Action for Kazakhstan Science Schools GRADE 10

Syllabus based on Common European Framework

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Action for Kazakhstan Science Schools Grade 10 Student's Book
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Express Publishing

Action for Kazakhstan

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Science Schools
GRADE 10

Student's Book

Express Publishing

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Action

for Kazakhstan

Science Schools

GRADE 10

Student's Book

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	Reading	Speaking & Functions	Writing	Culture Corner/ Curricular
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	• *The Day the Earth Moved* (missing sentences) • *Water, Water, Everywhere!* (matching headlines) • *Flood: Stay alert!* (open cloze)	• describe an experience • give bad news & react • make suggestions – agree/disagree	• a short article about an earthquake • a leaflet about a natural disaster and how to prevent damage • a story	• *Hurricane Katrina: The Tragedy of New Orleans* (matching headings) • *Tsunami: A wave of disaster* (Geography)
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Pronunciation p. GR22 Word List pp. WL1-WL21 Irregular Verbs

Starter module

Jobs

1 a) 10.5.2 **Match the words to form jobs.**

1	video game	A	counsellor
2	flight	B	chaser
3	secret	C	walker
4	sales	D	attendant
5	camp	E	shopper
6	police	F	coach
7	dog	G	assistant
8	storm	H	tester
9	sports	I	officer

b) **What job would you like to do?**

Extreme Sports

2 10.5.2 **Label the pictures.**

• street luge • speed skiing • windsurfing
• mountain biking • paragliding • motocross
• white-water rafting • rock climbing


1 .....


2 .....


3 .....


4 .....


5 .....


6 .....


7 .....


8 .....

Entertainment

3 10.5.2 **Fill in:** *audience, scene, scenery, lighting, performance, curtain, stage, props, fame, icon.*

1 Beyoncé is still a reigning ..... in the world of pop music.
2 He's in charge of painting the ..... for the play.
3 The twist at the end of the play was a complete surprise for the ..... .
4 A lot of child actors achieve ..... at a very young age.
5 The lead actor gave an excellent ..... .
6 Actors need to know the ..... plan so they know where to stand.
7 At the beginning of the play there were no actors on the ..... .
8 They brought down the ..... at the end of the play.
9 The final ..... of the film was very dramatic.
10 When the curtain rose, the only ..... on stage were a table, a chair and a glass.

The Internet

4 10.5.2 **Fill in:** *interface, engine, account, login, profile, browse, sign up, community.*

1 Miras set up an email ..... so that we could keep in touch.
2 My favourite search ..... is Google.
3 This social network seems to be a very tight-knit ..... .
4 You have to type in your user ..... to open your account.
5 You can personalise your ..... in a number of ways.
6 You can ..... to get their e-newsletter.
7 This program has a much more user-friendly ..... than a lot of others I've used.
8 You can ..... for new contacts by name or location.

Starter module

see pp. GR1-GR4

The Weather

5 10.5.2 **Circle the odd one out.**

1 **SNOW:** blizzard – breeze – hail – sleet
2 **RAIN:** tornado – flood – shower – drizzle
3 **WIND:** gale – tornado – breeze – storm
4 **TEMPERATURE:** boiling hot – chilly – sunny spells – freezing cold

Health Issues

6 10.5.2 **Fill in:** *strain, loss, thumb, swelling, rash, infection, shoulder, upset, immune, insomnia, watery, sickness.*

1 We need a healthy ..... system to fight off infections.
2 The ..... went down after he put an ice-pack on the injury.
3 My mum gets terrible travel ..... , so she rarely goes anywhere.
4 Gulnara gets ..... eyes and a runny nose because of her hay fever.
5 We should take regular breaks from the computer screen to prevent eye ..... .
6 Roland got a ..... strain playing tennis last week; now he can't move his arm.
7 My uncle suffered hearing ..... because he worked with loud machinery.
8 I got an itchy ..... on the side of my face after I borrowed my friend's mobile phone.
9 She's not getting enough sleep because she has ..... .
10 The cut from that rusty nail gave me a skin ..... .
11 He had a terrible ..... stomach after he ate curry last night.
12 Sending a lot of SMS messages can cause ..... arthritis.

Appearance & Character

7 10.5.2 **Circle the odd one out.**

1 middle aged – old – teenager – plump
2 well-built – overweight – skinny – medium
3 neck – beard – moustache – hair
4 curly – wavy – pierced – straight
5 wrinkles – freckles – tattoo – eyebrows
6 patient – generous – outgoing – blonde

Present/Past tenses (revision)

8 10.6.7 10.6.9 10.6.10 **Put the verbs in brackets into the correct present or past tense forms.**

1 Amy ..... **(sleep)** when it started to rain.
2 They ..... **(travel)** to Iceland last week.
3 Ulan ..... **(go)** climbing every weekend.
4 Hundreds of people ..... **(lose)** their lives as a result of the earthquake so far.
5 Aizhan ..... **(read)** at the moment.
6 John ..... **(trip)** and ..... **(cut)** his knee as he ..... **(walk)** up the stairs.
7 Brian was angry because he ..... **(wait)** for Ben for an hour.
8 By the time we arrived at the beach, it .... **(start)** to pour with rain.

Everyday English

9 10.5.2 **Choose the correct response.**

1 A: What was the performance like?
B: **a** Not really. **b** It was fantastic.
2 A: What seems to be the problem?
B: **a** It's my shoulder. **b** I'm afraid it's infected.
3 A: What does he do for a living?
B: **a** He works shifts. **b** He works as a nurse.
4 A: I'll make sure it doesn't happen again.
B: **a** You're welcome.
b Thanks. I'd really appreciate that.
5 A: If we offer you the job, when can you start?
B: **a** I'll be in touch. **b** Immediately.
6 A: Do you want to go out later?
B: **a** Sure! **b** It was nothing special.
7 A: Hello. I'd like to book a room, please.
B: **a** Your booking reference is 2223344.
b Certainly. Which dates, please?
8 A: Should I come and see you again?
B: **a** Yes, it's very red. **b** Only if it gets worse.
9 A: What day?
B: **a** 12 Merton St. **b** 19th July.
10 A: You look nice. Is something different?
B: **a** I got a new haircut.
b You've grown your hair.

Module 1
Science & scientific phenomena

Vocabulary: famous scientists, genetics, DNA, jobs related to science
Grammar: comparison of adverbs, past modals of speculation and deduction, active/passive (present simple/past simple)
Phrasal verbs: *bring, come*
Word formation: forming negative/ opposite verbs/adjectives
Writing: an article about a famous person
Culture: *The Man Who Invented the Net*
CLIL *(Biology)*: *Where did you get that from?*

Vocabulary
Famous scientists

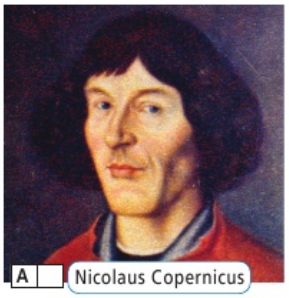
1 a) 10.5.2 **Complete the descriptions (1-5) with:** *invented, founded, developed, argued, discovered.*

1 *developed* the theory of relativity
2 ..... the World Wide Web
3 ..... radioactivity and won the Nobel Prize twice
4 ..... that the Sun was at the centre of the universe
5 ..... the environmental organisation EcoCenter

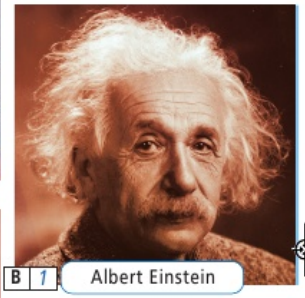
b) 10.5.2 **Now match the scientists (A-E) to their achievements (1-5) in Ex. 1a. Listen and check. Tell the class.**

Albert Einstein developed the theory of relativity.

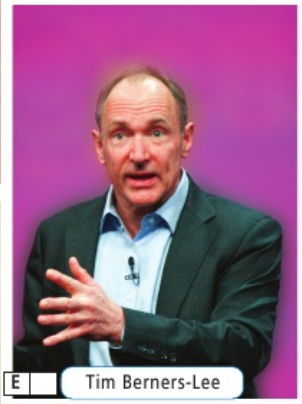
2 10.5.2 **Which famous scientist is related to:** ***physics, astronomy, biology, computer science, chemistry?***


A Nicolaus Copernicus

VIDEO


B 1 Albert Einstein


C Kaisha Atakhanova


E Tim Berners-Lee


D Marie Curie

OVER TO YOU! 10.1.6 10.3.7

- **Which of these scientists do you think has had the biggest impact on our lives? Why?**
- **Name some other famous scientists and why you consider them important.**

1a Genetics

Reading & Vocabulary

1 a) 10.5.2 **These words appear in the article. What do you think the article is about?**

- characteristics • genes
- genetics • cells • DNA
- chromosomes

b) 10.4.1 10.4.3 **Look at the picture and read the title of the article. What do you think is happening in the picture? How is this related to a world without disease?** 🎧 **Listen and read to check.**

2 10.4.1 10.4.2 **Read the sentences (1-8) and decide if they are *T* (true), *F* (false) or *DS* (doesn't say).**

1 Not all our characteristics come from our genes. .....
2 Diseases cannot be passed on through genes. .....
3 Cells have chromosomes from both parents. .....
4 A gene is made up of DNA. .....
5 Genes sometimes do not work correctly. .....
6 Genetic engineering may stop heart disease. .....
7 Genetically-modified food is better than normal food. .....
8 The writer of the article is in favour of 'designer babies'. .....

Check these words

characteristics, genes, pass on, inherit, bring up, gene editing, trillion, cell, chromosome, be made up of, function, remove, unborn child, prevent, develop, debate, rights and wrongs

A World Without Disease

If you could change something about yourself, what would it be? Maybe you'd like to grow taller. Perhaps you'd like the ability to run the fastest or learn languages more quickly. How about living longer? A lot of these characteristics come from your genes – the information in your body that has been passed on from your parents to you – and some come from the environment you were brought up in. Unfortunately, we can also inherit diseases from our parents' genes, but all that might change soon thanks to the science of genetics and, more specifically, gene editing.

Your body is made up of trillions of cells. Inside each cell, you have 46 chromosomes – 23 from your mother and 23 from your father. Chromosomes are made up of DNA (deoxyribose nucleic acid). A gene is a short section of DNA that determines a characteristic like how curly your hair is or the size of your ears. Genes that don't function properly can cause disease. By removing or replacing the faulty genes in an unborn child, scientists might be able to prevent a disease before it develops. This is called gene editing.

Gene editing (sometimes called genetic engineering) could mean the end to life-threatening illnesses like cancer or heart disease. It could also mean that we will be able to select characteristics for our unborn children. We already eat genetically-modified food. In the future, we may have 'designer babies'. Parents may get to choose how strong a child will be, the colour of their hair or whether they have brown eyes or green. There is a lot of debate about the rights and wrongs of creating 'designer babies', but the benefits of gene editing are clear - a world without disease.

3 10.5.2 **Fill in:** *debate, inherited, cells, prevent, made, determines, characteristics, brought.*

1 Damir ..... his parents' intelligence.
2 The research team was ..... up of ten scientists.
3 DNA ..... what a person looks like.
4 What ..... do you share with your grandparents?
5 Our class had a ..... about the pros and cons of genetic editing.
6 Gene editing could ..... a lot of diseases.
7 In my family, we were ..... up to be polite.
8 The scientist looked at the ..... under a microscope.

4 a) 10.5.2 **Match the columns to make collocations.**

1 ☐	live	a	babies
2 ☐	inherit	b	editing
3 ☐	gene	c	food
4 ☐	faulty	d	longer
5 ☐	genetically-modified	e	diseases
6 ☐	designer	f	genes

b) 10.5.2 **Use the collocations in Ex. 4a to complete the sentences.**

1 Children can ..... from their parents.
2 Scientists could use .... to stop life-threatening diseases.
3 I think most people would like to ....
4 Some illnesses are caused by ....
5 ..... may mean the end to famines.
6 ..... could be born without genetic diseases.

Grammar

see p. GR4

Comparison of adverbs

5 a) 10.6.12 **Read the examples. How do we form the comparative and superlative of adverbs? Find more examples in the article.**

- *Aizhan arrived **later** than her sister.*
- *Dan ate his dinner **more quickly** than Tom.*
- *Gulnara sings **better** than Assel.*
- *The football team played **worse** in the second half.*
- *Cameron works **the hardest** in his class.*
- *Wendy paints **the most beautifully** in her family.*
- *Saule danced **the best** in the competition.*
- *Peter behaves **the worst** of all the boys.*

b) 10.6.12 **Complete the sentences with the correct form of the adverb in bold.**

1 The door squeaks ..... **(loudly)** in the winter than in the summer.
2 Chris ran ..... **(fast)** of all the runners.
3 Miras speaks English ..... **(well)** than Alisher.
4 I did ..... **(badly)** in the class on the Science test.
5 The lecture started ..... **(early)** than we had expected.
6 I still have the flu, but I feel ..... **(little)** ill than yesterday.
7 Kevin played ..... **(well)** of all the basketball team.
8 Akbota read the instructions ..... **(carefully)** than the rest of the class.

Speaking & Writing

6 10.1.6 10.3.4 10.3.7 10.6.11 **What characteristics do you share with the other members of your family? Tell your partner.**

My father and I have the same colour eyes.

7 10.1.6 10.5.1 10.6.1 **Give the class a short summary of the text.**

8 ICT 10.1.6 10.5.1 10.6.1 **Collect information online about famous people related to genetics. Write a short quiz.**

1b DNA

Vocabulary & Reading

1 10.4.3 **Read the dictionary definition and the news headline. Could DNA help bring extinct animals back to life? Read to find out.**

DNA: acid in the cells of living things which determines the structure and function of every cell; responsible for characteristics being passed on from parents to children

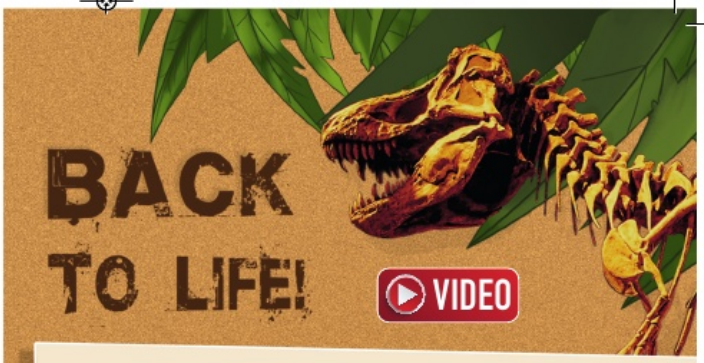
DINOSAUR BLOOD VESSELS FOUND IN 68-MILLION-YEAR-OLD T. REX SKELETON

2 10.4.1 **Read again and choose from the sentences A-F the one which fits each gap (1-5). There is one extra sentence.**

A It was dinosaur blood vessels ... 68 million years old!
B He thinks that would be the best lecture he could ever give.
C Most scientists believe that it can survive 100,000 years at the most.
D This may not seem so impressive, but a series of alterations could result in a completely new kind of dinosaur!
E Ignoring what the others said, he carried on with his research.
F For this reason, he is also looking at other ways to revive dinosaurs.

3 10.5.2 **Fill in:** *bring, became, walk, run, break, conduct, hatch, make.*

1 ..... extinct
2 ..... back to life
3 ..... a breakthrough
4 ..... the Earth
5 ..... in two
6 ..... out of an egg
7 ..... experiments
8 ..... tests



BACK TO LIFE!

VIDEO

When the last Pyrenean ibex died, the species became extinct. But scientists had already taken DNA samples from this wild mountain goat. Using these samples and a domestic goat's eggs, they were able to bring the Pyrenean ibex back to life. Even though the clone lived for only seven minutes, some scientists claim that advanced techniques could now be used to clone dinosaurs and create a real-life 'Jurassic Park'!

Could a T. rex really walk the Earth again? Well, dinosaurs were roaming the Earth over 65 million years ago and dinosaur DNA doesn't last that long. [1] Jack Horner, a world famous palaeontologist at Montana State University, disagrees.

In 2003, Jack and his team made an amazing breakthrough. While excavating the skeleton of a Tyrannosaurus rex in Montana, its thigh bone broke in two. Back at the university, one of Jack's students was running tests on the bone when she found organic material. [2] Jack and his team must have been amazed because it suggested that DNA lasts a lot longer than originally believed.

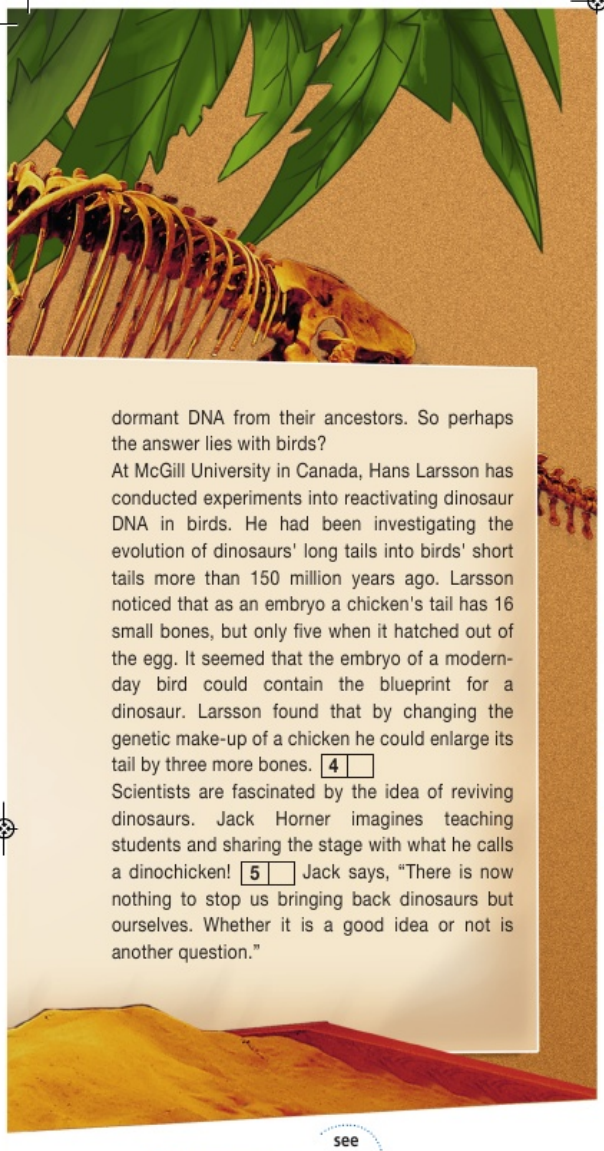
So does this mean that we will be sharing Earth with cloned T. rexes in the future? Jack believes it's possible, but a complete genetic map of a dinosaur would have to be worked out first and that might take decades. [3] Most scientists believe that birds are distant relatives of certain types of dinosaur and have some

Check these words

domestic, clone, roam, palaeontologist, make a breakthrough, excavate, thigh bone, organic material, genetic map, distant relative, dormant, ancestor, conduct experiments, reactivate, evolution, embryo, hatch, revive, blood vessels, impressive, alteration

4 10.5.2 **Replace the words/phrases in bold using words from the Check these words box in their correct form.**

1 Do we want dinosaurs to **wander** around the Earth?
2 Finding dinosaur DNA was a **remarkable** discovery.
3 The palaeontologists were **digging up** dinosaur bones.
4 We need to make **changes** to bird DNA to get dinosaurs.



dormant DNA from their ancestors. So perhaps the answer lies with birds?

At McGill University in Canada, Hans Larsson has conducted experiments into reactivating dinosaur DNA in birds. He had been investigating the evolution of dinosaurs' long tails into birds' short tails more than 150 million years ago. Larsson noticed that as an embryo a chicken's tail has 16 small bones, but only five when it hatched out of the egg. It seemed that the embryo of a modern-day bird could contain the blueprint for a dinosaur. Larsson found that by changing the genetic make-up of a chicken he could enlarge its tail by three more bones. [4]

Scientists are fascinated by the idea of reviving dinosaurs. Jack Horner imagines teaching students and sharing the stage with what he calls a dinochicken! [5] Jack says, "There is now nothing to stop us bringing back dinosaurs but ourselves. Whether it is a good idea or not is another question."

see p. GR4

Grammar

Past modals of speculation and deduction

5 10.6.13 **Read the theory. Find an example in the text. What does it express: *speculation* or *deduction*?**

- *Tom isn't in the library. He **must have gone** home.* (I am sure it happened. – deduction)
- *Kelly isn't at home. She **might/may/could have gone** to the supermarket.* (I am not sure. – speculation).
- *You **can't have seen** Berik at work this morning. He's on holiday.* (I am sure it didn't happen. – deduction)

1b

6 10.6.13 **Use the prompts and the verbs in brackets to complete the sentences with the past modals.**

1 Harry looks upset. He ..... **(have)** some bad news. (I am not sure)
2 My bicycle isn't there! Someone .... **(steal)** it! (I am sure it happened)
3 This book is 600 pages long. You .... **(read)** it in one day! (I am sure it didn't happen)
4 There's a cake in the fridge. Mum .... **(go)** to the supermarket. (I am sure it happened)

Study skills

Listening for specific information
Before you listen, read the choices and think about synonymous words. This will help you do the task.

Listening

7 10.2.1 10.2.2 **Listen to Jack and Amy talking about a lecture on DNA. For questions 1-4, choose the correct answer (A, B or C).**

1 What does Amy think about gene editing?
A It is an important development.
B It shouldn't be used on people.
C It will not be very popular.

2 What does Jack say about scientists?
A They will solve all the problems.
B They might remove the wrong cells.
C They already know a lot about gene editing.

3 Amy says that
A Jack is wrong about scientists.
B scientists need to take more care.
C she understands Jack's opinion.

4 How does Jack feel about gene editing?
A sad **B** unsure **C** frightened

Speaking & Writing

8 a) 10.1.6 10.3.4 10.3.6 **What information in the text did you find the most interesting?**

b) 10.1.6 10.3.4 10.3.6 10.6.7 **Do you think it's a good idea to bring back dinosaurs and other extinct species? Write a paragraph giving your reasons.**

1C Myth-Busters

Vocabulary & Reading

Jobs related to science

1 a) 10.3.7 10.5.2 **Match the jobs (1-8) to a description of what they study (a-h). Tell your partner.**

1 ☐ physicist
2 ☐ geneticist
3 ☐ mathematician
4 ☐ astronomer
5 ☐ chemist
6 ☐ biologist
7 ☐ psychologist
8 ☐ geologist

a planets, the universe, space
b the characteristics of substances and how they react
c the human mind and the way it works
d the Earth's surface
e matter and energy
f numbers, shapes and space
g all natural life
h the inherited characteristics of living things

A physicist studies ...

b) 10.1.2 10.5.2 **Which job seems the most interesting to you? Tell the class.**

I think being an astronomer is the most interesting because ...

2 a) 10.2.3 10.4.3 10.4.7 **Read the subheadings in the text. Do you think they are true?**
Listen and read to find out.

Science helps us understand the world around us, but there's a lot of misinformation out there! It can be difficult separating science fact from science fiction. Here are a few science myths that are simply not true.

Einstein failed Maths

Albert Einstein is perhaps the most **famous** physicist ever, and he is widely considered to be a genius. His theory of relativity changed the way we think about the universe, and, in 1921, he won the Nobel Prize for Physics. At the end of the 20th century, TIME magazine voted him 'Person of the Century'. **Unfortunately**, a lot of people believe that he struggled at maths! What is true is that when he was young, he **failed** a university entrance exam because his mark wasn't high enough. He didn't fail the maths or physics sections, though. In fact, his marks in those sections were **excellent**, but he didn't do well at French, chemistry and biology. It seems that not even geniuses are perfect.

Check these words

myth-buster, misinformation, separate, myth, widely, genius, theory, vote, struggle, breathe, billion, neurons, come from, mental, physical, resources, misunderstand, brain scan, repeat, out of the blue, come up with, image, observe, anecdote

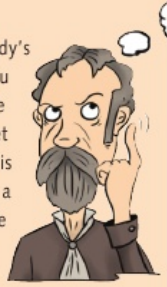
b) 10.4.1 10.4.2 **Read the article again and choose the correct answer (*A*, *B*, *C* or *D*).**

1 When he was young, Albert Einstein
A did not go to school.
B was not good at maths.
C had to take an exam twice.
D was better at some subjects than others.

2 In text B, the writer suggests that
A a scientist did not check his research.
B reporters might have made a mistake.
C the human brain is not always active.
D humans use 90% of their brains.

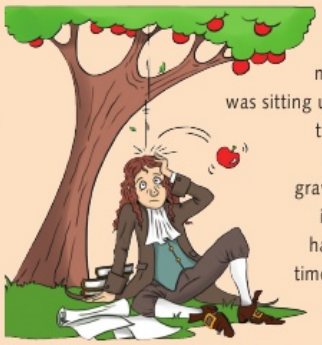
3 In text C, the writer says that
A there is some truth in the story.
B Newton often lied about his theories.
C the story is not very well known.
D Newton never watched apples falling.

We only use 10% of our brains



Your brain weighs just 1½ kg (about 2% of your body's weight), but uses around 20% of the oxygen you breathe. It contains billions of neurons that are **constantly** sending and receiving information. Yet people still say that you only use one tenth of it. This myth **possibly** comes from William James, a psychologist. In 1908, he claimed that, "We are making use of only a small part of our possible mental and physical resources." Journalists may have misunderstood him and the 10% myth was born. If we take a brain scan, though, we see that we use all the parts of our brains, just not at the same time. So whoever repeats this myth is certainly not using enough of theirs.

An apple fell on Newton's head



Here's a myth that is almost true. Sir Isaac Newton, the 17th century mathematician, astronomer and physicist, was sitting under an apple tree in his garden. Out of the blue, an apple fell on his head and he **immediately** came up with the theory of gravity. It is one of the most famous images in the history of science, but it might not have happened. Documents written at the time suggest that Newton did come up with his theory from observing falling apples, but one probably did not **hit** him on the head. It's possible that Sir Isaac was the one who invented the story, because, let's be **honest**, it is a great anecdote!

3 10.5.2 **Match the words in bold in the article to their antonyms.**

• definitely • dishonest • awful • miss • unknown • passed • luckily • eventually • occasionally

4 10.5.2 **Fill in:** *vote, struggles, come, breathe, observing.*

1 Tom ..... in chemistry. We should get him a tutor.
2 We can learn a lot about science by ..... the natural world.
3 How did Einstein ..... up with the theory of relativity?
4 We're going to ..... for a new class president today.
5 Sally's asthma medicine helps her ..... better.

1C

Word formation: Negative verbs

5 10.5.2 **Read the theory. Then complete the sentences using the word in bold with the correct prefix and in the correct form.**

- '**re**' means '**again**'. *Nurasyl must retake his Physics test.*
- '**mis**' means '**wrong**'. *I don't want you to misunderstand so let me explain better.*
- '**un**' means '**not**'. *I'm sorry, but David is unable to answer the phone right now.*
- '**dis**' means '**the opposite**'. *Why do you dislike maths so much?*

1 I'm sorry I ..... you; can you say that again? **(HEAR)**
2 The sun ..... behind the grey clouds. **(APPEAR)**
3 Oh no! I think I left the front door ..... . **(LOCK)**
4 My phone's dead; I'll have to ..... it. **(CHARGE)**
5 The children ..... and their mother got very angry. **(BEHAVE)**

Speaking

6 a) 10.1.2 10.1.4 **Which of the myths did you find the most convincing? Why? Tell the class.**

b) 10.1.4 10.2.2 10.3.6 10.3.7 **In your own words, narrate the story of Newton's discovery of gravity.**

Writing

7 10.4.8 10.5.1 ICT **Collect information about another myth. Write a paragraph and tell the class.**

1d Writing

An article about a famous person

Writing Tip

10.5.2 **Writing an article about a famous person**
An article about a famous person is a formal piece of writing that presents the life and achievements of the person. It is meant to be interesting and informative so it contains lots of facts. You can find articles about people in magazines, newspapers, websites, etc. As a formal piece of writing, we use passive forms, connectors and full forms. Also, we use past tenses to talk about the person's life, but we can use present tenses for how his/her achievements are seen today.
An article about a famous person usually includes:

- an **introduction** which introduces the person and tells readers why they are famous.
- a **main body** of two or three paragraphs (early life & later life) with details and dates, achievements and death in chronological order.
- a **conclusion** with final comments.

1 10.5.7 **Read the rubric and look at the key words in bold. Answer the questions.**

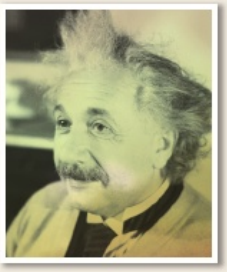
You have had a class discussion about famous scientists. **Your teacher** has asked you to write **an article** about one. Include **when** and **where he/she was born**, **his/her achievements**, **when he/she died**. Write your article **(120-180 words)**.

1 What are you going to write?
2 Who is going to read it?
3 What should your piece of writing be about?
4 How many words should you write?
5 What should you include in your writing?

2 10.5.7 **Read the article and match the paragraphs (A-D) to the descriptions below.**

1 ☐ early life
2 ☐ later life
3 ☐ introduction
4 ☐ final comments

Albert Einstein



A Who do you think of when you hear the word genius? Leonardo da Vinci? Mozart? For many people, it is the physicist Albert Einstein.

B Einstein was born in Germany in 1879. As a child, he was very interested in science, in particular, maths and physics. After university, Einstein took a job as an office clerk. While he worked there, he developed his theories of special and general relativity. It was published in 1905 and he was soon offered important university positions.

C In 1921, Einstein became world famous because he was awarded the Nobel Prize for Physics. In 1932, he moved to America where he worked in universities and eventually became an American citizen. He continued his work and died on 18th April, 1955, at the age of 76.

D Despite changing the way we see the world, Albert Einstein was a very modest man. Talking about himself, he once said, "It's not that I'm so smart, it's just that I stay with problems longer."

Writing Tip

Techniques for beginning/ending an article
An interesting beginning and ending make an article more interesting for a reader. There are several ways to do this. They include:

- addressing the reader directly: *Have you ever wanted to meet your ancestors?*
- making a statement: *Without a doubt, Albert Einstein was an incredible scientist who changed the way we see the world around us.*
- using a short quotation: *As Sam Kean once said, "Genes are like the story, and DNA is the language that the story is written in."*

3 10.5.4 **Which techniques has the writer used to begin/end the article? Rewrite the beginning and ending using another technique.**

4 10.6.16 **Read the examples and find connectors in the article.**

Connectors

- *Meirzjan loves astronomy* ***and*** *he has a telescope to observe the stars.* (addition)
- *Daniya would like a new laptop,* ***but*** *she doesn't have enough money.* (contrast)
- *Tom wants to go to the science fair* ***because*** *he is interested in Physics.* (cause/reason)
- ***Despite*** *getting high marks in English, Artyom wants to study Maths.* (contrast)
- ***While*** *Fran was walking to work, she was listening to music on her phone.* (time)

5 10.6.16 **Complete the sentences with a suitable connector.**

1 Dana enjoys reading, ... her brother prefers playing video games.
2 ..... the bad weather, Harry decided to walk to the library.
3 Aizhan is very good at Physics ..... she hopes to study it at university.
4 ..... Viktor was tidying his room, his sister was watching TV.
5 Gulsara was late for work ..... her alarm clock didn't go off.

see pp. GR4-GR5

Active/Passive (present simple/past simple)

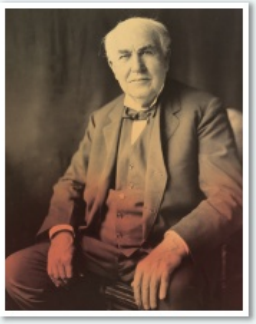
6 10.6.9 **Read the examples. How is a passive sentence different from an active one? When do we use 'by' or 'with' in a passive sentence? Find examples of passive sentences in the article in Ex. 2.**

Active: *The earthquake* ***destroyed*** *the town.*
Passive: *The town* ***was destroyed*** *by the earthquake.*

7 10.6.9 10.6.10 **Rewrite the active sentences in the passive.**

1 Alexander Fleming discovered penicillin in 1928.
.....
2 Mr Roberts teaches our class Physics on Tuesdays.
.....
3 Leonardo da Vinci designed a helicopter in the 15th century.
.....
4 We keep the laboratory door closed at all times.
.....
5 Anna lost all her files when her laptop crashed.
.....

8 10.6.9 10.6.10 **Read the paragraph below. Rewrite it in the passive.**



People usually recognise Thomas Alva Edison as the inventor of the light bulb, but other inventors developed types of light bulb before Edison. Humphry Davy invented the first electric light at the beginning of the 19th century and Joseph Swan demonstrated a light bulb at one of his lectures in 1879 around the same time as Edison. Edison and Swan created a company in 1883. They called it Edison-Swan United.

9 10.1.10 10.5.2 10.5.4 10.5.6 10.5.7 10.6.2 10.6.12 10.6.16 **You have had a class discussion about famous scientists. Your teacher has asked you to write an article (120-180 words) about one of them. Include when and where he/she was born, his/her achievements and when he/she died. Use the plan to write your article.**

Plan

Para 1: introduce the famous scientist and say why they are famous
Paras 2/3: early years, achievements and later years
Para 4: final comments

1e Culture Corner

The Man Who Invented the Net

1 10.4.3 **What do you know about the invention of the Internet? Read to find out.**

2 10.4.2 **Read again and fill in gaps 1-10 with an appropriate word.**
Listen and read to check.

Nowadays, we take going online and searching the Net for granted. It has replaced the library as the go-to source of information and is the place where we shop, do business and communicate over social media. Yet we tend **1)** ..... forget that this is a fairly recent invention that appeared little more than a generation **2)** ..... . It also seems strange that we have one man to thank for the Net, a system so massive that we could **3)** ..... picture our lives without it. That man is Tim Berners-Lee.

Berners-Lee **4)** ..... born in London, England, on 8th June 1955. He studied physics at Oxford University and after graduation worked as an engineer and software writer. In 1980, he started working for the European Organisation for Nuclear Research, more commonly known as CERN. It was at CERN that he first came up **5)** ..... 'hypertext', a system that would allow users in a company to share information. Later, he would develop this idea to allow users to share information over computer networks worldwide. It was this system **6)** ..... would eventually become famous as the World Wide Web with the initials 'www'. Berners-Lee went on to develop the first browser, and on 6th August, 1991, the first website **7)** ..... online. It is difficult to calculate, **8)** ..... there may now be over 630 million active websites and more are being added daily.

Berners-Lee was knighted **9)** ..... Queen Elizabeth II in 2004 for services to the global development of the internet. Sir Tim Berners-Lee's creation has changed the way we see and act in the world, and will continue changing it in ways we cannot imagine in the future. His work will go down in the history **10)** ..... science as perhaps the most important achievement of the 20th century.

3 10.5.2 **Fill in:** *history, important, do, famous, source, study, media, known.*

1 a ..... of information
2 ..... business
3 social .....
4 ..... at university
5 be ..... as
6 become .....
7 go down in .....
8 a(n) ..... achievement

4 10.3.2 10.3.7 **Answer the questions.**

1 Why is the Internet so popular?
2 What do you use the Internet for?
3 THINK! How will the Internet change our lives in the future?

5 10.4.8 10.5.6 ICT **Find information about an invention/ development that came from your country. Write: *who invented/developed it, what it does and/or how it is used*. Write a paragraph about it, then read it to the class.**

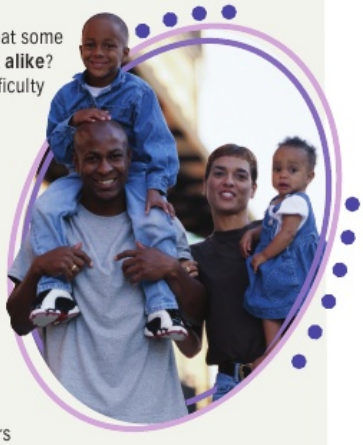
Check these words

take sth for granted, go-to, tend to, generation, massive, picture, commonly, (be) known as, come up with sth, initials, browser, calculate, add, knight, services, creation

Curricular: Biology 1f

VIDEO

Where did you get that from?



Have you ever noticed that some sisters and brothers look **alike**? Or have you ever had difficulty telling twins apart? Their inherited traits are what make their physical appearance so similar. An inherited trait is a particular characteristic or quality that is genetically passed down from our parents. Inherited traits are what distinguish one person from another. These characteristics depend entirely on genetic factors and include gender, hair colour, skin colour, ear shape, blood group and inherited diseases.

Offspring inherit genes from both the mother and father, which results in a combination of the parents' characteristics. This is why we often hear people say, "She has her mother's eyes," or, "He has his father's nose".

Not all traits are inherited, however. Variation is also caused by environmental factors. For instance, your weight depends on your diet and other environmental factors such as gender, calorie intake and lifestyle. Language is also not inherited. Adopted children who move to another country will quickly learn the local language and may even forget their **native** language. The majority of human characteristics are determined by inherent and environmental factors. Studies have shown that intelligence is partly inherited and partly learnt. Similarly, our genes determine our **natural** hair colour, but exposure to the sun or hair dye can easily change that colour.

It seems that we are all very different. You just need to look around to see how many different traits people have, but in fact, people are remarkably alike. 99.9 percent of all human DNA is identical. It's those few **unique** differences in our DNA that create the variety of characteristics we see around us.

Check these words

trait, inherited, tell apart, genetically, passed down, distinguish, factor, gender, offspring, calorie intake, native language, partly, exposure

1 10.1.2 10.4.3 10.5.2 **Many of the following traits or characteristics are 'inherited' or passed down to us from our parents. Which of these traits do you think can be inherited from one's parents? Read to see if you were right.**

• straight hair • weight
• gender • language • strength
• intelligence • eye colour
• blood type

2 10.3.6 10.3.7 10.4.2 **Read the text again and answer the questions.**

1 Why do siblings often resemble one another?
2 What are some of our inherited traits?
3 Why isn't a person's weight an inherited characteristic?
4 What percentage of our DNA makes us look different from other people?

3 10.5.2 **Match the underlined words in the text with their synonyms. What part of speech are they?**

• rapidly • surprisingly
• completely • without difficulty

4 10.5.2 **Match the words in bold in the text with their antonyms. What part of speech are they?**

• foreign • common • man-made
• different

5 10.1.2 10.1.6 **Tell your partner three things you learned from the text.**

6 10.3.7 THINK! **Would you change anything about your appearance? If so, what? Tell the class.**

1 Language in Use

Phrasal verbs/Prepositions

1 10.5.2 10.6.15 **Choose the correct particle.**

bring about: cause sth to happen **bring out:** publish **bring up:** raise (a child) **come across:** find sth by accident **come down with:** catch an illness **come up with:** invent/discover sth

1 Diaz was brought ..... in the countryside.
2 Professor Thomas is bringing ..... his new book next month.
3 Newton came ..... with the theory of gravity in a garden.
4 The Internet has brought ..... huge changes in our lives.
5 I came ..... my old schoolbooks when I was cleaning the attic.
6 Marzhan won't be at work today as she's come ..... with the flu.

2 10.5.2 **Fill in:** *to*, *in*, *as*, *for*.

1 Einstein has gone down ..... history as a genius.
2 Gene editing is also known ..... genetic engineering.
3 Kairat's parents took it ..... granted that he would go to university.
4 Scientists want to bring the mammoth back ..... life.
5 Tracey tends ..... spend far too much time online.

Words often confused

3 10.5.2 **Choose the correct word.**

1 Thomas Edison **discovered/invented** the phonograph.
2 Askar is **learning/studying** physics at university.
3 Dr Lee is **conducting/making** an experiment at the moment.
4 **Astronomers/Astrologers** read the stars to tell people's futures.
5 Take a deep **breath/breathe** and count to ten.
6 The findings were **clear/clean** – it was dinosaur DNA!

Word formation

4 10.5.2 **Fill in the correct word derived from the word in brackets.**

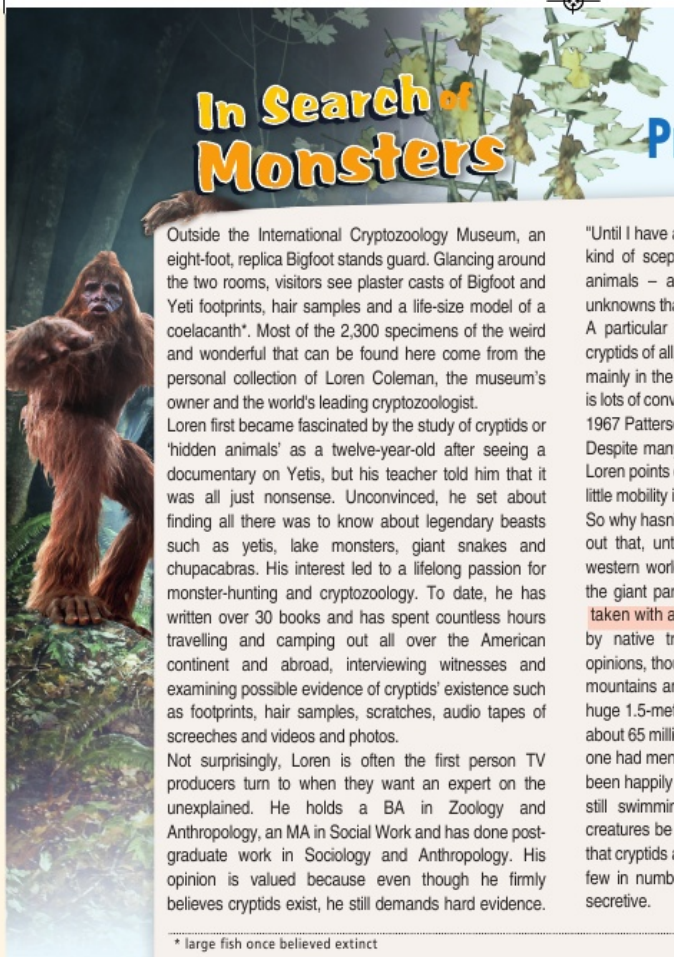
We can add the prefixes **mis-** *(information – **mis**information)*, **dis-** *(advantage – **dis**advantage)*, **re-** *(turn – **re**turn)* to the beginning of nouns to make their negatives/opposites.

1 Scientists are very careful to avoid the ..... of their findings. **(USE)**
2 The ..... of the dinosaurs is still not fully explained. **(APPEARANCE)**
3 This year's final was a ..... between the same two teams who played last year. **(MATCH)**
4 There was a ..... in the election and everyone had to vote again. **(COUNT)**
5 Beybarys got a ..... when he took the broken laptop back to the shop. **(FUND)**

Kazakhstan in Action!

Read and choose the correct word.

- Kazakhstan is full of creative people and inventors. A 2016 report **1) by/of** the National Institute of Intellectual Property stated that 36693 applications for inventions were submitted by Kazakh nationals between 1992 and 2016.
- The Nature Museum of Kazakhstan proudly displays the skeletal remains of T. rex and a six-metre **2) tall/high** Tarbosaurus.
- The Altyn-Yemel State Memorial Shokan Valikhanov Museum and a statue nearby are both to **3) respect/honour** Shokan Valikhanov, the great Kazakh scholar and scientist.
- After scientists investigated the DNA of apples, they **4) invented/discovered** that the first eating apple grew in the Tien Shan mountains of Kazakhstan.



In Search of Monsters

Progress Check 1

Outside the International Cryptozoology Museum, an eight-foot, replica Bigfoot stands guard. Glancing around the two rooms, visitors see plaster casts of Bigfoot and Yeti footprints, hair samples and a life-size model of a coelacanth*. Most of the 2,300 specimens of the weird and wonderful that can be found here come from the personal collection of Loren Coleman, the museum's owner and the world's leading cryptozoologist.

Loren first became fascinated by the study of cryptids or 'hidden animals' as a twelve-year-old after seeing a documentary on Yetis, but his teacher told him that it was all just nonsense. Unconvinced, he set about finding all there was to know about legendary beasts such as yetis, lake monsters, giant snakes and chupacabras. His interest led to a lifelong passion for monster-hunting and cryptozoology. To date, he has written over 30 books and has spent countless hours travelling and camping out all over the American continent and abroad, interviewing witnesses and examining possible evidence of cryptids' existence such as footprints, hair samples, scratches, audio tapes of screeches and videos and photos.

Not surprisingly, Loren is often the first person TV producers turn to when they want an expert on the unexplained. He holds a BA in Zoology and Anthropology, an MA in Social Work and has done post-graduate work in Sociology and Anthropology. His opinion is valued because even though he firmly believes cryptids exist, he still demands hard evidence. "Until I have a hair sample or footprint or twisted branch, I'm really kind of sceptical," he says. "80% of all accounts are ordinary animals – a few fakes, a few hoaxes. But it's that 20% of unknowns that keeps me going."

A particular interest of Coleman's is one of the most famous cryptids of all, Bigfoot or Sasquatch, which is said to inhabit forests mainly in the North-western United States. He believes that there is lots of convincing evidence of its existence, including the famous 1967 Patterson-Gimlin footage of a Bigfoot walking into the forest. Despite many people claiming they were 'the person in the suit', Loren points out that the creature walks the way an ape does, with little mobility in the hips and neck.

So why hasn't anyone found a real Bigfoot yet? Well, Loren points out that, until 150 years ago, it was believed by most in the western world that mountain gorillas didn't exist and before that the giant panda was virtually unknown. Tales of sightings were taken with a pinch of salt; they were thought to be legends told by native tribes. Respected scientists had to change their opinions, though, when these creatures were found high up in the mountains and deep in the forests. Similarly, the coelacanth is a huge 1.5-metre-long fish that was thought to have become extinct about 65 million years ago until it was rediscovered in 1938. But no one had mentioned this to islanders in the Indian Ocean, who had been happily eating it for ages! So if a fish from prehistoric times is still swimming around, why can't Bigfoot and other strange creatures be hidden away in a forest somewhere? Loren argues that cryptids are not monsters at all, just species of animal that are few in number, live far from human settlements and are highly secretive.

* large fish once believed extinct

Reading

1 10.4.1 10.4.2 **Read the text and choose the best answer A, B, C or D.**

1 Most of the exhibits at the museum
- A are replicas.
- B are plaster casts.
- C were donated.
- D belong to Loren.

2 What inspired Loren to study cryptids?
- A The books he read on cryptozoology.
- B His teacher's encouragement.
- C A film he saw as a young boy.
- D His travels and camping trips.

3 What does Loren say motivates him most to continue searching?
- A his scepticism
- B people's accounts
- C uncertainty
- D hard evidence

4 The writer uses the highlighted phrase in the text to show that
- A people believed in the reports about pandas and gorillas.
- B stories about hidden animals come from tribal legends.
- C scientists often change their minds.
- D the Western World knows little about hidden animals.

4x5=20 marks

Listening

2 10.2.2 **You will hear five people talking about theories for the reason for the building of Stonehenge. Match the headings (A-G) to the speakers (1-5). There are two extra headings.**

- A DESTINATION FOR THE SICK
- B RELIGIOUS CENTRE
- C A GIANT CLOCK
- D LANDING SITE
- E FOR THE DEAD
- F OBSERVING THE STARS
- G MATHEMATICALLY CONSTRUCTED

Speaker 1	
Speaker 2	
Speaker 3	
Speaker 4	
Speaker 5	

5x4=20 marks

1 Progress Check

3 10.5.2 **Fill in:** *observed, select, debate, psychologist, myth, struggling, prevent, ancestors, discovery, passed.*

1 We've made an amazing .....; it's a cure for the common cold!
2 Did you know that Barry's ..... come from Ireland?
3 In the future, we might be able to ..... what our children are like.
4 We had a ..... in class about bringing back dinosaurs. I'm for it!
5 Inherited characteristics are ..... on from parents to their children.
6 It's a ..... that lightning never strikes the same place twice.
7 Gene editing could ..... some life-threatening diseases.
8 Einstein said that he just ..... the world and described what he saw.
9 Are you ..... to answer the last question?
10 The ..... helped me with some of my phobias. *10x1=10 marks*

4 10.6.12 **Complete the sentences with the correct comparative/superlative form of the adverb in bold.**

1 The weather got ..... in the afternoon. **(BADLY)**
2 Jake drives ..... than his brother. **(CAREFULLY)**
3 The lecture ended ..... than we expected. **(EARLY)**
4 Fran eats ..... than her sisters. **(HEALTHILY)** *4x2=8 marks*

5 10.6.13 **Use the prompts and the verbs in brackets to complete the sentences with the past modals.**

1 Yerasyl isn't in the laboratory so he ..... **(go)** home early. **(I am sure)**
2 An apple ..... **(fall)** on Newton's head. **(We can't be sure)**
3 Sanzjar ..... **(be)** pleased when he failed the Maths test. **(I am sure it didn't happen)**
4 She ..... **(do)** well in the test because she never studies. **(I am sure it didn't happen)** *4x2=8 marks*

6 10.6.9 **Rewrite the sentences in the passive.**

1 They considered the experiment a great success.
2 The government gave Dr Harrison an award in 2009.
3 A lot of tourists visit Sir Isaac Newton's house.
4 The research team need more time to finish the experiment.
5 The palaeontologists found dinosaur DNA in a broken bone. *5x2=10 marks*

7 10.6.16 **Fill in:** *because, while, despite, but, and.*

1 I want to be an astronomer, ... I don't think my marks in maths are good enough.
2 ..... being warned about the weather, Max went out without his coat.
3 John finished school last month ..... he is going to university soon.
4 Sally needs a new smartphone ..... her old one broke.
5 ..... Samal was preparing dinner, Miras was tidying the house. *5x2=10 marks*

8 10.5.6 **Read the rubric and write your article.**

You have seen this announcement in a science magazine: *"We're looking for articles about the life and achievements of famous scientists. The winning articles will appear in the magazine. Send your article to the magazine before the end of the month."*
Write your **article** (120-180 words).

14 marks

Total: 100 marks

Check your Progress

- talk about genetics and DNA ____
- talk about science myths ____
- make comparisons with adverbs ____
- use past modals of speculation and deduction ____
- use the passive (present simple/past simple) ____

GOOD ✓ VERY GOOD ✓✓ EXCELLENT ✓✓✓

Module 2
Natural disasters

Vocabulary: natural disasters, causes & consequences – prediction & prevention of natural disasters

Grammar: compound adjectives, (to) infinitive/*-ing* form, prepositions & prepositional phrases

Everyday English: giving bad news & reacting, making suggestions – agreeing/disagreeing

Phrasal verbs: *back*, *call*, *carry*

Word formation: compound adjectives

Writing: a story

Culture Corner: *Hurricane Katrina: The Tragedy of New Orleans*

Curricular *(Geography)*: Tsunamis

Vocabulary
Natural disasters

1 🎧 **Listen and say.**

- forest fire • volcanic eruption
- huge tropical storm • mine collapse
- earthquake • tsunami

2 a) 10.5.2 **Look at the natural disasters in the pictures and complete the sentences with:** *burnt*, *rescued*, *caused*, *erupted*, *hit*. **Then, match the disasters in Ex. 1 to the pictures (A-E).**

b) 10.1.9 10.3.5 **Have you heard about any of these disasters? If yes, how did you feel? How do you think the people in these countries felt? Discuss with your partner.**

3 10.2.1 10.2.6 🎧 **Listen to extracts from two news reports. Which of the events in the headlines is each one about?**

A In 2017, forest fires **1)** ..... over 1.2 million acres of land in Portugal.

VIDEO

B In 2010, 33 men were **2)** ..... from a collapsed mine in the Atacama Desert, Chile.

C In 2005, Hurricane Katrina **3)** ..... massive flooding and loss of life in New Orleans, USA.

D In 2010, the Eyjafjallajökull volcano in Iceland **4)** ..... and people had to evacuate.

E In 2011, a 9.0 earthquake **5)** ..... Japan followed by a huge tsunami that killed thousands of people.

OVER TO YOU! 10.3.7

Close your books and say a few things you remember about the disasters that have happened in the 21st century so far.

2a Disasters

Vocabulary & Reading

Causes & consequences of natural disasters

1 a) 10.6.15 **Read the headlines and fill in:** *CLOSED DOWN, WASHES AWAY, RUNNING WATER, UNDERSEA, STRIKES, FORCE, EVACUATED.*
Listen and check. Say the headlines in your language.

MASSIVE 1) ..... EARTHQUAKE 2) ..... OFF THE COAST OF JAPAN

10-METRE TSUNAMI 3) ..... HOUSES & CARS

4) ..... OF JAPAN QUAKE MOVES ISLAND BY 2.4 METRES

NUCLEAR POWER STATIONS IN QUAKE AREAS 5) .....

HALF A MILLION JAPANESE 6) ..... THEIR HOUSES &1.4 MILLION WITHOUT 7) .....

b) 10.1.9 **Use the headlines to tell the class what you think happened in Japan in March 2011.**

In March 2011, an undersea earthquake struck off the coast of Japan. Soon after, ...

2 10.2.1 **Write down three questions you would like to ask about this disaster then listen to the text. Can you answer your questions?**

Check these words

strike, devastating, nuclear meltdown, axis, foreshock, exceed, shake, epicentre, authorities, warning, head for, roll across, crash into, loaded (with), debris, landslide, mud, pylon, evacuation, explosion, courageous, technician, struggle, aftershock, relief worker, desperate, collapse, rip apart, blaze, force, sweep away, inland, slam into

On 11th March, 2011, at 14:46 local time, an undersea earthquake struck off the northeastern coast of Japan. The force of the earthquake, the most powerful in Japan's history, triggered a devastating tsunami. [1] The world faced a partial nuclear meltdown and the planet moved on its axis, shortening the length of every day by 1.8 milliseconds. It was a terrible national tragedy that the country will need a great deal of time to recover from.

In the days before the main earthquake, Japan had experienced quite a few foreshocks, some of which exceeded magnitude 7, but nothing could prepare the nation for the main shock, a magnitude 9 quake. It was strong enough to be felt hundreds of kilometres away in Tokyo where buildings shook violently and many office workers ran out onto the streets terrified. [2] Much worse was yet to come as the authorities issued a tsunami warning.

Frantic residents headed for high ground, rooftops or upper floors of buildings. Soon after, a wall of water, 10 m high in some places, rolled across the Pacific Ocean and crashed into the coast. [3] One giant wave even crashed through an airport in Sendai, leaving 1,300 people stranded on the upper floors. The waters reached up to 10 km inland before heading back out to sea, now loaded with debris and leaving a swamp-like landscape of landslides and mud. TV viewers couldn't believe their eyes as these heartbreaking scenes were broadcast around the world.

By this time, many areas were without electricity as pylons had crumbled which caused a major disaster at Japan's nuclear power stations. [4] The government immediately ordered an evacuation of hundreds of thousands of residents. Explosions rocked the plant as courageous technicians struggled to control the damage and prevent a nuclear meltdown.

Over the next few days, a large number of aftershocks continued to shake Japan, causing plenty of problems for hard-working rescue teams as they raced to find survivors. Several countries sent relief workers and the world held its breath while it waited to see how the tragedy would end. [5] Over 15,000 people died that day and thousands more were missing. Several amazing tales of survival came to the attention of the world's press, though. A 4-month-old baby girl became world-famous when she was pulled alive from the rubble four days after the earthquake. A man was found clinging to his rooftop as it was floating 14 km out at sea 2 days after the tsunami. And there was the Japanese student in California, desperate for news of her lost family, who found them on a YouTube news clip. It showed her sister holding up a sign and sending a desperately-needed message of hope across the world: "We all survived."

3 a) 10.4.7 **Read the text again. Five sentences are missing. Match each sentence (A-F) to a gap (1-5). There is one extra sentence.**

A Closer to the epicentre, buildings collapsed, roads and railways were ripped apart and fires blazed.
B The evacuation zone around the nuclear power plant was soon increased to 20 km.
C Many thousands of people lost their lives and roads, buildings and entire villages were swept away.
D Sadly, there were hardly any survivors.
E Without power, the cooling system at the Fukushima No. 1 Plant failed.
F It washed away houses and cars and hurled ships far inland, carrying them along and slamming them into whatever lay in their path.

b) 10.2.2 **Listen and check.**

4 10.4.5 **Match the highlighted words to their meanings:** ***holding on tightly, panicked & frightened, broken into small pieces, started, incomplete, unable to leave, pieces of bricks, stones & other materials, very wet, violently threw.***

Grammar Compound adjectives

see p. GR5

5 a) 10.6.3 **How do we form compound adjectives? Find four examples of compound adjectives in the text. Check in the Grammar Reference Section.**

b) 10.5.3 10.6.3 **Then use them to make sentences based on the text.**

(to) infinitive/*-ing* forms

see pp. GR5-GR6

6 10.6.15 **Put the verbs in brackets into the correct form. Check in the Grammar Reference Section.**

1 You should avoid ..... **(drive)** your car when there is a flood.
2 We need ..... **(buy)** food and water before we leave the city.
3 The residents were looking forward to ..... **(get)** back to their normal lives again after the huge tropical storm.
4 Let's ..... **(leave)** the house now before it's too late!
5 The government spent lots of money on ..... **(repair)** the damage from the earthquake.
6 The emergency services are having difficulty ..... **(rescue)** all of the survivors.

7 10.6.15 **Put the verbs in brackets into the correct form. How do they differ in meaning?**

1 a Don't forget ..... **(stand)** under a doorframe during an earthquake.
b I'll never forget ..... **(read)** about the firefighter who risked his life to save the students from a burning bus.
2 a They stopped ..... **(buy)** some emergency supplies.
b They stopped ..... **(work)** and ran out into the street.
3 a We regret ..... **(not/move)** our garden furniture indoors before the storm.
b We regret ..... **(inform)** you that all flights are cancelled due to the earthquake.
4 a She tried ..... **(stay)** calm when she felt the ground shaking.
b Have you tried ..... **(use)** a bucket to remove floodwater?
5 a Berik meant ..... **(put)** a torch in his emergency kit, but he forgot.
b Hearing a tsunami warning means ..... **(go)** to the roof of the building.

Speaking & Writing

8 10.3.5 THINK! **Listen and read the text. Imagine you were in Japan on the day of the earthquake and tsunami in March 2011. Where were you? What did you see and hear? How did you feel? In a few minutes, write a few sentences. You can use the headlines in Ex 1a. Tell your partner or the class.**

9 10.5.3 10.6.4 **Write a short article about the earthquake in Japan or another earthquake for the school magazine.**

2b Natural disasters

1 rail accident
2 landslide
3 flood
4 factory explosion
5 road accident
6 plane crash
7 severe/freak storm
8 environmental disaster
9 tsunami
10 earthquake
11 war
12 avalanche

VIDEO

Vocabulary
Disasters – causes & consequences

1 a) 10.1.9 10.3.7 **Listen and say. Which disasters (1-12) are: natural? influenced by man? Which can you see in the pictures?**

b) **Which accident/disaster (1-12) best matches each of the headlines (A-H).**

A ☐ Train Collision Injures 50
B ☐ Violent Tremors Hit Capital City
C ☐ Oil Spill Blackens Coast
D ☐ 20 Survivors rescued from Aircraft
E ☐ Dangerous Blast At Chemical Plant
F ☐ CITY CENTRE buildings damaged by hurricane
G ☐ Rising River *Waters Close Roads*
H ☐ Side Of Mountain Collapses Onto Homes

2 a) 10.2.1 **Listen to some people describing the disasters in the pictures 1-4. Match the descriptions A-D to the disasters 1-4.**

b) 10.3.7 **Choose a picture and describe it to your partner in as much detail as possible.**

Reading

3 10.4.3 **Read through the text quickly. What is it about? Tell the class.**

Water, Water, Everywhere!

A recurring phenomenon

More than 7,000 people were evacuated from their homes across seven regions of Kazakhstan in April 2017 because of flooding. [1] ☐ There were also significant floods in 2010, 2014 and 2015.

Weather Warnings

[2] ☐ Kazakhstan's location combined with its climate means it has a lot of snowfall in winter and sunshine in the summer. It is the melting of the winter snowfall caused by sharp increases in temperature or heavy rain that is the cause of the recurring floods. Sometimes extremes of weather, such as heatwaves can lead to disasters such as mudslides. [3] ☐ Akmola, Aktobe, East Kazakhstan, Zhambyl, Karaganda, Kostanay and North Kazakhstan are some regions among those that have experienced floods.

Flood damage

The flooding in Kazakstan has caused a lot of injuries to people and loss of livestock. In addition, many residential areas and people's homes have been damaged by floodwaters. Some houses made from adobe were completely destroyed by floods and mudslides, leaving some people homeless. Moving floodwaters and mudflows also carried some people's vehicles away. [4] ☐ In fact, to repair the roads, bridges, power lines and buildings cost billions of tenge.

Finding Solutions

There are now some solutions to help the people of Kazakhstan deal with floods. For example, after floods in 2010, they built a dam in order to stop floods in Kazakhstan's capital city, Nur-Sultan, when the River Ishim bursts its banks. [5] ☐ During floods, emergency teams save thousands of livestock by moving them to higher ground away from floodwaters. All of these efforts help to protect the people of Kazakhstan from the devastation caused by this natural disaster.

Check these words

evacuate, mudslide, dam, (river) bursts its banks, emergency teams

4 10.4.7 **Read the text again. Five sentences are missing. Match the sentences (A-F) to the gaps (1-5). There is one extra sentence.**

A In Kazakhstan, flooding is common.
B The areas most commonly affected by flooding in Kazakhstan are those close to the country's rivers and lakes.
C Moreover, some areas use pumps to pump water away from homes and public buildings.
D However, it was not the first time that Kazakhstan has been affected by flooding.
E Unfortunately, many homes were completely destroyed.
F All of the damage was extremely expensive to repair.

5 10.3.7 **Fill in:** *recurring*, *extremes*, *sharp*, *higher*, *power*, *natural*, *moving*, *public*, *emergency*, *heavy*, *residential*, *flood*. **Use the completed phrases to talk about flooding in Kazakhstan.**

1	..... floodwaters	7	..... line
2	..... rain	8	..... building
3	..... teams	9	..... disaster
4	..... floods	10	..... of weather
5	..... damage	11	..... increase
6	..... ground	12	..... area

Prepositions & Prepositional phrases

6 a) 10.6.14 **Choose the correct item.**

1 Winter snowfall melting led **to/away** the river bursting its banks.
2 The people who live close **with/to** rivers and lakes are more likely to experience floods.
3 The flood barriers protected their home **from/of** floodwaters.
4 Natural disasters are responsible **for/of** the loss of lives and homes.
5 The emergency teams dealt **for/with** the floodwaters by using a pump.

b) 10.5.3 **Use the prepositional phrases in Ex. 6a to make sentences about the natural disasters in Ex. 1a.**

Speaking

Giving bad news & reacting

7 10.5.8 **Use the headlines in Ex. 1b and the language in the box to make exchanges, as in the example.**

Giving bad news	Reacting
• Did you hear? There's been ... • Did you see/hear about the ... on the news? • Have you heard? • Guess what happened! • You'll never guess what's happened! • Look at this!	• It's awful, isn't it? • Oh no! That's awful/terrible! • Really? How horrible! • I don't believe it! • That's so sad/depressing, etc.

A: Did you hear? There's been a major train crash and 50 people have been injured.
B: It's awful, isn't it?

Listening

8 a) 10.2.2 **You'll hear a radio news report. For questions 1-5, listen and tick (✓) *T* (true) or *F* (false).**

		T	F
1	The train crash happened at lunchtime.		
2	No one died in the accident.		
3	The reason for the lights' failure isn't known yet.		
4	The flood is due to a burst water pipe.		
5	The town suffered a worse flood last year.		

b) 10.1.1 10.3.1 **Now, imagine you work for the emergency services (e.g. the police, ambulance). How do you help the people affected by a flood? Offer solutions. Discuss in groups.**

9 10.1.5 10.5.1 10.6.7 10.6.17 **Choose a disaster which was in the news last month. Prepare a short news report for the local TV station. Talk about: *place*, *date*, *event*, *what happened*. Proofread/Edit your work before handing it in. Swap papers with your partner. Correct each other's mistakes.**

2c Safety

Vocabulary
Prediction & prevention

1 a) **Look at the pictures (1-5).**
Listen and say.

b) 10.1.1 10.1.9 10.3.5 **Are floods common in the area where you live? Have you ever experienced one? Which of the actions in the pictures did you do to prevent damage and stay safe? Tell the class.**

Reading

2 a) 10.4.1 **Look at the text. Is it: *an article*? *a leaflet*? *an advertisement*? Have you seen a similar one before? What is the purpose of the text? Tell the class.**

b) 10.4.1 10.4.3 **Which of the actions in Ex. 1 should someone do before/during/after a flood?**
Listen and read to find out.

3 10.4.2 **Read again and fill in the gaps 1-12 with a word which best fits.**
Listen again and check.

4 10.4.2 **Complete the sentences with words/ phrases from the text.**

1 They packed a torch, a radio and some new batteries into their ..... .
2 Rescue teams working in floods should always wear ..... such as boots and waterproof clothing .
3 If you are evacuated from your home, remember to turn off the ..... .
4 The residents built ..... around their homes using sandbags.
5 The ..... were so deep that they carried the car away.
6 There were frequent ..... about the flooding on the radio.
7 They abandoned the car and moved to ..... .
8 We can't use this ..... until it is checked by a professional.

Flood: Stay alert!

Always be prepared:

- Have a disaster plan – decide **1)** ..... you will go and what you will do if there is a flood.
- Prepare an emergency kit – pack a bag with important items such **2)** ..... bottled water, tinned food, a torch, a portable radio and protective clothing (a raincoat, rubber boots and waterproof gloves).
- Build flood defences outside **3)** ..... home – flood barriers and walls can protect your home from floodwaters.

Before a flood:

- Turn **4)** ..... the electricity and water supplies.
- Move important furniture and items to the top floor of your home.
- Use sandbags to prevent water **5)** ..... entering your home.
- Arrange for any livestock to be moved to high ground.

Listening & Speaking

5 a) 10.2.7 **You are going to listen to a seismologist talking to a group of students about earthquakes.**
Listen and choose the correct answer.

1 What does Dr Felton say about earthquake prediction?
A It is easy to predict when an earthquake will happen.
B Predictions help us to evacuate animals before an earthquake.
C Animals can help us predict when earthquakes will occur.

2 Earthquake drills
A happen during earthquakes.
B are held in schools and businesses.
C are very stressful events.

2C

During a flood:

- Wear protective clothing and get your emergency kit.
- Evacuate the house if necessary and move **6)** ..... high ground.
- Listen to the weather forecast using a radio. There will be frequent flood updates and advice on **7)** ..... to do next.
- Don't walk through moving water. Even shallow moving water **8)** ..... cause you to fall and carry you away.
- Avoid already flooded areas.
- Don't use cars in flooded areas – they can be swept away by floodwaters. If you are in a car and encounter a flash flood, get **9)** ..... and move to high ground.

After a flood:

- Don't return to your home until the authorities say it is safe **10)** ..... do so.
- Clean all items that got wet in the flood.
- Ensure all electrical equipment has dried and an electrician has checked it **11)** ..... using it.
- Boil tap water before drinking **12)** ..... .

3 What does Dr Felton suggest doing?
- **A** storing emergency contact details in your phone
- **B** writing phone numbers down
- **C** keeping your mobile phone charged up

4 You should check for damage
- **A** immediately after the ground stops shaking.
- **B** while the earthquake is happening.
- **C** after any aftershocks have taken place.

5 Dr Felton says that new homes
- **A** are reinforced with carbon-fibre.
- **B** use flexible pipe systems.
- **C** are built to deal with earthquakes.

6 What is Dr Felton's opinion on securing furniture?
- **A** He doesn't think it's a good idea.
- **B** He agrees with it to a certain extent.
- **C** He totally agrees with securing all furniture.

Check these words

emergency kit, flood defences, flood barrier, shallow, flash flood

b) 10.3.7 THINK! **In three minutes write four things you have learnt about earthquake safety. Tell the class.**

Speaking

6 10.3.5 10.3.7 **Use the language in the box and the earthquake safety tips in Ex. 5 to act out exchanges, as in the example.**

Making suggestions	Agreeing/Disagreeing
• How/What about (+ *-ing* form) ...? • Let's (+ bare infinitive) ... . • Why not (+ bare infinitive) ...? • Perhaps/Maybe you/we could ... . • Why don't you/we ...? • You/We should	• That sounds great. • I think it's a great idea. • That's an excellent idea! • Good thinking. • Yes, I suppose you're right. • OK. Why not? • OK. What do you suggest? • I don't think it's a good idea. • I don't think so. • I'm not sure about that. • How about ... instead?

A: What do you think we should do to prepare in case there is an earthquake?
B: I think that we should pack an emergency kit with some water, tinned food, a torch and a battery-powered radio.
A: Good thinking. In my opinion ...

Writing

7 10.1.6 10.5.5 10.6.3 ICT **Do some Internet research to find out information about another natural disaster and ways to prevent damage. Prepare a leaflet similar to the one in Ex. 2. Present it to the class.**

2d Writing

A story

Writing Tip

Writing stories

Stories can be about real or imaginary situations. They can be in first person *(I, we)* or third person *(he, she, they)*. Before we start writing a story, we first decide on the type of story, the main characters and the plot.

In the **first paragraph**, we set the scene (when/where it happened, main characters, weather, what happened first).

In the **main body paragraphs**, we describe the events in the order they happened leading to the climax event (the main event).

In the **final paragraph**, we write what happened in the end and how the character(s) felt.

We normally use **past tenses** and **time linkers** (*as, when, after, later, while, suddenly, finally*, etc.) to help the reader follow our story. We can also use a **variety** of **adjectives** and **adverbs** and **direct speech** to make our story more interesting to the reader.

Study skills

Understanding rubrics

To plan your piece of writing you need to understand the rubric as it contains information on the imaginary situation and the imaginary reader which will help you decide what style you will write in, the type of writing and any specific details.

1 10.5.7 **Read the rubric and look at the key words in bold. Answer the questions.**

A **travel magazine** has asked its **readers** to send short stories describing a **nasty holiday experience they** had. The best story wins a three-day visit to London. Write your story for the competition **(120-180 words)**.

1 What are you going to write?
2 Who is going to read it?
3 What should your piece of writing be about?
4 How many words should you write in?
5 Will your narrative be in the first-person or the third-person?

2 10.4.2 **Read the story and answer the questions.**

1 How does the writer set the scene?
2 What is the climax event?
3 What happened in the end?
4 How did the characters feel?

The Runaway Train

By John Brown

During my summer holiday, my friend James and I were travelling across the USA. One day we decided to take a journey on a steam train. Little did we know that we were in for a terrifying experience.

We had been enjoying a smooth ride when suddenly the ground started shaking. It was an earthquake. The train started to make strange noises as it made its way slowly down a hill. There was a loud screeching noise and then, the train started rocking. People's bags were falling out from the overhead compartments.

People started screaming frantically. As we all held onto our seats, the train started rocking dangerously from side to side and speeding up. A man got out of his seat and ran quickly to the front of the train. A few moments later, the train slowed down. Soon after that, we pulled into the next station and we all got up anxiously to see what had happened. It seems the earthquake caused the driver to hit his head on the control panel and lose his senses.

Luckily, the passenger had got there in time to slow down the train and save the day. We were relieved to hear that no one had been hurt and that the driver was well.

3 10.4.1 **Put the events in the order they happened. Compare with your partner.**

A ☐ We heard a screeching noise.
B ☐ We pulled into the next station.
C ☐ James and I went on a train journey.
D ☐ A man ran to the front of the train.
E ☐ The driver hit his head.
F ☐ The train began to speed up.
G ☐ The train started to slow down.
H ☐ The driver was well.

4 10.5.2 **Which adjectives has the writer used to describe the following?**

1 ..... experience
2 ..... ride
3 ..... noise

2d

5 10.5.2 **Write the adverbs the writer has used to describe the following:**

1 making our way .....
2 screaming .....
3 train rocking .....
4 ran .....
5 we got up .....

6 10.5.2 10.6.3 **Fill in the sentences with a suitable adjective or adverb from the list. Which adverb is used as an intensifier? Give more examples.**

• deafening • dark • rapidly
• carefully • absolutely
• violently • massive • heavy

1 The thunder was ..... and the windows were shaking ..... .
2 I felt ..... terrified when I saw the ..... wave rushing ..... towards us.
3 ..... clouds filled the sky as the ..... rain poured down.
4 Simon drove ..... across the bridge.

7 10.6.16 **Fill in:** *suddenly, before, and then, eventually, as soon as, while, and.*

1) ..... we reached London, we looked for somewhere to spend the night. **2)** ..... we came across a small nice *Bed & Breakfast* hotel. **3)** ..... we were waiting at the reception, a young man entered. He looked at us coldly then disappeared in the lift without saying a word. **4)** ..... we heard a scream. Minutes later the young man came down the stairs. He looked very scared **5)** ..... his hands were shaking. **6)** ..... we said a word he grabbed my hand and said, "I saw him. He is in my room waiting for me. Please, help me." **7)** ..... he fainted.

Study skills

Setting the scene

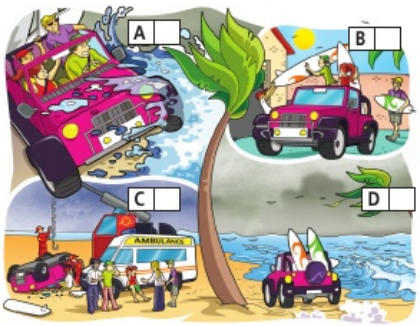
When we write a story we start by setting the scene. To do so, we imagine we are looking at a picture and try to describe the place (*where*), the time (*when*), the weather, the people involved (*who*), and what happens. We can use our **senses** to make the descriptions more vivid. We can describe what we **see** (e.g. *a cute dog*), **hear** *(barking)*, **feel** *(soft grass)* or **smell** (e.g. *the scent of orange trees*).

8 10.1.9 10.3.7 **Look at the picture and use the prompts to set the scene. Start with the sentence given.**

Steve could never expect his weekend trip would end like this.

9 10.2.1 **Put the pictures in the correct order to make the outline of a story.**

Listen and check.



10 10.5.1 10.5.6 **A magazine has asked its readers to send in stories (120-180 words) about a nasty experience. Use the pictures in Ex. 9 to write the story. Follow the plan.**

Plan

Para 1: set the scene: characters, when/where, weather *(One hot day, Matt & ... ., After they ...)*
Paras 2/3: events in order they happened & climax event *(By the time they got ... ., Dark clouds ... ., All of a sudden, ...)*
Para 4: what happened in the end, feelings *(Before long ... . Everyone sighed with relief.)*

2e Culture Corner

1 10.1.9 **How did Hurricane Katrina affect New Orleans? Listen and read to find out.**

2 10.4.1 **Read again and match the subheadings (A-G) to the paragraphs (1-6). There is one extra heading.**

A Surrounded by water
B Gathering strength
C Collapsing buildings
D Moving on
E The birth of the storm
F Help at last
G An awful situation

3 10.4.5 **Match the words in bold with their meanings: *broke, manage, moved from the sea to land, sending people to a place of safety, old people, in danger, asking anxiously, stealing, announced.***

4 10.6.3 **Fill in:** *threat, recovery, beg, declare, shelters, pump, tropical, level, rise, struggle, lose, eye.*

1 ..... storm; **2** ..... a state of emergency; **3** the ..... of the storm; **4** be under ..... from; **5** below sea .....; **6** in temporary .....; **7** waters .....; **8** ..... for help; **9** ..... to cope; **10** ..... water out; **11** ..... their lives; **12** make a slow .....

5 10.1.9 THINK! **Imagine you lived through Hurricane Katrina. Narrate your experience to the class.**

6 10.1.4 10.1.6 10.5.3 ICT **Find information about a disaster that happened in your country. Find out: *what kind of disaster it was, when/why it happened, what happened, what the situation is now*. Compare it to the disaster in New Orleans.**

HURRICANE KATRINA: THE TRAGEDY OF NEW ORLEANS

1 [ ]
On Wednesday, 24th August, 2005, a tropical storm formed over the Bahamas, about 560 km east of Miami, Florida. By 25th August, the storm had strengthened and become Hurricane Katrina. Residents of the city of New Orleans had no idea that within days, 80% of their city would be underwater in one of the worst disasters in US history.

2 [ ]
Hurricane Katrina was one of the most powerful storms that has ever hit the Atlantic coast with winds of over 270 km per hour. As it became stronger over the Gulf of Mexico, the mayor of New Orleans **declared** a state of emergency and started **evacuating** the city. When the eye of the storm missed the city by about 72 km, everyone thought the worst was over, but they were very wrong.

3 [ ]
New Orleans has always been **under threat** from flooding. With the Mississippi River on two sides, Lake Pontchartrain to the north and parts of the city 2 m below sea level, a series of high walls, called levees, protect it. As the hurricane **came ashore**, it brought an 8-metre-high storm surge that rode the rivers up to New Orleans, and **smashed** through the levees.

4 [ ]
Over a million residents had already left the city, but tens of thousands, mainly **the elderly** and the poor, were in temporary shelters. As the waters rose, people were **begging** for help on roofs, and neighbourhoods were suffering from **looting** and violence. Emergency services struggled to **cope**.

5 [ ]
Eventually, the military and the National Guard moved into the city and began to get food and water to the desperate few that remained. After 43 days, army engineers pumped the last of the flood water out of the city. Almost 1,500 people had lost their lives because of Hurricane Katrina in New Orleans alone.

6 [ ]
These days, New Orleans is making a slow recovery. The city has improved the levees, the community is rebuilding itself, and everyone is working hard to make sure that nothing like this will ever happen again.

Check these words

strengthen, residents, declare, state of emergency, evacuate, eye of the storm, below sea level, come ashore, levee, storm surge, smash, looting, violence, emergency services, struggle to cope, the military, desperate, army engineers, pump, slow recovery, rebuild

Curricular: Geography 2f

1 10.1.9 10.3.2 **What do you know about tsunamis? What else would you like to know? Write down three questions you would like to ask.**
Listen and read to see if you can answer your questions.

2 10.4.1 **Read again and match the subheadings (A-G) to the paragraphs (1-6). There is one extra heading.**

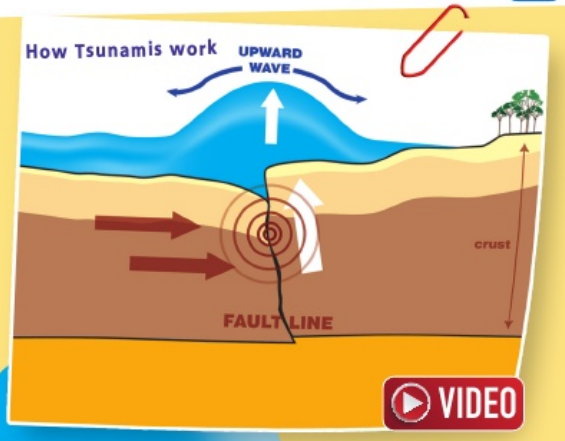
A A frequent phenomenon
B Happening one after the other
C High tide
D Deadly power
E A sudden movement
F Less by degree
G Below the surface

3 10.4.2 **Complete the sentences with words/phrases from the Check these words box.**

1 A tsunami can be caused by a(n) underwater ..... .
2 When the Earth's ..... move suddenly, an earthquake happens.
3 A tsunami is similar to throwing a(n) ..... into a lake, but on a much larger ..... .
4 When the water reaches the ..... and comes ..... it destroys everything in its ..... .
5 A tsunami can ..... buildings and destroy ecosystems.

4 10.3.6 10.3.7 10.5.2 **Tell your partner or write four things you have learnt about tsunamis.**

5 10.1.6 10.5.1 10.5.3 10.5.6 ICT **Collect more information about tsunamis. Use the key word: tsunami. Present your information to the class.**



Tsunami: A wave of disaster

1 A tsunami is a large wave that travels at great speed towards land. They are usually caused by an undersea earthquake, but they can also happen after a large undersea landslide and an underwater volcanic eruption.

2 When an undersea earthquake happens, the Earth's tectonic plates move suddenly downwards or upwards. This usually happens on a fault line and one plate slides below the neighbouring plate causing a large amount of water to be forced upwards.

3 This water forms a wave. Just like when you throw a pebble into a lake, the water ripples outwards. It is the same with a tsunami, but the water doesn't stop moving until it reaches land.

4 As the wave moves towards the land, it increases in speed and strength. Not all tsunamis are giant waves when they hit the shore, though. Many of them come inland as a strong and fast tide. However, the impact of the water often destroys everything in its path.

5 After the initial tsunami hits land, there are often other waves following it, that can be just as big, which slowly get smaller over time. The same as the ripples from the pebble mentioned before, but on a much larger scale.

6 Water is a very powerful force and can cause tremendous damage. As well as the loss of life that a tsunami can cause, it can flatten buildings and trees and destroy whole ecosystems.

Check these words

speed, undersea landslide, volcanic eruption, tectonic plates, fault line, slide, force, pebble, ripple, outwards, shore, come inland, fast tide, impact, in its path, initial, on a larger scale, tremendous damage, loss of life, flatten, ecosystem

2 Language in Use

Phrasal verbs/Prepositions

1 10.5.2 10.6.14 10.6.15 **Choose the correct particle.**

back away: move backwards from sth/sb
back down: give in, accept defeat
back up: make a copy of a file/programme etc.
back sb up: give support to sb
back out: decide not to do sth
call sb back: return sb's phone call
call off: cancel
carry on: continue
carry out: do sth as planned (a plan/order/threat etc.), perform or conduct (repairs, research, tests, etc.)

1 The guard asked the passengers to back **away/down** from the edge of the train platform.
2 The school carried **on/out** a fire safety drill.
3 Despite his accident, he carried **on/out** climbing.
4 Back **up/out** your computer files regularly.
5 The match was called **off/back** due to heavy rain.
6 She backed **down/out** of the race in the end.

2 10.6.14 **Choose the correct preposition.**

1 Tsunamis travel **at/on** a great speed.
2 Paul lives his life **from/to** the fullest.
3 Damir's photos are always **at/in** high demand.
4 The tsunami destroyed everything **on/in** its path.
5 The man was begging **in/for** help.

Words often confused

3 10.5.2 **Choose the correct word.**

1 He tried hard to **stay/keep** alive.
2 The ground started to **shake/jump**.
3 The clouds **blocked/closed** the view.
4 The water **raised/rose** quickly.
5 The tsunami **reached/arrived** land fast.

Word formation

4 10.6.3 **Fill in the sentences with the correct word in the list.**

Compound adjectives
We form compound adjectives with two words, usually joined by a hyphen. We often use **adjective/noun/number + noun + -ed** (*red-haired, two-faced*), **adjective/adverb/noun + past participle** (*short-tempered, well-known*), **adjective/adverb/noun + present participle** (*long-lasting, time-consuming*).

• well • thought • man • thirty • never

1 The lightning storm in Catatumbo is almost ..... ending.
2 The children were very ..... behaved for the babysitter.
3 I saw a ..... provoking documentary about earthquakes last night.
4 Lava fountains can reach as high as a ..... storey building.
5 Lives are lost every year through natural and ..... made disasters.

Collocations

5 10.5.2 10.6.1 **Fill in:** *nuclear, barrier, sea, volcanic, take, struck, environmental, tectonic, emergency, relief.*

1 ..... plates
2 flood .....
3 ..... meltdown
4 ..... eruption
5 ..... worker
6 ..... services
7 ..... disaster
8 ..... level
9 ..... precautions
10 disaster .....

Kazakhstan in Action!

Read and choose the correct word.

- The Kazakh steppe **1) covers/spreads** around 800,000 km^2. This is about one third of the country.
- Kazakhstan's location means that you can experience all types of weather from hot **2) wet/dry** summers to **3) boiling/freezing** cold snowy winters.
- Kazakhstan is **4) house/home** **5) to/of** Charyn Canyon which is also known **6) as/for** the younger brother of the Grand Canyon in Arizona, USA.
- **7) Above/Beneath** the surface of Lake Kaindy in Kazakhstan is an underwater forest that came from an earthquake in 1911 that triggered a landslide.
- Around 250 km from Almaty national park are the 'Singing Dunes'. These amazing sand dunes emit a rumbling **8) sound/noise**. One sand dune called the Singing Barchan dune sounds **9) as/like** a pipe organ when the wind **10) blows/heats** from the West.

Progress Check 2

Reading

1 10.4.1 10.4.2 **Read the text and for questions 1-5, choose the best answer A, B, C or D.**

1 Martin Rietze can't stay near a volcano for a long time because ...
- **A** it's bad for his equipment.
- **B** he can't stand the heat.
- **C** it's too loud.
- **D** it's dangerous for his health.

2 Volcano chasers have to be ...
- **A** very active.
- **B** talented scientists.
- **C** patient.
- **D** freelancers.

3 When the Eyjafjallajökull volcano erupted, it was difficult for Martin to ...
- **A** get a flight to Iceland.
- **B** find somewhere to stay.
- **C** get close enough to take good photos.
- **D** protect himself from flying rocks.

4 It seems that Martin ...
- **A** doesn't take enough safety precautions.
- **B** understands the risks he's taking.
- **C** often gets injured.
- **D** underestimates the dangers of volcano chasing.

5 Martin suggests that ...
- **A** he sometimes takes photos when he knows it's too dangerous.
- **B** volcano chasing is for everyone.
- **C** volcanoes aren't as dangerous as people think.
- **D** a volcano is sometimes too dangerous to photograph up close.

5x2=10 marks

Listening

2 10.2.2 **You will hear 5 different news reports from a radio programme. Match the speakers (1-5) to the news headlines (A-F). There is one extra news headline.**

- **A** NARROW ESCAPE
- **B** DISASTER AT SEA
- **C** HOPE AFTER THE DISASTER
- **D** DISRUPTION TO DAILY LIVES
- **E** TAKEN BY SURPRISE
- **F** PAYING FOR A WRONG DECISION

Speaker 1	
Speaker 2	
Speaker 3	
Speaker 4	
Speaker 5	

5x2=10 marks

In the Heat of the Moment

When a volcano erupts, most people want to get as far away as possible, as quickly as they can! German engineer Martin Rietze, on the other hand, grabs his camera and tries to get as close as he can and stay alive at the same time!

He's so close that he can feel the heat burning his face even through his gas mask. The lava flow is about a metre away and it's getting closer every second. The ground beneath his feet is shaking and there is a deafening roar like a plane taking off. He can't stay this close for too long because the gases and acids will destroy his camera, but Martin Rietze waits just long enough to see flaming hot lava and ash explode out of the nearby crater – and gets the perfect shot.

Martin is a freelance photographer whose stunning photographs of volcanic eruptions are in high demand with newspapers and magazines all over the world. He is one of a small but dedicated group of volcano chasers. When a dormant volcano becomes active, they book the first flight to be as near as possible to it, set up camp and wait, sometimes for as long as two weeks. It takes a lot of patience as a volcano can erupt at any time, night or day, and clouds, fog and steam often block the view. The final results though, like Martin's shots of volcanic lightning – a phenomenon that still mystifies scientists – are definitely worth it!

When the Eyjafjallajökull volcano in Iceland erupted in 2010 and ash clouds closed airspace over Northern Europe, Martin was already on the scene for some of his most spectacular shots. After spending three sleepless nights in freezing temperatures, Martin got within three feet of the lava flow and even took photos of lava fountains – jets of lava that shoot up as high as a thirty-storey building! He didn't get any sleep because the volcano was throwing out rocks the size of cars, so for most of the time he was sheltering behind a large boulder!

Martin says that he's had more accidents when mountain climbing than volcano chasing, but that doesn't stop him from taking precautions because this is a job where safety is a priority. Goggles and a gas mask provide protection from poisonous gases, but gloves are just as important because fresh lava can be as sharp as a knife. Volcano chasing is quite risky. As Martin admits, "One has to know when it is safe to come near and when it is a matter of survival to stay away – sometimes many kilometres away!"

2 Progress Check

3 10.5.2 **Fill in:** *exceeded, avoided, struck, collapsed, evacuated, declared, encountered, burst, ensure.*

1 33 men were trapped underground when a mine ..... in Chile.
2 Thousands of people were ..... from their homes before the flood.
3 In 2016, an earthquake that ..... magnitude 6 struck central Italy.
4 After days of heavy rainfall, the river ..... its banks.
5 After a flood you should ..... all of your electrical items are safe to use.
6 They got out of the car after they ..... a flash flood.
7 The government ..... a state of emergency as the tropical storm moved closer to land.
8 Assel ..... going into the city centre because it was already flooded.
9 An earthquake of magnitude 9 ..... just off the coast of Japan.

9x2=18 marks

4 10.6.15 **Put the verbs in brackets into the correct (to) infinitive/*-ing* form.**

1 He's wearing rubber boots ..... **(keep)** his feet dry.
2 The children were made ..... **(crawl)** under their desks during the earthquake.
3 Miras considered ..... **(move)** to a town further away from the river.
4 Saule is willing ..... **(volunteer)** in Japan and help those affected by the tsunami.
5 ..... **(have)** a disaster plan in place helps you stay calm during an emergency.
6 Luckily, he remembered ..... **(bring)** a torch and a radio with him.

6x2=12 marks

5 10.6.15 **Choose the correct item.**

1 Two trains crashed **into/on** each other injuring hundreds of people.
2 The emergency services struggled to cope **at/with** the people affected by the disaster.
3 Make sure you turn **down/off** the power supply to your home in the event of a flood.
4 Fast-moving floodwaters can carry you **in/away** if you walk through them.
5 Heavy rains can lead **to/on** recurring floods.

5x2=10 marks

6 10.3.7 10.5.8 **Match the exchanges.**

1 ☐ We should make a disaster plan.
2 ☐ Guess what happened! There was another earthquake in Japan.
3 ☐ Why don't you try driving through the floodwaters?
4 ☐ Did you hear about the landslide?
5 ☐ Did you hear? The hurricane has made thousands of people homeless.

A That's so sad.
B I don't think it's a good idea.
C I don't believe it!
D Yes. It's awful, isn't it?
E That's an excellent idea.

5x2=10 marks

7 10.5.2 **Complete the sentences with the correct word derived from the words in bold.**

1 A ..... storm formed above the islands. **(TROPIC)**
2 The earthquake was very ..... . **(POWER)**
3 The city is making a slow ..... . **(RECOVER)**
4 There were two ..... after the main earthquake. **(SHOCK)**
5 Many ..... areas were evacuated during the flood. **(RESIDE)**

5x2=10 marks

8 10.5.6 **Write a story called 'A Lucky Escape' (120-180 words).**

20 marks

Total: 100 marks

Check your Progress

- talk and write about natural disasters ____
- write a leaflet ____
- give bad news & react ____
- make suggestions – agree/disagree ____
- write a story ____
- talk about tsunamis ____

GOOD ✓ VERY GOOD ✓✓ EXCELLENT ✓✓✓

Module 3
Virtual reality

Vocabulary: applications of virtual reality, materials & substances, mobile apps, computer accessories & gadgets
Grammar: future tenses, determiners & pre-determiners, quantifiers
Phrasal verbs: *look, try*
Word formation: forming adjectives from verbs
Writing: an opinion essay
Culture Corner: *VR-ART: Create Noosa*
Curricular *(IT)*: *Virtual Reality, Real Classrooms*

VIDEO

Vocabulary
Applications of virtual reality

1 10.3.5 10.3.7 **Read the following definition. What do you know about VR? What do we use it for? Tell your partner.**

virtual reality [U n] = a 3D environment which can be explored and interacted with using special equipment, such as a headset with a screen, built-in headphones & a microphone

2 a) 10.3.7 **Match the applications of VR (1-6) to the pictures (A-F).**

1 ☐ experience new planets without leaving Earth
2 ☐ practise operating on patients without any risk
3 ☐ go on a field trip without leaving the classroom
4 ☐ visit the world's best department stores from your home
5 ☐ simulate the construction of a new building
6 ☐ interact with other gamers in immersive gameplay

b) 10.3.7 **Which application is related to the field of: *architecture*? *education*? *space exploration*? *shopping*? *entertainment*? *healthcare*? Make sentences, as in the example.**

Experiencing new planets without leaving Earth is related to the field of space exploration.

OVER TO YOU! 10.3.3 10.3.5 10.3.7

- **Which application of virtual reality do you think is the most important? Why?**
- 10.1.4 **Imagine you have virtual reality headsets in your classroom. Where would you go and what would you do? Why? Tell the class. Comment on your classmates' answers.**

3a Products of the future

Vocabulary
Materials & substances

1 10.3.7 Listen and say. Make sentences, as in the example.


1 fabric (cotton, silk, wool, nylon, etc)


2 metal (aluminium, steel, etc)


3 glass


4 wood (oak, pine, etc)


5 plastic

The bag is made of silk.

Reading & Listening

2 10.2.1 10.4.1 Read the title, the introduction, and look at the pictures. In groups, talk about what you expect the text to be about.
Listen and read to check.

3 10.4.2 Read again and for questions 1-7, choose from the texts (A-C).

Which text mentions:

robust material?	1
a form of recycling?	2
a potential first-aid use?	3
treasure-hunting?	4
a machine which needs no putting together?	5
an easy way to go shopping?	6
an invention with limitless potential?	7

VIDEO

TOMORROW'S WORLD

Think about a normal day. What do you usually wear? What technology do you use? What games do you play? Let's take a look into tomorrow to see what everyday life will be like in the (very near) future.


A

What will we be wearing in the future? While some scientists are developing textiles that allow the wearer to generate electricity as they walk and others are working on clothes that monitor your fitness, Dr Manel Torres and Prof Paul Luckham have invented a spray-on fabric. The spray contains minute cotton, wool, linen or acrylic fibres that dry instantly on your skin and turn into garments like T-shirts or tops. You can wear it, wash it and wear it again – just like the rest of the clothes in your wardrobe. Then, when you get bored, you can dissolve it and use the material again to make something new. Fabrican took ten years to develop and Dr Torres hopes that in the future there will be spray booths in stores where you can drop in to design something new. They are also looking into its use for spray-on bandages and furniture coverings. So forget about that walk-in wardrobe because with Fabrican, all you need is a shelf.


B

Wouldn't it be great if you could just think of something you want and print it out there and then? Well, believe it or not, you can. For the first time ever, scientists have found a way to print out fully-functional machines using a 3D printer. The first item is a bicycle made of nylon called the Airbike. It's as strong as steel but much lighter. It comes out as a complete bike, so there's no assembly required. The possibilities for this new technology are endless. Medical researchers hope that with a special cartridge of human cells and bio-friendly gel, they can use it to print out skin grafts for burn victims. They have already managed to demonstrate the potential medical uses by printing out a copy of a human ear in 30 minutes. This incredible invention will transform our lives beyond our imagination.

C

Even high-definition graphics and immersive gameplay can seem a little boring these days. It's time to take gaming to the next level – it's time for you to get inside the game! Virtual reality (VR) headsets are lightweight gadgets that fit over your eyes with a built-in microphone and headphones to give you the impression that you're in the 3D world of the game. It's like you're the one who's driving the car, fighting the zombies or searching for the lost treasure. VR headsets are not just for gamers, though. They're also useful in healthcare to train surgeons, and in space exploration to help NASA explore Mars. In the future, experts say VR headsets will have many more uses. You are going to be able to go to a virtual department store, take a virtual tour around a museum or attend live performances and sporting events where it looks, feels and sounds like you're in the audience. So before long you'll be doing whatever you want, wherever you want, without ever leaving your living room!

Check these words

develop textiles, generate electricity, monitor fitness, spray-on fabric, minute fibres, dry instantly, turn into, garment, dissolve, booth, drop in, look into, bandage, fully-functional, lighter, no assembly required, endless possibilities, cartridge, skin graft, immersive gameplay, take sth to the next level, lightweight, surgeon, audience

4 10.3.7 **Fill in:** *turn into*, *graphics*, *endless*, *dissolve*, *assembly*.

1 The Airbike is ready to ride as it doesn't require any ..... .
2 Dr Torres has developed a fabric that can .... any garment.
3 The possibilities of using the new spray are ..... .
4 The high-resolution ..... in this game give an amazing picture.
5 Some supermarkets are using plastic bags which ..... in water, leaving no trace.

3a

Grammar

see pp. GR6-GR7

Future tenses (*will*, *be going to*, present continuous, future continuous)

5 10.6.8 **Match the examples (1-7) to the descriptions (A-G). Find more examples in the text in Ex. 2.**

1 ☐ It's hot in here. **I'll open** the window.
2 ☐ She**'s going to buy** a printer soon.
3 ☐ Don't worry. I **won't be** late.
4 ☐ Sarah**'s taking** her driving test next week.
5 ☐ Our homes **will be** very different in the future.
6 ☐ I **won't be studying** tomorrow afternoon.
7 ☐ He's got the car keys. He**'s going to drive** into the city.

A a promise
B a fixed arrangement
C a prediction based on what we believe/imagine
D a plan or intention
E an on-the-spot decision
F an action in progress at a certain time in the future
G a prediction based on what we see

6 10.6.8 **Choose the correct verb form. Identify the reason for the use of each tense.**

1 That's the phone. I **will answer/am answering** it.
2 I think he **is going to be/will be** happier there.
3 Now that I've got some money I **will be buying/ am going to buy** a new PC.
4 **Will you work/Are you working** tomorrow?
5 This time next week we **are travelling/will be travelling** to Chile.
6 Sorry! I **won't/am not going** lie again.
7 Ulan is wearing his T-shirt, shorts and trainers. He **will be playing/is going to play** football.

7 10.6.8 **Say two things you:** ***will be doing this time next week, are doing tomorrow, will do in the summer, are going to do this weekend.***

Speaking & Writing

8 10.1.10 10.3.7 THINK! **How do you think each invention in the text will improve our lives? Write a few sentences. Tell the class.**

3b Apps on the go

Vocabulary
Mobile apps

1 a) 10.3.7 **Where does the word app come from? What do you use mobile apps for? Use the phrases below to tell your partner.**

I use mobile apps to get directions.

- get directions • upload pictures • chat online
- browse maps • monitor the weather
- play games • get breaking news
- study for exams

b) 10.1.4 10.3.5 **What other apps do you know? How useful are they? Tell the class.**

2 10.4.3 **Read the title and the first paragraph of the article. What do you expect the text to be about? Listen and read to find out.**

3 10.4.1 10.4.2 **Read the text again and, for questions 1-5, choose the correct answer (A, B, C or D).**

1 In the first paragraph, the writer says that
- A the number of apps available is increasing.
- B only young people play games on their phones.
- C you can only download apps made in your country.
- D it is difficult to do everyday tasks without an app.

2 The writer thinks that educational apps
- A can replace schools and universities.
- B help students to learn on their own.
- C are only useful for university students.
- D can take the place of school teachers.

3 The writer suggests people often identify living things by
- A asking an expert.
- B taking photos.
- C checking reference books.
- D using Internet search engines.

4 The writer says that NASA
- A is tracking people using apps.
- B allows you to follow a space station.
- C has apps that send you photographs.
- D lets you chat with its astronauts.

5 What is the writer's opinion of apps?
- A We need to be careful when we use them.
- B They are best used for entertainment.
- C We should try not to use them too much.
- D They can help in many aspects of our lives.

4 10.3.7 10.5.2 **Fill in:** *real, grab, live, keep, basic, go, tap, independent, living, breaking.* **Use the phrases to make sentences based on the text.**

1 the ..... world
2 ..... feed
3 ..... news
4 ..... learners
5 ..... skills
6 in ..... time
7 ..... sb's attention
8 ..... the touchscreen
9 ..... sb updated
10 on the .....

5 10.4.5 **Match the words in bold to their meanings:** ***studying sth you have already learnt, complete, do, plants and animals, almost immediately, watch on the Internet, watching and checking carefully.***

see p. GR7

Grammar
Determiners & pre-determiners

Determiners are words such as *a/an, the, this, that, these, those, my, your, his, her, its, our, their, 's* (possessive 's). They are used before a noun.

Pre-determiners are words such as *all, both, half, twice, one-third, such, what,* etc. and come before determiners to give more information or place more emphasis on the noun.

3b

We've all heard someone say, 'there's an app for that', and with millions of apps to choose from, it seems they're right. Every day even more apps are being added to app stores by developers everywhere. A lot of us enjoy using apps for entertainment such as playing games, watching videos or catching up with our friends on social media. However, there are plenty more things that an app can do. From **monitoring** the weather and keeping us updated with breaking news to helping us learn a new language or explore the galaxy, there's an app for almost everything!

Apps that make learning fun

Starting from basic skills like learning the alphabet, and going right up to university physics, there are apps for all subjects and levels. Apps grab students' attention and help them become independent learners who **perform** even better in exams. **Revising** algebra, practising a language or simulating dangerous chemistry experiments can all be done just by tapping the touchscreen. Educational apps come in so many forms with apps offering 3D models of the human body, interactive textbooks or educational games and quizzes. Studying for exams has never been so much fun and can be done at home, on the go or even in the school break.

A guided tour through the living world

With over 8 million species of animals and around 300,000 species of plants on the planet, apps that can guide you through the living world are extremely useful. No longer do we have to search online to find what insect we saw in the garden or what plant is growing in the park. Just use your smartphone to take a photograph and **within moments** an app can tell you all you need to know about the **flora and fauna** without speaking to a biologist. It's almost like spending a day at the library.

Apps that are out of this world

Why stop at exploring the world around you? There's a **whole** universe out there. Now, you can explore space and browse maps of the night sky. Space map apps allow you to track the movements in the night sky in real time by simply holding your phone up in the air and tapping the screen. NASA (the National Aeronautics and Space Administration) has its own app that lets you track the International Space Station. You can even **stream** a high-definition live feed of the space station's view of Earth from cameras mounted on the outside.

Check these words

developer, monitor, keep sb updated, breaking news, basic skills, grab sb's attention, independent, perform, revise, algebra, tap, touchscreen, interactive, on the go, guide, the living world, flora and fauna, universe, browse, track, stream, live feed, mount

6 10.6.4 **Choose the correct word.**

1 Miras downloaded **an/the** amazing new app last night.
2 My dad used to have one of **these/those** old phones with antennas.
3 Can you help me with **these/those** books? I'm going to drop them!
4 Did you see **this/that** documentary on TV last night?
5 **All/Both/Some** of the twins study chemistry.
6 This is **so/what/such** an expensive smartphone!
7 **Each/Some/Either** computer game has its own story and characters.
8 Tom makes **all/twice/such** as much money as Jon.

Listening

7 10.2.1 10.2.8 **Listen to two classmates talking about smartphone apps. Mark the statements (1-6) as *T* (true) or *F* (false).**

1 Toby is using an app to study. .....
2 Toby thinks the app is very useful. .....
3 Toby says that books provide better information. .....
4 Roxanne agrees that some apps are useful. .....
5 Toby says apps can be difficult to use. .....
6 Roxanne agrees to try out a study app. .....

Speaking & Writing

8 10.1.1 10.3.3 10.3.5 10.5.8 10.6.1 10.6.15 **Do you think mobile apps are useful? Why (not)? Discuss with your partner. Use ideas from Ex. 7 and the expressions in the table, as in the example.**

Expressing opinion	
• In my opinion, ... • If you ask me, ... • I (don't/strongly) believe/think (that), ... • The way I see it, ... • It seems to me (that), ... • From my point of view, ...	
Agreeing	**Disagreeing**
• I (quite/completely/totally) agree. • I couldn't agree more. • You're right (there).	• I don't agree. • You are so wrong (there). • No, I don't think so./ That isn't true.

A: In my opinion, mobile apps are very useful.
B: I couldn't agree more. There are apps that can help you revise for your exams.

9 10.1.5 10.3.7 10.5.4 10.6.9 THINK! **Create your own mobile application. Write a paragraph about it and present it to the class.**

3c 2D Games

Vocabulary
Computer accessories & gadgets

1 a) 10.5.2 Listen and repeat the words in the list. Then match the words to the pictures (1-8).

- smartphone • monitor
- speakers • tablet • mouse
- headphones • keyboard
- games console

b) 10.5.2 What do we use the items in Ex. 1a for? Tell the class.

We use a mouse to move the cursor around the screen.

Reading & Listening

2 10.4.3 Read the definition. What differences are there between 2D games and 3D games? Skim read the article to find out.

2D (adj): having two dimensions i.e. having width and length but no depth

The World of 2D Gaming

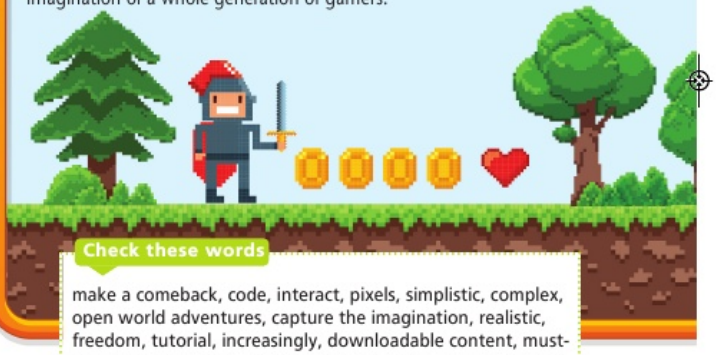
You may think that games with 2D computer graphics are a thing of the past, but these cartoon-like games are making a surprise comeback. So maybe it's time to find out about the wonderful world of 2D gaming.

Making 2D

To create 2D video games, you need to know how to code. [1] Computer programmers must write a series of **commands** that the computer can understand. They use code to create the characters and program them to **interact** with other objects in the game. Early 2D characters were made from just a few pixels – small squares that were **combined** to create a simplistic-looking character.

The Early Heroes

In the 1970s and 1980s, there were no consoles to play your favourite 2D games on in the comfort of your own home. [2] There, they **defended** the Earth from aliens in the shooter game *Space Invaders* or bounced around in platform games such as *Donkey Kong* or *Mario Bros.* In these games, the characters run left or right across the screen leaping from one platform to the next. [3] In *Mario Bros.*, **courageous** plumber Mario tries to defeat creatures coming out of New York's sewers. The arcade video games may seem simplistic compared to today's complex open world adventures, but these games captured the imagination of a whole generation of gamers.



Check these words

make a comeback, code, interact, pixels, simplistic, complex, open world adventures, capture the imagination, realistic, freedom, tutorial, increasingly, downloadable content, must-have gadget, computer memory, download, collector's item, graphics, must, serious, pixelated, suitable, arcade

3 10.4.5 10.4.7 Read again and choose from the sentences A-F the one which fits each gap (1-5). There is one extra sentence.

Listen and read to check.

A That meant that they were more suitable for hand-held devices.
B These were also the first games to have storylines.
C However, larger games with many levels may require a whole team of programmers.
D Learning to code is like learning to speak a new language – computer language.
E 2D now seemed very old-fashioned.
F People went to amusement arcades to play on game machines.

2D vs 3D

In the 1980s and 90s, programmers began developing games with 3D computer graphics. These were more realistic than games with 2D images and allowed the players more freedom to explore the virtual world. New games consoles such as *PlayStation* and *Xbox* used all the power of newer technology to create open world games with immersive gameplay. [4] Games now came with tutorials to take the player through the **increasingly** complicated controllers and with extra downloadable content for more adventures. It seemed that the days of 2D gaming were over. Or were they?

Return to 2D

As smartphones became the must-have gadget for the new millennium, designers were looking for games that could be played on them. 2D games were cheaper to produce than 3D ones and didn't **require** as much computer memory. [5] In 2012, *Angry Birds* was the first mobile game to reach 1 billion downloads. Today, *Angry Birds* is so popular that it has been downloaded over 3 billion times, has produced a range of toys and a film that was a box-office hit. 2D games are back. Console makers have released modern versions of old 2D consoles that are sold as collector's items, and new games are still being produced. So while excellent graphics and complex gameplay are **a must** for any serious gamer, it seems there's still a place in their hearts for little pixelated characters who run and jump to collect gold coins.

4 10.4.1 **Answer the questions.**

1 What are the advantages and disadvantages of 2D games?
2 Why are 2D games popular again?
3 THINK! 10.1.7 10.3.3 Which games (2D or 3D) would you prefer to play? Why?

5 10.5.2 **Fill in:** *memory, platform, item, open, must-have, downloadable, game, hand-held.* **Make sentences based on the text.**

1 ..... machines	5 collector's .....
2 ..... device	6 ..... gadget
3 computer	7 ..... world games
4 ..... content	8 ..... games

6 10.4.5 **Match the words in bold in the text to their meanings.**

• need • essential • protected • brave
• orders • have an effect on each other
• joined • more and more

Grammar Quantifiers

see p. GR8

7 10.6.2 **Choose the correct words. Then make sentences using the other words.**

1 Are there **any/some** secret levels in this game?
2 There are very **few/little** platform games around these days.
3 Mobile games can be **a lot of/much** fun.
4 This games console doesn't use **many/much** electricity.
5 Until recently, there weren't **much/many** VR games and **any/some** hardware that existed was very expensive.

8 10.6.2 **Read the sentences. Which word/phrase is not possible in each sentence?**

1 **All/Several/Every/Each** of these games can be played on your console.
2 These games take up **a large amount of/a great deal of/a number of/a lot of** the computer's memory.
3 In the 1980s, there were **no/hardly any/any/a small number of** 3D games.
4 **Much/A large number/Several/A couple** of my friends don't play computer games.

9 10.6.2 **Make sentences based on the text using:** *the whole of, both, neither, either, none.*

Speaking & Writing

10 10.1.10 10.2.8 10.5.1 10.5.6 **In groups, design a video game. Think about:** ***the type of game, the title, characters, what happens in the game, how players win, what they win.*** **Tell the class.**

11 10.5.3 10.5.8 10.5.9 10.6.9 THINK! **Now write a paragraph about your game. Remember to punctuate your writing correctly.**

3d Writing

An opinion essay

Writing Tip

An **opinion essay** is a formal piece of writing in which we present our personal opinion on a topic and support it with reasons and examples. An opinion essay consists of:

- an **introduction** in which we introduce the topic and clearly state our opinion.
- a **main body** consisting of three paragraphs. The first two present separate viewpoints, each supported by reasons/examples, and the third paragraph presents the opposing viewpoint supported by reasons/examples. Each paragraph starts with a topic sentence which summarises the main idea of the paragraph.
- a **conclusion**, in which we restate our opinion in different words.

We normally use present tenses. We link our ideas with appropriate linking words.

Adding more points: *Moreover, Furthermore, Also, Apart from this, In addition,* etc

Listing points: *To begin with, Firstly, In the first place, Secondly, Last,* etc

Introducing opposing viewpoints: *On the other hand, Although, However,* etc

Introducing examples/reasons: *For example/instance, Such as, Therefore, In particular,* etc

Expressing results: *As a result, Consequently, So, As a consequence,* etc

Concluding: *To sum up, All things considered, Taking everything into account,* etc

To express our opinion we use phrases such as: *I believe, In my opinion, I think, It seems to me that, To my mind, I strongly disagree with, I am totally against, I completely agree with,* etc

We do not use colloquial expressions, everyday language, short verb forms or chatty personal language. We use **formal expressions, longer sentences, full verb forms** and **formal linking words**.

We can also find this type of writing in the form of an article in newspapers, magazines etc.

1 Almost all new computer games these days are 3D games. Some people still think that 2D games are a good option for gamers, but **I believe** that 3D games are the best option for today's gamers.

2 **To begin with**, 3D games have excellent graphics. **For example**, the landscapes in these games are extremely detailed and the characters are incredibly realistic. **As a result**, the game worlds are believable making the game more enjoyable.

3 **Secondly**, 3D games have open world gameplay that can be fully explored. Players have the freedom to go wherever they want. **Therefore**, gamers have a fully immersive experience.

4 **On the other hand**, the latest 3D games need expensive hardware to play them. As a result, some people might prefer 2D games because they cannot afford the technology for 3D games.

5 **In conclusion**, I believe that 3D games are the only type of game for serious gamers. Their excellent graphics, open world gameplay and immersive experience provide the best gaming experience.

1 10.5.4 **Read the rubric. Underline the key words and answer the questions.**

You have had a class discussion about the following statement: *3D games are the best option for the current generation of gamers*. Your teacher has asked you to write an **essay** giving your opinion with reasons to support your opinion (120-180 words).

1 Who is going to read your essay?
2 What do you have to write in your essay?
3 What style will you use: *informal*? *formal*? Why?
4 What is your opinion on the topic? Give reasons.

3d

2 a) 10.5.5 10.5.7 **Read the essay and match the paragraphs (1-5) to the headings (A-E) below.**

A ☐ restate opinion
B ☐ second viewpoint & reasons/examples
C ☐ state topic & opinion
D ☐ first viewpoint & reasons/examples
E ☐ opposing viewpoint & reasons/examples

b) 10.5.5 10.5.7 **Answer the questions.**

1 What is the writer's opinion?
2 What viewpoints and reasons/examples does he/she use to support his/her opinion?
3 What is the opposing viewpoint?

3 a) 10.6.16 **Read the essay again. Which of the linking words in bold:**

• introduce an opinion? • list points? • add more points?
• show results? • introduce an opposite viewpoint?
• introduce examples? • conclude?

b) 10.6.16 **Replace the words in bold in the essay with: *In addition*, *Consequently*, *To start with*, *For instance*, *To sum up*, *In my view*, *However*. Check with your partner.**

Topic/Supporting sentences

4 10.5.5 **Read the topic sentences. Use the phrases to write supporting sentences, as in the example.**

1 On the other hand, some people believe that traditional games and sports are better than computer games.
• no batteries needed
• use your body
For instance, you don't need batteries to play these games. What's more, they require you to use your body more, helping you to get exercise.

2 3D computer games are more realistic than 2D games.
• detailed landscapes
• believable facial expressions

3 In conclusion, I believe that virtual reality will become very popular in the future.
• experience more realistic games
• have virtual trips and holidays

5 10.5.5 **Read the essay topic and match the viewpoints (1-4) to the supporting reasons/ examples (a-d).**

"Games developers should stop producing 2D games"

Viewpoint

1 ☐ 2D games are still popular.
2 ☐ 2D games can be complex and interesting.
3 ☐ 3D games are more realistic.
4 ☐ There is more to explore in 3D games.

Reason/Example

a The graphics are more detailed and lifelike.
b You can move in any direction.
c Although the graphics are simple, the stories are not.
d They are perfect for smartphones and tablets.

6 10.1.7 10.5.1 10.5.3 10.5.4 10.5.7 10.5.9 10.6.9 **Use ideas from Ex. 5 and the plan to write your essay (120-180 words). Use phrases from the *Useful language* box.**

Plan

Para 1: state the topic, give your opinion *(Most computer games are made in 3D ... but I believe that ...)*
Paras 2 & 3: present viewpoints & support them with reasons/examples *(Firstly, ... For example, ...)*
Para 4: present the opposite viewpoint with reasons/examples *(On the other hand, ... It would be ...)*
Para 5: restate your opinion in other words *(All in all, I believe ...)*

Useful language

In the first place ...; Furthermore, it is essential ...; On the other hand, it can be argued ...; All things considered, it seems to me that ...; For example, ...; Moreover, ...; As a result, we ... .

3e Culture Corner

VR-ART: Create Noosa

1 a) 10.1.1 10.1.4 10.1.6 **What different forms of art do you know (e.g. painting, graffiti)? In pairs, make a list. Tell the class.**

b) 10.1.1 10.2.1 10.4.3 **What do you think virtual reality art is? Tell your partner. Skim the text to find out.**

2 10.4.2 **Read the text again and, for questions 1-10, choose the correct word (A, B, C or D). Listen and read to check.**

3 10.5.2 **Fill in:** *cave, come, unique, job, gain, virtual, promising, develop.*

1 ..... application
2 ..... skills
3 ..... artists
4 ..... painting
5 ..... sculpting
6 ..... first
7 ..... experience
8 ..... opportunity

4 10.4.1 **Answer the questions.**

1 How do students produce an entry for this competition?
2 How can this competition help young people?
3 THINK! 10.3.3 What is your opinion of virtual art?

5 10.4.8 10.5.6 ICT **Find information about an art and/or technology award for young people in your country (e.g. what it is, when and why it was started, what it involves, why someone should take part in it, what the prize is). Write a paragraph about it, then read it to the class.**

From the early days of cave painting, humankind has always created art. We have taken what we see **1)** ..... us and used it to imagine scenes that we then drew on walls. Thousands of years later, we are still creating art, **2)** ..... the walls are no longer solid rock – these days, they're virtual.

Create Noosa is the world's first virtual reality art competition for schools. Entrants design 3D artworks, 3D light-painting or virtual sculpting, using virtual reality equipment in a VR studio provided by the competition organisers. The equipment **3)** ..... you to paint in 3D brushstrokes. Unlike traditional art, VR art is not confined to the size of your canvas or the material you sculpt from – here, you can create worlds that only exist in your imagination.

Started in May 2017, this exciting event is open to high school students from Noosa, a town in Queensland, Australia. The idea for the competition **4)** ..... from a local group of creative technology professionals. Their aim is to identify young talent and motivate students to develop their tech skills. It also helps students gain professional experience **5)** ..... would look great on any future job application.

The promising young artists are **6)** ..... to the VR tools through tutorials, in which instructors show them how to use the VR program. Then they head to the VR studio, where they start the creative process. They **7)** ..... on their project at school and at home, building up ideas and sketches to help them create their final piece in the studio. When their studio time is over, the VR artworks are saved to a database and safely **8)** ..... up. Judged **9)** ..... a panel of industry professionals, the competition offers a VR system for coming first and drawing tablets for two runners-up. *Create Noosa* is not only a unique opportunity for young artists to explore their creativity, it's **10)** ..... a chance to see the possibilities of VR combined with the human imagination.

1	**A**	between	**B**	around	**C**	against	**D** towards
2	**A**	as	**B**	that	**C**	but	**D** because
3	**A**	makes	**B**	accepts	**C**	lets	**D** allows
4	**A**	came	**B**	arrived	**C**	began	**D** rose
5	**A**	whose	**B**	which	**C**	where	**D** who's
6	**A**	presented	**B**	proposed	**C**	introduced	**D** announced
7	**A**	work	**B**	take	**C**	make	**D** try
8	**A**	checked	**B**	locked	**C**	backed	**D** joined
9	**A**	by	**B**	in	**C**	with	**D** for
10	**A**	too	**B**	still	**C**	also	**D** yet

Check these words

humankind, scenes, solid, entrant, studio, brushstrokes, confine, canvas, aim, identify, tutorial, process, sketch, database, judge, professionals

Curricular: IT 3f

How VR Works

VIDEO

It's a normal Tuesday at school. In Geography, you're sitting on the edge of a volcano that's about to erupt. After the break, you're walking on the **surface** of the Moon in Science. In the afternoon, it's English, and today, you're in the **audience** for the first night of Shakespeare's *Romeo and Juliet*. Sounds impossible, doesn't it? VR, though, will soon make this school day a reality.

VR involves hardware and software. A VR headset covers your eyes and ears completely, making sure that the real world doesn't **intrude**. It is connected to a console either wirelessly or with an HDMI cable. The console **runs** the software that creates the virtual environment you experience. For that environment, the VR headset copies the way our eyes work. It sends two **images** which appear on a display (the screen) for us to focus on, one for each eye. These images are sent to our brains, tricking them into 'seeing' 3D.

The headset tracks our movements and changes what we see on the display. When we move our head up, the image moves up. When we move our head down, the image moves down. The display is large enough so that we cannot see its edge. It is immersive – we can only see the image on the display.

Also on the headset are headphones that **block out** the noise of the real world and provide the sound of the virtual environment. Like the display, the sound moves when we move. Sometimes, it is behind us and sometimes it is in front of us. To allow us to **physically** interact with the environment, there are controllers that we either hold or wear on our hands. Similarly, a microphone built-in to the headset allows us to communicate in the virtual world. In the future, we will also have bodysuits or sensors that pass on sensations to complete the experience of the virtual environment. So the next time you have a Geography lesson, you won't just be able to see and hear that volcano – you might even feel the heat.

Check these words

surface, audience, intrude, wirelessly, HDMI cable, copy, focus on, trick, track, immersive, block out, similarly, built-in, pass on

1 10.1.6 10.4.8 10.5.2 **Look at the pieces of equipment below. What do they do? Check in a dictionary or online.**

• VR headset • console • HDMI cable • display
• headphones • microphone • controller • sensors

2 10.4.3 **How does the equipment in Ex. 1 create virtual reality?**

Listen and read to find out.

3 10.4.2 **Read the text again and answer the questions.**

1 How is the headset connected to the console?
2 How do our brains get the 3D images?
3 What does the headset follow and why?
4 Why can't we hear what is happening in the real world?
5 What will make us feel the virtual environment in the future?

4 10.4.5 **Match the words in bold in the text to their meanings below.**

• interrupt • pictures
• people at a performance
• ground • controls
• using the body • stop

5 10.1.5 10.1.6 10.5.2 **Write a short summary of the text using the words in Ex. 1.**

The headset covers our eyes and ears completely. The console ..., etc.

3 Language in Use

Phrasal verbs/Prepositions

1 10.5.2 10.6.15 **Complete with the correct particle(s).**

look after: take care of
look into: do research about
look over: examine quickly
look up to: admire
try on: put on clothing to see if it fits
try out: compete for a place (in a team)
try sth out: use sth to see if it works/you like it

1 Ben is trying ..... for the basketball team.
2 Samal sometimes looks ..... her little sister.
3 Miras looked ..... the essay he had written.
4 Paul is trying ..... his new VR headset.
5 Jon has always looked ..... his favourite uncle.
6 NASA are looking ..... using VR to explore Mars.

2 10.5.2 **Fill in:** *on (x3), to, out.*

1 The competition is open ..... all ages.
2 The class is going ..... a field trip tomorrow.
3 I've saved all my files ..... a flash drive.
4 Can you print ..... my project for me?
5 Kanat spends all his time playing ..... his games console.

Words often confused

3 10.5.2 **Choose the correct word.**

1 There are millions of apps to **select/choose** from.
2 It's a game that **allows/lets** you build a community.
3 We can **simulate/stimulate** an alien planet with VR.
4 Dan has only got basic computer **talents/skills**.

Word formation

4 10.5.2 **Fill in the correct word derived from the word in brackets.**

Adjectives from verbs
We can add the suffixes **-able** (*download – downloadable*), **-ive** (*immerse – immersive*), **-ing/-ed** (*interest – interesting/interested*), **-ible** (*sense – sensible*), **-ent** (*excel – excellent*) to verbs to make adjectives.

1 This app allows students to get ..... . **(CREATE)**
2 Ayagoz is a ..... girl who always makes the right decisions. **(SENSE)**
3 The VR game felt very real and I was ..... . **(FRIGHTEN)**
4 Playing video games is my idea of a ..... hobby. **(RELAX)**
5 Sanzjar's new smartphone is totally ..... from his old one. **(DIFFER)**

Collocations

5 10.5.2 **Fill in:** *breaking, live, flora, monitor, high-definition, built-in, must-have, generate, independent, collector's.*

1 ..... graphics
2 ..... feed
3 ..... and fauna
4 ..... electricity
5 ..... weather conditions
6 ..... news
7 ..... item
8 ..... microphone
9 ..... learner
10 ..... gadget

Kazakhstan in Action!

Read and fill in the correct word.

- The Kazakh government is currently working **1)** ..... plans to create a virtual museum system by 2025. This will promote Kazakh culture and heritage and **2)** ..... it accessible to everyone!
- You don't need to have interactive computer games at home because the Khan Shatyr mall has its **3)** ..... game lounge **4)** ..... children can gather to play the latest video games.
- Kobylanda Zhanabekuly from Almaty created a 'Game of Thrones' style board **5)** ..... called Kazakh Khanate. It is patented and is totally unique **6)** ..... Kazakhstan.
- The Tamgaly ravine near Almaty is home to some amazing rock paintings. The paintings **7)** ..... show chariots, tamgas and discs **8)** ..... now considered a UNESCO World Heritage site.

SMARTPHONES:

Just how smart will they get?

The pace of technological advancement in the mobile phone industry is nothing short of astonishing. Ten years ago, mobiles were just about making calls. Today, they are cameras, video cameras, portable media players, and so much more. How else might mobile phone technology advance in the future?

High-speed Internet connections on mobiles make it possible to watch TV and also play interactive games. The problem is the size of the picture. Who wants to watch a movie on a 5-inch screen? The solution will be built-in projectors. Televisions may soon become a thing of the past thanks to technology that will allow people to create a big-screen experience on their living room wall with their mobiles.

Another new development is the flexible screen. Scientists have already developed the technology that would allow mobile screens to take on various forms. Imagine being able to roll out the screen from your phone so it is closer to the size of a laptop, then roll it back up to fit in your pocket. This kind of technology could make laptops and desktops obsolete.

Mobile phones will also replace our wallets, turning us into a cashless society. Technology will turn our phones into credit cards, IDs, keys for our cars and homes, and more. In some countries, many users already purchase products with their phones.

Smartphones will also inform us of goods and services we might like wherever we are. We will need to be comfortable with having large amounts of information about our lifestyles on our phones for this to happen. But this is already the case for people who regularly use social networking websites.

Looking further into the future it is certain that smartphones will incorporate nanotechnology, allowing us to use our phones to scan our food for harmful toxins, for example. In short, the smartphone of the future will be the ultimate do-anything gadget. In the words of Eric Schmidt, Google's chairman and CEO, "it will be our alter ego – fundamental to everything we do".

Progress Check 3

Reading

1 10.4.2 **Read the article and choose the correct option (A, B, C or D).**

1 The reason people may use TVs less in the future is
- **A** smartphones will have bigger screen displays.
- **B** TV programmes will be made especially for smartphones.
- **C** smartphones will be able to project images onto walls.
- **D** TV programmes will all be watched on PCs.

2 Smartphone screens will soon be
- **A** unbreakable.
- **B** rigid.
- **C** expandable.
- **D** exchangeable.

3 In the future, cash could become
- **A** more valuable.
- **B** no longer necessary.
- **C** used in only some countries.
- **D** made of plastic.

4 In order for our phones to suggest goods and services to us, we would have to
- **A** make changes to our lifestyle.
- **B** join a social networking site.
- **C** provide location details.
- **D** sacrifice some privacy.

5 The nanotechnology of the future may
- **A** replace smartphones.
- **B** release harmful toxins.
- **C** be used in a number of gadgets.
- **D** revolutionize smartphones.

5x2=10 marks

Listening

2 10.2.8 **Listen to a man talking about the future and decide if the following statements are *T* (true) or *F* (false).**

1 We will have devices implanted in us. .....
2 It will be impossible to lose anything in the future. .....
3 Mobile phones will have disappeared by 2100. .....
4 We will go online by putting on glasses in 2100. .....
5 By 2100, everyone will know all there is to know. .....

5x2=10 marks

3 Progress Check

3 10.5.2 **Fill in:** *code, interact, hand-held, level, tap, arcade, stream, lightweight, comeback, audience.*

1 I like playing online because I can ..... with other gamers.
2 At the end of the play, the ..... stood up and clapped.
3 I've heard that 2D games are making a(n) ..... .
4 Virtual reality games takes gaming to the next ..... .
5 Just ..... the screen to start the app.
6 We can't afford to go to the concert, but we can ..... it online.
7 *Super Mario Bros.* started as a(n) ..... game.
8 This new console is so ..... I can pick it up with one hand.
9 I have at least four chargers for all my ..... devices.
10 I'm learning to ..... so I can create my own 2D games.

10x2=20 marks

4 10.6.8 **Complete the sentences with the correct future form of the verbs in bold.**

1 I think Tom's new app ..... **(make)** him rich.
2 Look out! You ..... **(knock)** your phone off the table!
3 Our IT class ..... **(start)** at 9:15 am.
4 This time next week, they ..... **(release)** the new VR headset.
5 We ..... **(buy)** a 3D TV during the winter sales.
6 Don't worry. I promise I ..... **(not/let)** you down.
7 I ..... **(not/be)** at work on time; there's a traffic jam.
8 Umit ..... **(turn)** 16 this November.
9 Alisher ..... **(get)** a new games console this weekend.
10 Perhaps Sam ..... **(go)** to the science fair with you?

10x2=20 marks

5 10.6.4 **Choose the correct item.**

1 Miras showed me **such/what** a great app that I downloaded it myself.
2 I'll use **that/these** app I installed to find the directions.
3 **These/All** of my friends have this app on their smartphones.
4 Oliver checks his emails **all/twice** a day.
5 When is Miss Dawkins giving us **this/our** grades?

5x2=10 marks

6 10.6.2 **Choose the correct item.**

1 There is **a great number/a lot of** interest in wearable technology.
2 There was **hardly any/several** memory, so I deleted some apps.
3 How **much/many** levels does this game have?
4 **A large number/A great deal** of students entered the VR competition.
5 Do you know **much/any** of Daniya's friends?
6 **No/Neither** of the consoles comes with a VR headset.
7 I was playing on my console for **plenty of/a couple of** hours.
8 **A few/A little** students take their smartphones to school.
9 **Both/Some** of the twins enjoy playing 2D games.
10 There are **several/a little** VR games, but they are very expensive.

10x1=10 marks

7 10.5.1 10.5.7 **Read the rubric and write your essay.**

You have had a class discussion about the following statement: *Virtual reality is only useful for entertainment.* Your teacher has asked you to write an essay giving your opinion with reasons to support your opinion (**120-180 words**).

20 marks

Total: 100 marks

Check your Progress

- talk about virtual reality ____
- use future tenses ____
- use determiners/pre-determiners & quantifiers ____
- write an opinion essay ____

GOOD ✓ VERY GOOD ✓✓ EXCELLENT ✓✓✓

Module 4
Organic and non-organic worlds

Vocabulary: organic and non-organic food production, renewable energy sources
Grammar: pronouns – quantifiers, future perfect (active/passive voice), future perfect continuous
Phrasal verbs: *do, drop, get*
Word formation: forming verbs from nouns/ adjectives
Writing: a for-and-against essay
Culture Corner: *The Organic Industry in the UK*
Curricular *(Citizenship)*: *How to be... a responsible shopper*

Vocabulary
Organic and non-organic food

1 10.3.7 10.5.2 Listen and say. Which relate to: *organic food production*? *non-organic food production*? Tell the class.

2 10.3.7 10.5.2 Match the two columns to make complete sentences. Tell the class.

In organic food production...

1 ☐	biological pesticides	A is GMO-free and has organic ingredients.
2 ☐	compost	B can help prevent disease.
3 ☐	animal feed	C can help reduce pests/ disease.
4 ☐	good living conditions	D is used as fertiliser.

In non-organic food production...

5 ☐	farmers spray chemical pesticides	E to prevent and treat illness and make animals grow faster.
6 ☐	animals eat any type of food	F to increase the growth of plants.
7 ☐	livestock are given antibiotics & hormones	G to protect crops from pests.
8 ☐	farmers use synthetic fertilisers	H which can contain synthetic substances.


A chemical pesticides

VIDEO


B GMO (genetically modified organism) crops


C compost (food and animal waste)


D biological pesticides (such as ladybirds and beetles)


E hormones and antibiotics


F synthetic fertilisers

OVER TO YOU! 10.3.3
Which two things about non-organic food production have the worst effect on our health? Why?

4a Organic food

Vocabulary

1 a) 10.5.2 THINK! In a minute, write as many words as you can think of under each heading. Compare with your partner.

FRUIT VEGETABLES
MEAT DAIRY PRODUCTS

b) 10.3.7 THINK! Which items from the lists above do you usually buy organic? How often do you buy organic food? Why (not)? Tell your partner.

Reading

2 10.4.1 Read the title and the headings. What is the text about?
Listen and read to find out.

3 10.4.2 10.4.9 Read again and mark the sentences *T* (true), *F* (false) or *DS* (doesn't say).

1 People have recently started eating organic food. .....
2 Only items that are 100% organic can have an organic label on them. .....
3 Biological pesticides are not as effective as chemical ones. .....
4 On organic farms, compost is used as a fertiliser. .....
5 Synthetic hormones are used to prevent disease in animals. .....
6 Non-organic foods are higher in antioxidants. .....

Save the
ENVIRONMENT
and eat
ORGANIC!

VIDEO

Some people say 'you are what you eat,' and they might be right. For example, if you only eat unhealthy foods, you're likely to become unhealthy, too! This is why many people are replacing unhealthy snacks with organic foods in an effort to take better care of themselves.

TYPES OF ORGANIC FOOD

We've all seen organic food and drinks at the farmer's market or our local supermarket. There's organic fruit, vegetables, juices, dairy products, grains and cereals, legumes, meat and even chocolate! You can tell which products are organic by looking for the different organic labels on the packaging. Some foods, such as fresh produce or meat are certified 100% organic and other foodstuffs, for example bread, may not be totally organic, but might contain some organic ingredients.

PRODUCING ORGANIC FOOD

So, what is organic food? Well, organic food is different to regular food because it is produced without the use of any synthetic substances. Farmers have to follow lots of strict rules in order to produce it. Let's find out what some of those rules are ...

4 10.5.2 Fill in: *hormones*, *compost*, *ingredients*, *produce*, *welfare*, *pesticides*.

1 Organic farming methods protect animals' ..... .
2 This bread contains some organic ..... .
3 Some animals are given ..... to make them produce more milk.
4 Local ..... is fresher because it doesn't need to travel far before it's sold.
5 Many farmers spray their crops with chemical ..... to prevent pest damage.
6 You can easily make ..... from your kitchen and garden waste.

- No genetically modified organisms (GMOs) – These are plants or animals that are artificially changed to grow faster or be resistant to disease.
- No chemical pesticides – Some farmers use biological pesticides. This means using larger insects or birds to eat the pests that damage the crops. One example is using ladybirds to eat the aphids that damage crops. It's natural and much safer for the environment.
- No synthetic fertilisers – Farmers can only use organic compost made from food and animal waste as a fertiliser. This means that synthetic fertiliser doesn't build up in the environment, causing harm to other plants and wildlife.
- Focus on animal welfare – Organic farming promotes animal welfare. In fact, the animals can only have organic feed and they must have good living conditions.
- No synthetic hormones and medicines – Organic farmers don't use synthetic hormones to increase the animal's growth or milk production. They also avoid medicines such as antibiotics to prevent and treat infections.

THE BENEFITS OF EATING ORGANIC

When we take all this into consideration, we can see why organic food is good for us and the environment, too. It doesn't contain high levels of synthetic chemicals and producing it can be less harmful to other plants and wildlife. Furthermore, studies have found organic produce to contain more beneficial nutrients and antioxidants than their non-organic equivalents. Whilst some non-organic foods may not be harmful to us and may still provide us with the vitamins and minerals we need, the benefits of organic food are clear. Whatever you choose to buy, always check the label because if you don't recognise an ingredient, chances are your body won't either.

Check these words

organic label, animal welfare, feed, nutrients, artificially

5 10.4.5 **How do non-organic farming methods have a negative impact on the environment? Tell the class.**

Grammar

see pp. GR8-GR10

Pronouns – Quantifiers

6 10.6.2 10.6.6 **Study the table. When do we use relative/demonstrative/indefinite/reflexive pronouns and quantifiers? Check in the *Grammar Reference* section.**

4a

*The man **who** owns the organic farm is my granddad.* (relative pronoun) ***These** apples are 100% certified organic.* (demonstrative pronoun) *"Could **anyone** tell me how to make compost?" the teacher asked.* (indefinite pronoun) *Jane cut **herself** while preparing the salad.* (reflexive pronoun) *There are **many** nutrients and antioxidants in fruit.* (quantifier)

7 10.6.2 10.6.6 **Choose the correct option.**

A: Have you got the shopping list?
B: Yes, here it is. First we need **1) some/much** milk.
A: OK. Let's get this one. It's the same brand **2) that/who** my mum buys.
B: No, **3) everyone/someone** says organic milk is better for you. Perhaps we should try it for **4) ourselves/yourselves**.
A: Sure. I've never tried **5) anything/nothing** organic before.
B: OK, next we need **6) a little/a few** apples, too. **7) These/Those** green ones over there look delicious!
A: Yes, they do. Have we got **8) everything/anything**?
B: Yes. Let's go to the checkout.

Listening & Speaking

8 a) 10.1.1 10.2.2 10.2.4 10.2.5 **Listen to a lecturer talking about GM food. Read the questions (1-4) and make notes.**

1 How do Europeans and Americans differ on the question of GM food?
2 What are some of the arguments against GM food?
3 How are GMOs created?
4 Why do GM opponents argue against the idea that GM food will end world hunger?

b) 10.3.2 10.3.3 10.3.6 **Compare your notes with your partner. Tell the class.**

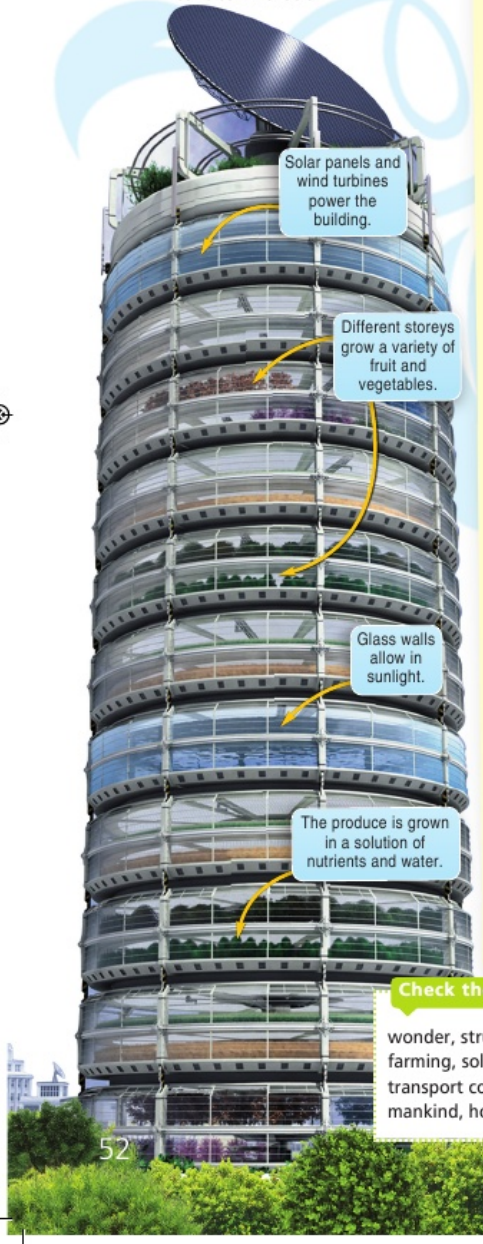
Writing

9 10.1.6 10.5.2 10.5.5 10.5.7 ICT **Do some Internet research to find out more information about GM food. Present it to the class.**

4b Skyscraper farms

Reading & Listening

1 10.4.1 10.5.2 Look at the picture. Then, listen to the sentences and repeat. What do you think a skyscraper farm is? How does it work? Read the text to find out.



VIDEO

Growing Up

Stories of The Hanging Gardens of Babylon, one of the seven wonders of the ancient world, tell of a structure with lush green gardens on different levels many metres high. [1] ***However, as our modern consumer society continues to drain the world of its resources, the population rises and food prices soar, a modern-day equivalent may soon be springing up in your neighbourhood!***

According to UN statistics, by the year 2050, the population of planet Earth will have risen to over 9 billion and feeding all these people will require extra farmland the size of Brazil! Finding this agricultural land will be a real challenge, but one that some creative scientists believe they have solved with the idea of vertical farming. [2] Just as an apartment block has different storeys, a vertical farm will have many different floors growing a variety of fruit and vegetables. [3] The walls will be made of glass to allow in sunlight and instead of soil, the produce will be grown in a solution of nutrients and water.

Dr Dickson Despommier, a professor at Columbia University, points out that just one 30-storey building could provide food for 10,000 people. [4] But as well as offering a solution to possible food shortages, this idea is environmentally friendly. Often, by the time food arrives on your plate, it will have been travelling for days or even months! Vertical farms, however, will go up in the centre of the city. [5] So, we'll save on transport costs, burn less fossil fuels and we'll all be eating fresh local produce from the skyscraper next door!

[6] Crops nearer the glass would get more light which means they would grow quicker than crops farther away. The only whole floor to get direct sunlight would be the top one. Possible solutions include having a permanent light source on every floor like the ones we now have in industrial greenhouses. At the moment, the cost of building and lighting these modern Hanging Gardens of Babylon is far too high. [7] Mankind has been farming horizontally for over 15,000 years, but now almost 80% of our farmland is already in use. Isn't it about time we started growing up?

How to consume less and produce more

- Convert the rooftop of your block of flats into a garden and grow your own vegetables.
- Use window boxes to grow fruit and veg like tomatoes, peppers and strawberries.
- Some communities are getting together and starting their own community farms on pieces of wasteland. You could get involved in a local project like this or even start one of your own!

Check these words

wonder, structure, lush, long gone, drain, rise, soar, equivalent, spring up, vertical farming, solution, nutrients, food shortage, environmentally friendly, powered, transport costs, local produce, permanent light source, industrial greenhouse, mankind, horizontally, consume, convert, wasteland

2 10.4.7 **Read the text again and for each gap (1-7) choose from the sentences A-H the one which best fits each gap. There is one extra sentence.**

A The idea isn't without its problems though.
B However, that doesn't mean we won't be able to do it soon.
C These are long gone.
D We are already using too much of our farmland.
E "With about 160 of these buildings, you could be feeding all of New York," he says.
F The idea is actually very simple.
G They will be powered by solar and wind energy.
H On one floor there will be lettuce, on the next carrots, and so on.

3 10.4.5 10.5.2 **Choose the correct word. Check in your dictionaries.**

1 Finding enough food to feed the world is a big **challenge/test**.
2 The population on Earth has **raised/risen** in recent years.
3 Many new businesses are **springing up/open up** in the area.
4 We need to **save/conserve** on transport costs.
5 The machine is **powered/controlled** by solar power.
6 Ulan's busy job sometimes **drains/exhausts** him of his energy.
7 The farm shop sells fresh **produce/outlet** such as beans and corn.
8 Fuel prices are **advancing/rising** at the moment; prices have nearly doubled since last year.

4 10.3.7 10.5.2 **Fill in:** *local, real, costs, vertical, friendly, food, wind, direct*. **Use the phrases to make sentences, as in the example. Tell your partner.**

1 *food* shortages
2 environmentally .....
3 ..... challenge
4 ..... turbines
5 ..... farming
6 ..... produce
7 transport .....
8 ..... sunlight

If the population continues to rise, there might be food shortages.

Grammar

see p. GR10

Future perfect – Future perfect continuous

5 10.6.8 **Read the theory and find examples of all the future tenses in the text in Ex. 1.**

We use the **future perfect** (will have + past participle) to describe an action that will be finished before a stated future time. *They **will have finished** making the roof garden before the end of next week.* (active voice) *The apartment **will have been built** by the end of the year.* (passive voice)
Time expressions used with the future perfect: before, by, by then, by the time, until/till (in negative sentences)
We use the **future perfect continuous** to emphasise the duration of an action up to a certain time in the future. *By next month, James **will have been working** at the farm for five years.*
Time expression often used with the future perfect continuous: By ... for

6 10.6.8 **Put the verbs in brackets in the *future perfect* or *future perfect continuous*.**

1 By the end of the year, we ..... **(live)** in this house for 10 years!
2 The rooftop of the new building ..... **(convert)** into a garden by next year.
3 Sanzjar ..... **(work)** as a gardener for 30 years by the time he retires.
4 I can't meet you at 6 o'clock. I ..... **(not finish)** work by then.
5 ..... **(we/find)** a solution to food shortages by 2050?

7 10.3.5 10.6.8 **Write: *two things you hope you will have done by the time you're 30, two things you will have been doing for over five years by the end of this year* and *two things that will probably have been invented by the end of the century*. Tell your partner.**

Speaking & Writing

8 10.2.1 **Listen and read the text again. What did you learn from the text? Tell your partner.**

9 10.1.5 10.1.9 10.6.13 THINK! **Why are vertical farms a good idea? How can they benefit society? Tell the class.**

4c Renewable energy sources

Speaking

1 10.1.9 10.5.2 **Look at the pictures. What do you know about renewable energy sources? Which source(s) is/are the most commonly used in your country? Tell the class.**

Study skills

Using prior knowledge
Before you read a text, think what you know about the topic. This will help you read the text more easily.

Reading

2 10.4.1 **Read the title of the text and the subheadings. Can you answer any of the questions?**
Listen and read the text to check your answers.

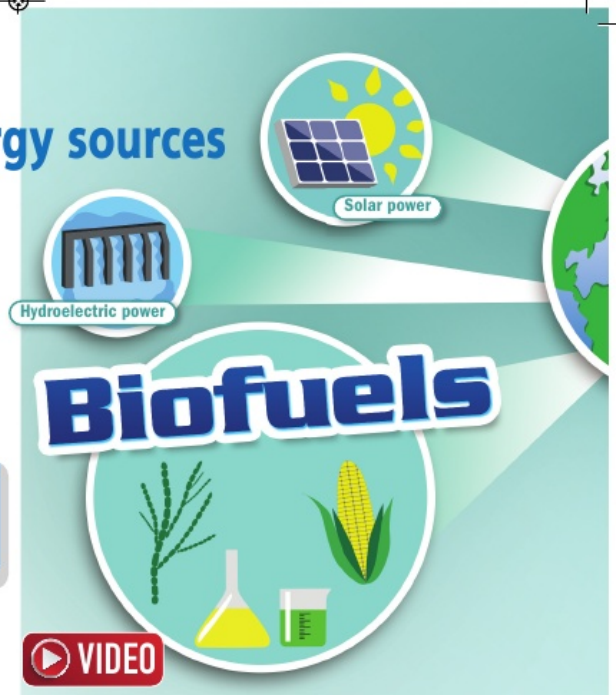
3 10.4.2 10.5.2 **Read again and complete the sentences with phrases from the text.**

1 Fossil fuels include ..... .
2 The types of biofuels are ..... .
3 The majority of biofuels consist of ..... .
4 Crops used for biofuels include ..... .
5 You have to mix biofuels with petrol or diesel ..... .
6 Biofuels help reduce ..... in the atmosphere, especially smoke and soot.

4 a) 10.5.2 10.6.2 **Fill in:** *source, fossil, carbon, organisms, dioxide, material, natural, chemicals, pollution, habitat, fats, acid.*

1 ..... fuels
2 living .....
3 renewable energy .....
4 ..... neutral
5 carbon .....
6 toxic .....
7 ..... rain
8 natural .....
9 plant .....
10 animal .....
11 air .....
12 ..... resources

b) 10.5.2 **Use the completed phrases to write a short summary of the text.**



Billions of gallons of biofuels are produced each year ... and they have been around since the early 20th century. But what are they?

What are they?

Many people believe that in the future, fossil fuels, such as coal, oil and gas are going to run out and will be replaced with biofuels. Fossil fuels are made from living things that died hundreds of millions of years ago whereas biofuels are made from recently living organisms such as plants and animals. All biofuels are considered to be a renewable energy source because they are quick and easy to replace. The three main types of biofuel include ethanol, biodiesel (both of which are mainly used in vehicles) and biojet fuel (which is only used in planes).

What are they made from?

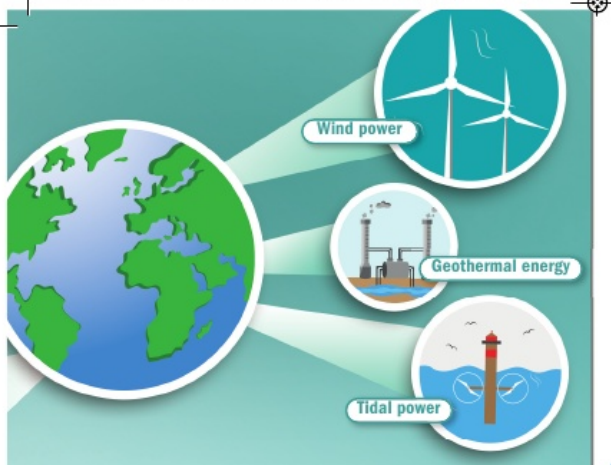
Most types of biofuel are made from plant material. Crops such as corn, sugar cane, wheat, rapeseed and soybeans can all be used to make biofuels. Other examples include palm and vegetable oils. However, there are types made from other materials, such as animal fats and waste.

How are they made?

Different biofuels have different methods in order to turn them into fuels and power engines. For instance, ethanol is often mixed with petrol. In a similar

Speaking

5 a) 10.4.6 **Do you think the writer is in favour of or against biofuels? Tell the class. Justify your answers based on the information in the text.**



way, biodiesel is mixed with regular diesel and biojet fuel is mixed with jet fuel.

Are they better for the environment?

This is a difficult question to answer but there are definitely some advantages. Some people say that they are better because they are carbon neutral. This means that the carbon dioxide they produce when they are used is the same as the amount taken up by the plants as they grow. So overall, they don't increase the amount of carbon dioxide in the atmosphere. Another advantage to using biofuels is that they produce less toxic chemicals than regular fuels and some biofuels are even non-toxic, non-flammable and biodegradable. This means less air pollution due to smoke and soot and sulfur which means less acid rain. Also, biofuels can increase farmers' incomes and lower fuel prices by limiting the demand for fossil fuels.

There are some disadvantages to biofuels, though. For example, it takes a lot of people, energy, money and natural resources (water, land, etc.) to grow the crops required to produce biofuels. A lot of this land space could be used for growing food crops and plants instead. As a result, some people are worried that even more land will be cleared in the future in order to grow more crops for biofuel production. This means destroying the natural habitat of some wildlife and possibly causing them to become endangered or even extinct.

Conclusion

Overall, biofuels have both pros and cons. It seems that although biofuels produce less emissions than fossil fuels they can only slow down global warming. Therefore we still have to invest in other technologies like solar power, but it is a good start.

Check these words

fossil fuels, non-flammable, biodegradable, acid rain, natural resources

4C

b) 10.3.3 10.3.4 THINK! **Do you think we should encourage the production of biofuels? Why (not)? Which renewable energy source(s) (see Ex. 1) is/are better for the environment? Discuss with your partner.**

Listening

6 10.2.3 10.2.4 10.2.7 **Listen to two people talking about biofuels. For questions 1-5, choose the correct answer A, B or C.**

1 Keith says that installing solar panels
- **A** helps protect the environment.
- **B** costs a lot of money.
- **C** makes electricity bills less expensive.

2 Both speakers agree that
- **A** the town is a good location for a wind farm.
- **B** wind turbines will spoil the landscape.
- **C** birds can be hurt by wind turbines.

3 In Keith's opinion
- **A** a dam would prevent the town from flooding.
- **B** hydropower isn't a good solution for the town.
- **C** a dam can produce enough electricity for the whole town.

4 How does Kimberley feel about Keith's view of biofuels?
- **A** She strongly agrees.
- **B** She neither agrees nor disagrees.
- **C** She completely disagrees.

5 Kimberley suggests that biofuels
- **A** cause more air pollution than regular fuels.
- **B** aren't as environmentally-friendly as we think.
- **C** often lead to food shortages.

Writing

7 10.1.5 10.5.2 10.5.5 10.5.9 10.6.4 10.6.8 10.6.17 ICT **Do some Internet research to find out information about another renewable energy source. Prepare a short presentation. You can use the text in Ex. 2 as a model. Proofread your work for any spelling or punctuation mistakes before handing it in. Present it to the class. Use their feedback to improve your main area(s) of weakness.**

4d Writing

A for-and-against essay

Writing Tips

Writing for-and-against essays

For-and-against essays present the advantages and disadvantages of a topic. They normally consist of:

- an **introduction** presenting the topic *without* giving an opinion.
- a **main body** presenting the points for and against the issue in separate paragraphs. Each argument is supported with justifications and examples. Each paragraph should start with a topic sentence that summarises the main idea of the paragraph.
- a **conclusion** presenting the writer's opinion or giving a balanced consideration of the topic.

For-and-against essays are written in a **formal**, impersonal style so short sentences, colloquial expressions and idioms are avoided.

You can begin and end your essay with any of the following techniques:

- address the reader directly. *We all know how frightening it can be to sit an important exam.*
- include a quotation. *As Martin H Fischer said, "Any man who does not make himself proficient in at least two languages other than his own is a fool."*
- include a rhetorical question. *Isn't it amazing that you can now study subjects like video game engineering and surfing science?*

1 10.5.5 10.5.7 **Read the rubric and answer the questions.**

> You have seen the following announcement in an environmental magazine: *"Should we only eat organic food?"* Send us an essay discussing the pros and cons of this proposal.
> Write your essay (120-180 words).

1 What type of essay do you have to write?
2 What style will you write it in?
3 Write *A* for advantage and *D* for disadvantage next to items 1-8 related to eating organic food. Compare with your partner.
1 *contains more nutrients* ☐; **2** *costs more than regular food* ☐; **3** *doesn't contain toxic substances* ☐; **4** *is better for wildlife and the environment* ☐; **5** *could be beneficial for health* ☐; **6** *often goes off quickly* ☐; **7** *more natural* ☐; **8** *more likely to go to waste* ☐.

2 10.5.4 **Read the essay. Which techniques has the writer used to start/end the essay?**

3 10.5.5 10.5.7 **Which paragraph (1-4): *gives the writer's opinion? presents the topic? gives the arguments against the topic? gives the arguments for the topic?***

1 Do you try your best to eat foods that are good for you? Today, people are becoming more and more interested in eating healthy and organic foods. But, is organic food really better than non-organic?

2 **To start with**, there are lots of advantages to eating organic food. **Firstly**, it's more nutritious. **For example**, organic meat and dairy contain more omega-3 fatty acids than non-organic foods. **In this way**, they provide you with more nutrients. **Secondly**, organic foods are less harmful to our health. Farmers use natural pesticides and compost. They don't use any toxic chemicals. **Therefore**, neither us nor the environment is harmed by organic farming.

3 **On the other hand**, there are some drawbacks to eating organic foods. **To begin with**, it's more expensive. **Since** it costs more to produce organic foods than non-organic, you have to pay more for these products. **Moreover**, organic food doesn't have a long shelf life. Organic food isn't treated with preservatives and **as a result**, it spoils faster.

4 **All in all**, I believe that organic food is better than non-organic. It is better for our health and much safer than non-organic food. As Hippocrates once said, "Let food be thy medicine and medicine be thy food," and I think he's right.

4d

LINKERS

To list/add points: Firstly, First of all, To start/begin with, Secondly, Finally, In addition, Furthermore, Moreover
To introduce/list advantages: The first/Another advantage of ..., One point in favour of ..., Some people feel/argue that ..., Without a doubt/Certainly there are many arguments ...
To introduce/list disadvantages: The first/main/One/Another disadvantage of ..., One argument against ... is that ..., Some/Many people are against ... because ...
To introduce examples/justifications: For example/instance, such as, like, because, as, since, as a result, therefore, this means that, In this way
To show contrast: On the other hand, However, In contrast, although, even though
To conclude: In conclusion, To conclude/sum up, All in all, Finally, Taking everything into account
To give your opinion: I think/believe that ..., I am strongly/totally in favour of ..., In my opinion/view, I am strongly/totally against ..., It seems/appears to me that ...

4 10.6.16 **Choose the correct words. Replace the linkers in bold in the text with alternatives.**

1 **As a result/To begin with**, there are lots of advantages to using biofuels. **For example/As**, they cause less pollution than fossil fuels.
2 **Some people feel that/One argument against** biofuels are better for the environment **therefore/because** they release less carbon dioxide which is a greenhouse gas.
3 **All in all/In contrast**, some people argue that biofuels cause habitat loss for wildlife. **Moreover/For instance**, animals lose their homes when land is cleared to grow crops for biofuels.

5 10.1.6 10.5.2 **Put the sentences in the correct order 1-5. Which is the topic sentence? Suggest an alternative.**

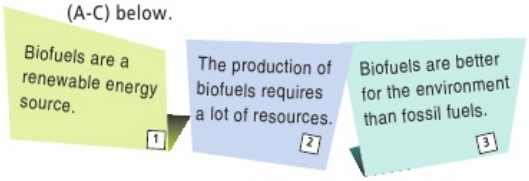
A ☐ This means they are much better for the environment.
B ☐ Therefore, they don't release additional carbon dioxide into the air.
C ☐ First of all, they are carbon neutral.
D ☐ There are many advantages to using biofuels in our vehicles.
E ☐ In addition, they release fewer toxic fumes when they are used.

Your turn

6 10.5.5 10.5.7 **Read the rubric, underline the key words and answer the questions.**

A website for students is asking for opinions on the following issue: *Should all cars run on biofuels?* Write a for-and-against essay discussing the pros and cons of this proposal (120-180 words).

1 What do you have to write and who will read it?
2 What will each paragraph include?
3 How could you begin/end your essay?
4 Which sentences (1-3) is/are in favour of the proposal and which is/are against it? Match each viewpoint with a justification/example (A-C) below.



A ☐ They produce less of the harmful chemicals that cause air pollution and acid rain.
B ☐ They won't run out since it is quick and easy to grow more crops.
C ☐ Land, water and a lot of energy is required to grow enough crops.

5 10.5.5 **Think of more advantages/disadvantages and justifications/examples to support them.**

7 10.5.5 10.5.7 **Use your ideas in Ex. 6 to write your essay. Follow the plan below. Use different techniques to start/end your essay.**

Plan

Para 1: present topic
Para 2: advantages with justifications/examples
Para 3: disadvantages with justifications/examples
Para 4: conclusion & own opinion

4e Culture Corner

VIDEO

1 a) 10.4.1 **Read the title of the text and look at the pictures. What do you think text is about? Read to find out.**

b) 10.4.2 **Read the text again and fill in the gaps with a word which best fits.** **Listen and read to check.**

2 a) 10.5.2 **Fill in:** *logo, chemical, alternatives, materials, sector, synthetic, industry, wool.*

1 organic .....
2 ..... chemicals
3 non-organic .....
4 organic cotton and .....
5 .....-free clothes
6 certified organic .....
7 organic .....
8 health and well-being .....

b) 10.3.7 10.5.2 10.6.7 **Use the completed phrases to prepare a short summary of the text. Tell the class.**

3 10.1.10 10.5.1 ICT **Find out information about the organic industry in your country. Write a text about it. You can use the text in Ex. 2 as a model. Present it to the class.**

Shopping is **0)** *a* popular hobby in the UK, but today's shoppers are much **1)** ..... interested than before in where their purchases come from and how they were produced. The amount of people who want to buy organic products is increasing each year. In fact, the organic industry in the UK is worth over £2.09 billion and counting!

Clothing

Clothing made from organic cotton and wool **2)** ..... sold in many high street stores in the UK. It is especially popular **3)** ..... young people and working professionals who can afford to spend a little more when they shop.

Organic materials **4)** ..... cotton and wool are produced without the use of any synthetic chemicals. The cotton comes from organic cotton plants and the wool, **5)** ..... is often produced in the UK, comes from organically-farmed sheep and Alpacas. **6)** ..... wool is used in jumpers, scarves, hats and gloves, all of which people buy to stay warm during the UK's cold winters. Organic clothing is a good option for British people of all ages **7)** ..... want to shop responsibly and buy chemical-free clothes.

8) ..... the moment, many clothes shops only offer a small selection of organic items. However, some of the UK's biggest supermarket chains plan to offer a larger choice of organic clothing to their customers in the future.

Health and Well-being

The organic health and well-being sector grew by more than 20% in 2016 and is now worth more than £61.2 million.

Much like other organic products, organic toiletries and beauty products must be produced without synthetic chemicals, GMOs and animal testing. **9)** ..... deodorants and sun creams to makeup and toothpastes, organic products are available in pharmacies, supermarkets, health shops and even online stores. Many health and well-being products in Britain say 'organic' on them, but shoppers have to look carefully **10)** ..... an official certified organic logo on the packaging.

Even though **11)** ..... products are more expensive than non-organic alternatives, many British people choose to buy them for **12)** ..... children because they are safer, more natural and they don't contain harmful chemicals.

Check these words

organic industry, well-being, official, certified, alternative

VIDEO

Curricular: Citizenship 4f

How to be...
a responsible shopper

In today's world of endless consumer choices, it's very easy to spend without thinking. Many people enjoy bargain-hunting, but our quest to pay less may have hidden dangers. The following is a guide to responsible shopping, which combines an awareness of human rights and green issues, as well as how to save our hard-earned cash!

1 a) 10.1.9 **Which of these sentences best describe you?**

1 I enjoy bargain-hunting.
2 I always check where and how a product was made.
3 I often shop online.
4 I always choose fairtrade products.
5 I prefer big chain-store retailers.
6 I often buy second-hand.
7 I never buy recycled products.
8 I try to avoid unnecessary packaging.
9 I never throw anything out.
10 I usually buy things that are on sale.

b) 10.4.1 **Do you know how to be a responsible shopper? Listen and read to find out.**

2 10.4.2 10.4.5 **Read the text and complete the sentences.**

1 We can go online to find out where big companies ..... .
2 'Fairtrade' labels mean ..... .
3 It's a good idea to buy second-hand because ..... .
4 Instead of throwing things away, we should ..... .
5 Comparing prices helps us ..... .
6 The sales period is a good time ..... .

3 10.5.2 **Fill in:** *working, hard-earned, reduced, seasonal, take, human, wisely, child.*

1 ..... rights
2 ..... labour
3 ..... conditions
4 ..... prices
5 ..... advantage of
6 ..... cash
7 spend .....
8 ..... retail shifts

Be ethical:
While you probably have no problem remembering where you bought your T-shirt from, do you actually know where and how it was made? Why not do some research on the policies of big chain-store retailers in order to be ethical when it comes to shopping? Find out where they manufacture their goods and in what conditions. How do they treat their employees? Are they involved in sweatshops or the use of child labour? These days, the Internet is a mine of information on big companies and how they operate. Also, you can always choose products labelled 'fairtrade,' which is a guarantee the goods have been made under acceptable working conditions.

Be green:
First of all, choose products that use fewer natural resources, and avoid goods which come in unnecessary packaging. The goal is not to waste anything! Another great option is buying second-hand. You can find a treasure trove of quality second-hand items at low prices on Internet sites like eBay, as well as in traditional charity shops. It's really worthwhile, as second-hand goods are often much better quality than cheaply made new products for sale at similar prices. Then, of course, there's always recycling. Try to buy products that can be recycled, or products that are already made out of recycled materials. Also, think twice before you throw anything out: you could always try to recycle your belongings yourself!

Be smart:
Don't throw your money away! Spending wisely involves some thought and research as well. First of all, before you buy, be clear about what you want to buy to avoid unnecessary purchases. Then, compare prices so that you don't end up paying too much. One great way to save money is to take advantage of seasonal retail shifts, such as the January sales, or late July and August, when they sell summer products off at reduced prices.

Lastly, try to remember that responsible shopping isn't just about trying to spend as little as possible. The goal is to find a good balance between being ethical, being green and using good money sense!

Check these words

bargain-hunting, quest, awareness, human rights, hard-earned cash, policy, ethical, manufacture goods, treat, sweatshop, child labour, mine of information, operate, guarantee, natural resources, treasure trove, purchase, seasonal retail shift, sell off, reduced prices, balance, money sense

4 10.1.9 10.1.10 10.5.5 THINK! **Has the information in the text helped you see things from a different perspective? How might this help you become a responsible shopper? In three minutes, write a few sentences. Tell the class or your partner.**

4 Language in Use

Phrasal verbs/Prepositions

1 10.5.2 10.6.15 **Choose the correct particle.**

do up: 1) fasten (clothes), 2) decorate (a room, a building)
do sth over (again): repeat sth
drop by/in: visit a place/person
drop out: leave before the end (school, college)
get across: make sb understand, communicate
get along (with someone): be friendly with someone
get ahead: do well in a career

1 Sam dropped **in/out** of his marketing course.
2 I've put on weight. I can't do **over/up** my jeans!
3 They don't get **along/across**.
4 Can we drop **up/by** the supermarket on our way to Askar's house? We need some bread.
5 This essay isn't good enough. I think you should do it **over/up** again.
6 Ulan couldn't get the message **across/along**.

2 10.6.14 **Fill in:** *to, on, at, of, for, from.*

1 Shoppers often buy products that are on the shelves ..... eye-level.
2 Tracey always takes advantage ..... special offers.
3 Gulnara exchanged the dress ..... a T-shirt.
4 3D printers are already ..... the market.
5 It's unbelievable how much food goes ..... waste.
6 This T-shirt is made ..... recycled materials.
7 Cheese is made ..... milk.

Word formation

3 10.5.2 **Fill in the sentences with the correct word derived from the word in brackets.**

Forming verbs from nouns/adjectives
We can form verbs from nouns and adjectives by adding the **prefix en-** or the **suffix -en:** *danger – **en**danger, rich – **en**rich, length – length**en**, wide – wid**en**.*

1 Michael can ..... his name to Mike. **(SHORT)**
2 Exercise and eating healthily helps ..... your body. **(STRENGTH)**
3 Please ..... you bring your receipt when returning faulty items. **(SURE)**
4 How much will it cost to ..... these photographs? **(LARGE)**
5 We must ..... consumers to shop responsibly. **(COURAGE)**

Collocations

4 10.5.2 **Fill in:** *natural, produce, animal, vertical, responsible, advice, organic, environmentally.*

1 dietary	5 ..... shopper
2 ..... farming	6 ..... welfare
3 .....-friendly	7 local .....
4 ..... resources	8 ..... industry

Words often confused

5 10.5.2 *Do* **or** *make*? **Complete the phrases. Check in your dictionaries.**

1 ..... research; **2** ..... sense; **3** ..... the shopping; **4** ..... sb feel hungry; **5** ..... your best; **6** ..... an offer; **7** ..... your hair; **8** ..... you good; **9** ..... badly; **10** ..... a mess; **11** ..... an effort; **12** ..... friends

Kazakhstan in Action!

Read and choose the correct word.

- A Kazakh inventor called Dauren Ankauov **1) created/did** an eco-friendly art solution using animal hair which will help to reduce the **2) charges/costs** of producing art and ensure it **3) lasts/takes** a long time.
- **4) Until/By** 2050, Kazakhstan aims to generate 50% of its energy from renewable **5) power/energy** sources! (source: KAZAKH TV)
- A school student called Temirlan Nabi from Nur-Sultan created **6) artificial/synthetic** honey. It doesn't cause allergies and can **7) make/do** you feel better when you're sick.
- Kazybek Toktarov, a pupil from Nur-Sultan, invented the 'smart' yurta. It has a heated floor and runs on **8) sun/solar** power.

I'll Never Buy Cheap Fashion Again

Everyone loves a bargain and the high streets these days are full of the latest fashions at rock-bottom prices. However, I never thought about where it came from, who made it and why it was so cheap. But then I saw an advert in a local newspaper for young people to take part in a TV documentary. We would be working at a clothes factory in New Delhi, India, for two weeks to find out how manufacturers could make such cheap clothes. I was studying journalism at university, so this seemed perfect. And after all, how hard could making T-shirts be?

My first day in the factory began at 7:30 a.m. As I approached, I was immediately shocked by the dirty, rundown building. The supervisor showed me the basement where I would be working. It was a huge, noisy, boiling hot room where at least a hundred other people were already hard at work. Today, I was sewing pockets onto shirts and my goal was fifty an hour, but after 30 minutes, I'd finished just four. My supervisor came over and told me disapprovingly that if I continued like that, I wouldn't get paid. I felt like crying.

I worked for 12 hours, with just fifteen minutes for lunch, but at the end of the day the factory owner handed me 100 rupees – about £1.50! Later, I went to buy some toothpaste, but found it cost more than a day's wages. By far the biggest surprise, though, was that just like the other factory workers, I would be sleeping on the factory floor every night! That evening, I spoke with some of the young girls. "Why aren't you angry about the conditions in the factory?" I asked one of them. "I am, but there is no other work here," she explained. "It's the factory or the street and if you say anything, you lose your job." The other girls nodded in agreement.

For two weeks, I worked 12 hours a day for 6 days a week and slept in the factory. I never managed to work fast enough or well enough, so my wages were lowered. Eventually, I was demoted to the lowliest position in the factory. The only times I was happy were when I was talking to my friend Aleya after work. I started teaching her to read.

Back home, I refuse to go in cheap high street shops anymore. Instead, I've started campaigning for ethical fashion; I write letters to governments and big stores to complain about sweatshop labour. I still like fashion, but I've found fairtrade designers online. I hope that when people see the documentary, they'll think twice before grabbing that cheap pair of jeans in the future. We all need to understand the true cost of cheap clothes.

Progress Check 4

Reading

1 10.4.3 10.4.5 **For questions 1-5, choose the best answer A, B, C or D.**

1 What was the writer's first reaction to the factory? She was
- **A** appalled.
- **B** impressed.
- **C** disappointed.
- **D** frightened.

2 The writer was soon criticised for
- **A** her attitude.
- **B** arriving late.
- **C** her speed of work.
- **D** the quality of her work.

3 The writer suggests that the workers
- **A** were too afraid to complain about conditions.
- **B** saved money by sleeping in the factory.
- **C** were paid worse than workers in other factories.
- **D** weren't allowed to speak to each other.

4 According to the writer, her boss demoted her
- **A** because she kept falling asleep.
- **B** because she talked to the other girls.
- **C** because she improved too slowly.
- **D** because she produced sub-standard work.

5 The writer wants the public to
- **A** send a message to the authorities.
- **B** avoid buying clothes made in sweatshops.
- **C** do all their clothes shopping online.
- **D** try designing and making their own clothes.

5x2=10 marks

Listening

2 10.2.2 **You are going to hear a radio interview with a young entrepreneur who started his own business. Complete the gaps (1-8) with the correct word(s).**

Simon set up an online shop that sells start-up kits for [1] _____ gardens.
He designed the kits for people who don't have much [2] _____ .
People who don't know anything about [3] _____ will find them very useful. The product comes in bags that also contain [4] _____ and is [5] _____ right to the customer.
Simon's [6] _____ were very impressed with his balcony garden.
Starting the website was first suggested to him by [7] _____ .
Today, Simon manages his business [8] _____ .

8x2=16 marks

4 Progress Check

3 10.5.2 **Fill in:** *nutrients, compost, converted, shortage, solution, renewable, resources, power, certified, substances.*

1 Debra ..... her rooftop into a garden.
2 Will everyone in the future be using biofuels to ..... their vehicles?
3 Organic fruit and vegetables contain lots of beneficial ..... .
4 We should make more effort to use ..... energy sources.
5 Producing biofuels requires a lot of natural ....., such as water and land.
6 You don't need soil if you grow your plants in a ..... of nutrients and water.
7 Wash fruit and vegetables before you eat them to remove the synthetic ..... .
8 ..... is a great fertiliser and it's made from food and plant waste.
9 All organic products should display an official ..... organic label on their packaging.
10 Some scientists are worried that there will be food ..... in the future.

10x2=20 marks

4 10.6.8 **Put the verbs in brackets in the *future perfect* or *future perfect continuous*.**

1 Some experts say fossil fuels ..... **(run)** out by the end of the century.
2 In September, Tiffany ..... **(work)** at the organic supermarket for five years.
3 Susan thinks scientists ..... **(create)** more GMOs by 2050.
4 Lucy hopes she ..... **(open)** her own organic clothes shop by next year.

4x2=8 marks

5 10.6.2 10.6.6 **Choose the correct item.**

1 We don't spray **any/some** pesticides on our fruit.
2 Would **no one/anyone** like to try this organic milk?
3 Jim planted the vegetables **itself/ himself**.
4 **There/This** soap is 100% natural.
5 Sue is the girl **which/who** sells organic clothes.
6 Yum! **These/Those** strawberries are delicious!
7 Give me the shopping list and I'll go to the shop **yourself/myself**.
8 Do you need **anything/nothing** from the shop?

8x1=8 marks

6 10.6.15 **Fill in the gaps with the correct particle.**

1 Do you like my new bag? It's made out ..... recycled materials.
2 Wildlife can be at risk if synthetic chemicals build ..... in the environment.
3 We should start using alternative energy sources in case we run out ..... fossil fuels.
4 Ethanol is mixed with petrol to turn it ..... a fuel that can power engines.
5 Nowadays, there are electric cars that run ..... solar energy.

5x2=10 marks

7 10.5.2 **Fill in the sentences with the correct word derived from the word in brackets.**

1 These corn crops are genetically modified to be ..... to disease. **(RESIST)**
2 Eating a diet rich in organic food can be ..... to our health. **(BENEFIT)**
3 The chemicals in fertilisers can be ..... to the environment. **(HARM)**
4 Some animals may become ..... or extinct due to loss of habitat. **(DANGER)**

4x2=8 marks

8 10.5.1 10.5.5 **Write a for-and-against essay for a health website about the following proposal:** *We should only buy organic products* **(120-180 words).**

20 marks

Total: 100 marks

Check your Progress

- talk and write about organic and non-organic food production ____
- talk and write about renewable energy sources ____
- write a for-and-against essay ____
- talk about the organic industry ____

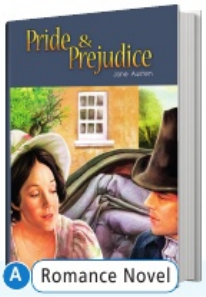
GOOD ✓ VERY GOOD ✓✓ EXCELLENT ✓✓✓

Module 5
Reading for pleasure

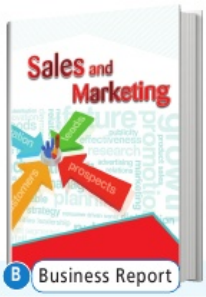
Vocabulary: types of literature
Grammar: question types; conjunctions
Reading: non-fiction/fiction texts
Listening: character analysis
Speaking: use formal/informal register; evaluate & comment on others' views; organise & present information to others
Writing: a summary

Vocabulary
Types of literature

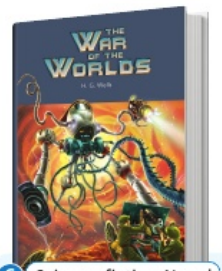
1 **Look at the pictures. Which books are *non-fiction* (based on facts)? *fiction* (created from the imagination)?**



A Romance Novel



B Business Report



C Science-fiction Novel

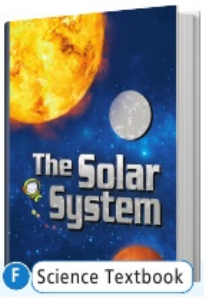
D Fantasy Story

2 10.1.2 10.1.3 **Which type(s) of books do you like reading? Why?**
Tell the class. Use ideas from the list.

- fascinating • thrilling • imaginative
- informative • relaxing • a waste of time
- unrealistic • boring/dull • predictable • silly

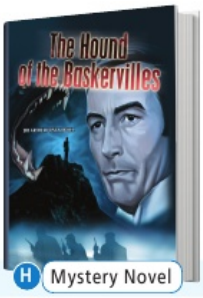
I'm not so keen on romance novels as I find them boring and unrealistic.

E Travel Guide



F Science Textbook

G Health & Fitness Book



H Mystery Novel

5 The War of the Worlds

VIDEO

3 10.4.4 **Read about H.G. Wells. What kind of novels did he write?**

H.G. Wells (1866-1946) was a British writer and one of the first to write about time travel, space flight and alien invasion.

Wells was born in Bromley, Kent, on 21st September, 1866. He left school when he was only fourteen and worked in various jobs in order to earn money for his family. After a number of unsuccessful years working as a shop assistant, a chemist's assistant and a teaching assistant, he won a scholarship to study biology under T.H. Huxley, a friend and follower of Charles Darwin, at the Royal College of Science in London. While he was at this college, he became interested in society and often thought about ways to organise it better. He did not like the fact that there were rich people and poor people in the world and thought that everyone should be equal.

Wells left college in 1887 and became a teacher. Later, he married Amy Catherine Robbins and they had two sons together. He began writing in his free time and published his first novel, *The Time Machine*, in 1895. Other famous novels include *The Invisible Man* (1897) and *The War of the Worlds* (1898). Once he was able to financially, he left teaching to write full time, and produced a large body of work, both fiction and non-fiction.

Wells died in London, on 13th August, 1946. Today, people remember him as one of the best science-fiction writers of all time and as a man who had great ideas on how to improve our world. He invented words like 'time machine', 'parallel universe' and 'heat-ray', and made many predictions about the future that have come true.

Check these words

alien invasion, scholarship, equal, prediction

4 10.3.1 10.3.2 10.6.5 **Ask and answer questions, as in the example.**

see pp. GR10-GR11

A: Where was H.G. Wells born?
B: He was born in Bromley, Kent.
A: What did he do before he became a writer? etc

5 10.4.4 10.4.9 **Read the text and decide if statements (1-5) are *T* (true), *F* (false) or *DS* (doesn't say).**

The War of the Worlds, by H.G. Wells, is one of the most famous science-fiction stories of all time. It is a gripping novel, narrated by a writer whose name we never learn, about Martians arriving on Earth with a plan to conquer humanity and settle on their planet.

The story, set at the end of the 19th century, begins one summer night when a strange cylinder falls to Earth near the English town of Woking, just south-west of London. Not many people are interested at first, but then the cylinder unscrews and a strange creature emerges. These are aliens from Mars, and after a short while they have created huge machines, equipped with heat-rays and chemical weapons, which attack humans and rain death upon the land. As people attempt to escape from London and the surrounding counties, the narrator must find a way to stay alive and be reunited with his wife. Will humans finally defeat the Martians? Will the narrator survive and find his wife?

The exciting plot keeps the reader absorbed to the very end. It is full of thrilling moments and dark tension among people who are forced to fight for their lives. What adds to the novel is its realistic portrayal of people struggling amongst the chaos, as society breaks down.

The War of the Worlds is highly recommended. Even though it is over 100 years old, its ideas and themes are still fresh. If you like science-fiction stories and excitement, this satisfying novel will not disappoint you!

Check these words

gripping, conquer, unscrew, emerge, equipped, rain death upon, surrounding, defeat, absorbed, portrayal, struggle

1 The narrator of the story remains nameless. .....
2 Woking is part of London. .....
3 The Martians kill many people. .....
4 In the end of the book, humans manage to defeat the Martians. .....
5 The writer thinks *The War of the Worlds* is a little old-fashioned. .....

6 10.2.8 **Read the theory. What type of text are the texts in Exs 3 and 5? Give reasons.**

Fiction *novel, crime story, myth, etc*	Non-fiction *biography, review, encyclopaedia, entry, etc*
• imaginary – made-up people/events	• fact-based – real people/events/subjects
• purpose – to entertain	• purpose – to inform
• first/third-person point of view	• any person or no point of view
• contains a plot with a climax & resolution	• contains an intro/main body/conclusion
• character development	• idea development
• language is stylistic/descriptive/ unrestrained with, idioms, metaphors, etc	• language is dependent on genre, but is generally quite restrained
• often has illustrations	• often has photos, diagrams, charts

Check these words

curate, lack

7 10.4.4 **How do the characters in *The War of the Worlds* express their fears? Find examples in the adapted extract below.**

The Ruined House

While my brother was trying to get away, I and the curate had hidden in an empty house at Halliford. I was worried for my wife. I imagined her terrified, in danger, and believing I was dead. I walked up and down the rooms of the house and cried out loud when I thought of all the things that might happen to her. My cousin was brave, but he was not the kind of man who realized danger quickly, or acted immediately. What was needed now was not bravery, but carefulness. My only hope was to believe that the Martians were on their way to London and away from her.

All this worrying made me tired. I got angry with the curate's constant remarks and his selfish hopelessness, so I kept away. The Black Smoke had crept around the house, surrounding it and making prisoners of us. Then, on Monday morning, a tripod came and washed it all away with steam. When it was safe, we looked out of the window. I realized that it was time to leave. I immediately started planning our next steps, but the curate was unwilling and had very little energy. He kept repeating the same words.

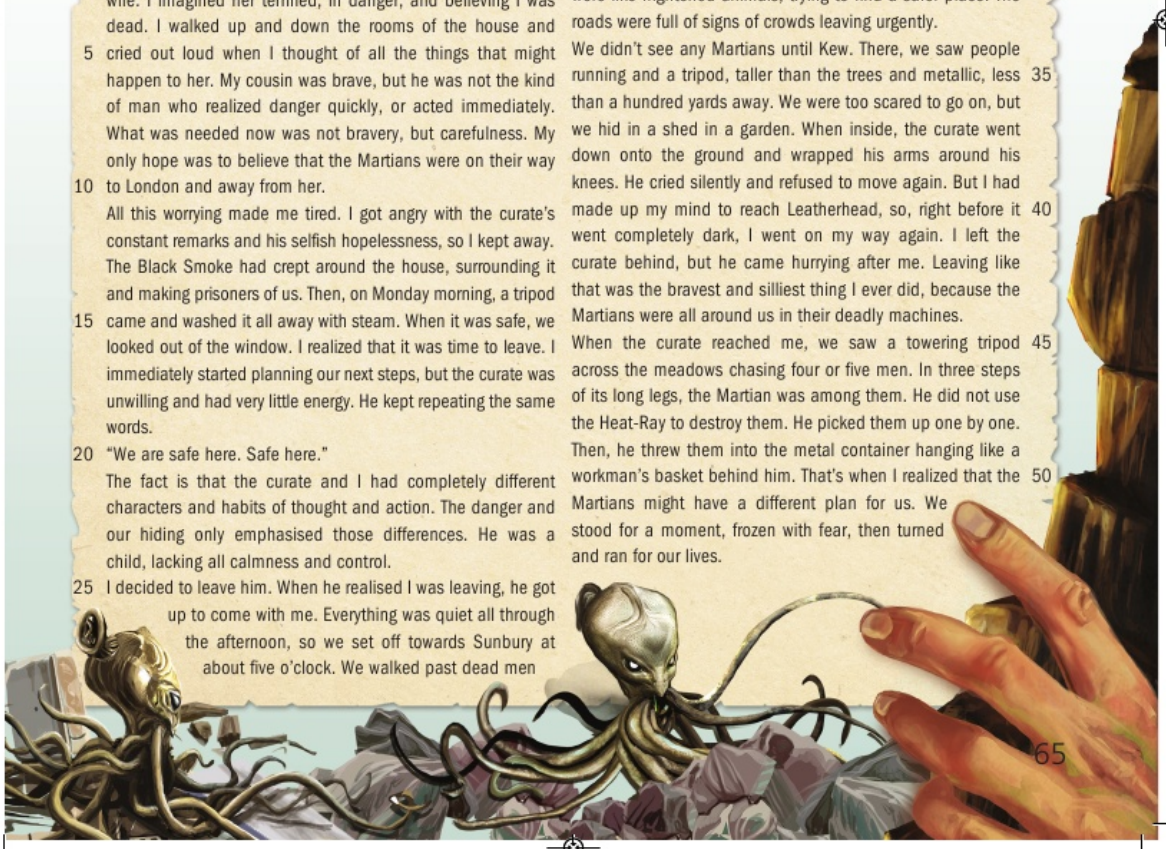
"We are safe here. Safe here."

The fact is that the curate and I had completely different characters and habits of thought and action. The danger and our hiding only emphasised those differences. He was a child, lacking all calmness and control.

I decided to leave him. When he realised I was leaving, he got up to come with me. Everything was quiet all through the afternoon, so we set off towards Sunbury at about five o'clock. We walked past dead men and horses, carts and luggage lying upside down, all covered with a thick coat of black dust. We met some people in Twickenham, but they had no news to share. Like us, they were like frightened animals, trying to find a safer place. The roads were full of signs of crowds leaving urgently.

We didn't see any Martians until Kew. There, we saw people running and a tripod, taller than the trees and metallic, less than a hundred yards away. We were too scared to go on, but we hid in a shed in a garden. When inside, the curate went down onto the ground and wrapped his arms around his knees. He cried silently and refused to move again. But I had made up my mind to reach Leatherhead, so, right before it went completely dark, I went on my way again. I left the curate behind, but he came hurrying after me. Leaving like that was the bravest and silliest thing I ever did, because the Martians were all around us in their deadly machines.

When the curate reached me, we saw a towering tripod across the meadows chasing four or five men. In three steps of its long legs, the Martian was among them. He did not use the Heat-Ray to destroy them. He picked them up one by one. Then, he threw them into the metal container hanging like a workman's basket behind him. That's when I realized that the Martians might have a different plan for us. We stood for a moment, frozen with fear, then turned and ran for our lives.



5

8 10.4.2 **Read the extract in Ex. 7 and choose the correct answer (A, B or C).**

1 The narrator can't leave the house at first because
   - **A** there are Martians outside.
   - **B** the Black Smoke is dangerous.
   - **C** he doesn't know where to go.

2 The curate leaves with the narrator because
   - **A** he wants to help him find his wife.
   - **B** he doesn't want to be left alone.
   - **C** he thinks it's too dangerous to stay where they are.

3 The narrator learns that the Martians
   - **A** don't just want to kill humans.
   - **B** are fairly easy to escape from on foot.
   - **C** are using human tools and containers.

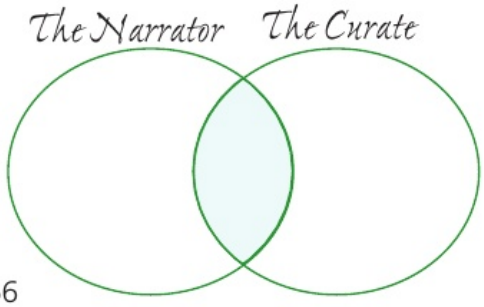
9 10.1.6 **What are the tripods like? Read the extract in Ex. 7 again. List the words used by the author and describe a tripod to your partner.**

10 10.1.3 10.1.4 THINK! **Compare the extract to the biography and the review. How do they differ? Discuss in pairs.**

• Character analysis

11 10.2.7 **Listen to a professor presenting the characters of the narrator and the curate. Use the adjectives from the list to complete the Venn diagram.**

• selfish • courageous • determined • foolish • worried • disturbed • educated • scared



12 10.1.3 10.3.4 **Compare the personalities of the narrator and the curate. In what ways are they the same? How are they different? Use examples from the extract in Ex. 7 and the ideas in Ex. 11 to explain your opinion.**

13 10.6.16 **Read the theory box and choose the correct item.**

see pp. GR11-GR12

Conjunctions show the logical relationship between sentences or parts of a sentence.

- **both ... and** *H G Wells invented **both** the term 'time machine' **and** 'parallel universe'.*
- **what is more** *I don't think aliens will come here soon. **What is more**, I think they'll be friendly when they do arrive.*
- **in addition (to)** ***In addition to** difficult conditions, other planets might be home to dangerous bacteria.*
- **although/even though/though/in spite of the fact that/despite the fact that** (+ clause) *Flying cars will soon exist **although/even though/though/in spite of the fact that/despite the fact that** they will be very expensive.*
- **in spite of/despite (+ noun/gerund)** *Technology is a good thing, **in spite of/despite** people's fears.*
- **however/nevertheless** *Fantasy books can be good. **However/Nevertheless**, they're not as good as science fiction.*
- **yet** (formal) *We want to visit the stars, **yet** our own planet is in danger.*
- **because** *I'm studying Science **because** I like to find out about the world.*

1 I would like to live on Mars **although/despite** the harsh climate.
2 There might be life on other planets, **however/yet** we may never know.
3 The science-fiction story was **both/though** exciting and frightening.
4 Some bacteria are more and more deadly. **Nevertheless/What is more**, the medicine we have doesn't kill them.
5 Technological advances can do great things for humanity. **However/What's more**, we should be careful they don't destroy the planet.
6 Aliens must exist somewhere **because/though** there are so many other stars and planets.
7 I think humans will travel into space **although/despite** it will be very dangerous.

14 10.5.4 10.6.16 **Fill in the graphic organiser based on the extract you read in Ex. 7. Now, use your notes and conjunctions to write a summary of the extract.**

Character(s):
.....
.....

Setting:
.....
.....

Main Event(s):
.....
.....

• Elements in fiction

15 **Read the theory. Find two examples of simile, two of metaphor and one of personification in the extract of *The War of the Worlds* in Ex. 7. Then, identify which type of figurative language is used in sentences 1-6.**

Figurative language

Writers often use figurative language such as similes, metaphors and personification to help them describe characters, places or situations.

- **Similes** use the words **as** or **like** to compare one idea to another to suggest that they are similar. *Paul runs **as fast as** lightning/**like** the wind.*
- **Metaphors** make a direct comparison between two things **without** the use of **as** or **like**. *The **stars are sparkling diamonds** in the sky.*
- **Personification** is when a writer gives human qualities to objects or animals for emphasis. *The clouds **sailed** across the sky.*

1 The soldiers fought like lions during the battle.
2 Jessica's room was a bomb site.
3 The flowers danced in the gentle breeze.
4 The wind howled in the trees.
5 Tom is as sly as a fox sometimes.
6 Kylie has a heart of stone.

16 10.4.4 **Read the novel. Test your knowledge.**

Quiz

1 Why do the Martians want to come to Earth?
A They want to learn more about humans.
B They want to show the humans their advanced technology.
C Their planet is dying.

2 Where does the first cylinder land?
A in a town
B in the countryside
C in London

3 What causes the fires around the Martians' first pit?
A the Heat-Ray
B a lightning bolt
C a spaceship landing

4 How many cylinders land on Earth in total?
A ten **B** five **C** six

5 What do the army use to successfully destroy tripods?
A a plane **B** guns **C** a warship

6 Where does the narrator's brother go to escape England?
A Calais, France
B Edinburgh, Scotland
C Ostend, Belgium

7 How is the curate discovered by the Martians?
A He makes too much noise.
B He is spotted while looking for food.
C He gives himself up to them.

8 Where did the artilleryman think humans could hide from the Martians?
A up on the mountains
B under the sea
C under the ground

9 What kills the Martians?
A the army **B** nuclear bombs
C bacteria

10 Where does the narrator meet his wife?
A abroad **B** in their house
C in the streets

5

17 10.1.2 10.1.3 **Read the novel, then watch Steven Spielberg's film adaptation *War of the Worlds* (2005). How close to the original story is the film adaptation?**

18 a) 10.4.4 **Read the newspaper headlines and the extracts. How are they related to *The War of the Worlds*? Read through and find out.**

Listeners Panic During The War of the Worlds

Oct 31st, 1938

Thousands leave their homes to escape 'aliens from Mars'!

Hysteria gripped radio listeners last night when a dramatisation of H.G. Wells' *The War of the Worlds* made them believe an alien invasion had started in New York.

The broadcast was made by Orson Welles' *The Mercury Theatre on the Air* over station WABC and the Columbia Broadcasting System's coast-to-coast network, from 8 to 9 o'clock. At least twenty adults required medical treatment for shock and hysteria. Families rushed out of their houses with wet handkerchiefs and towels over their faces to escape from what they believed was to be a gas raid. Throughout New York families left their homes, some to flee to nearby parks. Thousands of persons called the police and there were traffic jams all over the state.

The radio play was presented as a real radio program and some listeners missed the introduction, which clearly stated that it was a work of fiction.

Check these words

broadcast, coast-to-coast, flee

The myth of the War of the Worlds panic

30 October 2011

Mass panic and hysteria swept the United States on the eve of Halloween in 1938, when a realistic radio dramatisation of *The War of the Worlds* sent thousands of people into the streets or heading for the hills. Or did it?

The panic and terror associated with *The War of the Worlds* dramatisation did not come close to a nationwide dimension that night 73 years ago. Sure, some Americans were frightened by what they heard. But most listeners were not. They recognised it for what it was – a clever and entertaining radio play.

Hadley Cantril, a Princeton University psychologist, believes around six million people heard the radio play. Of those, around 1.2 million were frightened. But the whole point of the play was to frighten people – it was Halloween, after all. And there's a big difference between frightened and in complete panic.

So why did newspapers jump at the chance to misrepresent this story? Well, radio was their new competitor, and this was a chance to tell it off. And also, in the end, the idea of people escaping a pretend alien invasion was probably too good a story not to publish.

Check these words

dramatisation, nationwide, dimension, competitor, pretend

b) 10.3.3 10.3.6 **Compare and contrast the information in the articles. How different is their presentation of the reaction to Orson Welles' version of *The War of the Worlds*? Which do you believe and why?**

19 10.1.6 10.3.1 10.5.2 THINK! **Imagine filming the story nowadays in your country. How would you make it different? Think of: *characters* – *place* – *plot*. Present your story to the class.**

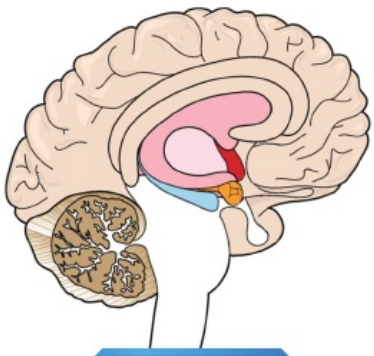
Module 6
Capabilities of the human brain

Vocabulary: capabilities of the human brain, stress symptoms & advice
Grammar: question types, relative clauses, the passive, type 3 conditional
Phrasal verbs: *set, take*
Word formation: adjectives to adverbs
Writing: an email giving advice
Culture: *The Duke of Edinburgh's Award*
CLIL *(PSHE)*: *Train your brain!*

Vocabulary
The human brain

1 a) 10.5.2 **Fill in the gaps in the texts A-D with words from the lists.**

b) 10.3.5 10.3.7 **In pairs, name some more capabilities of the human brain.**



VIDEO

A • react • experience • beat

We **1)** ..... our emotions in the brain. The physical effect of these emotions helps us **2)** ..... to situations. For example, fear makes our heart **3)** ..... faster, and gets us ready to fight or run away.

B • identify • strong • enjoy

The brain allows us to **4)** ..... music in lots of ways. When we listen to a piece of music, we can **5)** ..... the different instruments, and the music we hear often has a(n) **6)** ..... effect on our emotions.

C • converts • learn • written

The brain allows us to create, understand and **7)** ..... languages. This process is a lot more complicated than we think. It **8)** ..... spoken or **9)** ..... symbols into meaning which is passed on to other people.

D • invent • tell • imagine

The brain allows us to **10)** ..... things that are not real. We can **11)** ..... stories, paint pictures, sculpt statues and write music. This ability is the reason why we can **12)** ..... new things.

OVER TO YOU! 10.3.3 10.3.4 10.3.7

- **Which of these capabilities do you consider the most important? Give reasons.**
- **Which of these capabilities would you like to improve in yourself? Why?**

6a Physical structure of the human brain

Reading & Vocabulary

1 a) 10.3.7 10.4.8 10.5.2 **The words below come from the text. What do you think they mean? Tell your partner. Check in your dictionary.**

• blood pressure • body temperature • skull
• hemisphere • nerve fibre • neurologist
• synapse • neuron

One Brain or two

Think about your brain for a moment. Weighing about 3lbs (1.4 kg), it not only controls your other organs, **regulates** pleasure and pain, hunger and thirst, blood pressure and body temperature, but it also plays a huge part in determining your personal identity through thoughts, memories and emotions. It's an amazing organ, isn't it? Although a brain is often compared to the CPU (central processing unit) in a laptop, in reality, the brain is far superior and far more **complex**.

Underneath a protective skull, the brain appears to be separated into two halves, the left hemisphere and the right hemisphere, but this is not quite true. Information and instructions pass from one side of the brain to the other through the corpus callosum – about 200-250 million nerve fibres. Surprisingly, each hemisphere is responsible for the opposite side of the body. For example, information received from our **senses** on one side of the body is communicated to the opposite hemisphere of the brain.

Some scientists think that the two hemispheres control different abilities and behaviour. The left side is more related to logic and analysis: it deals with details. The right is usually considered more creative and imaginative: it prefers general ideas or 'the big picture' and deals with emotions. For artists such as writers, sculptors and musicians, the right side of their brain is **dominant**. On the other hand, people in professions that require organisation and facts like scientists and accountants more commonly use the left side of the brain.

It seems that each hemisphere of the brain has a tendency for certain kinds of **function**. For example, the left side of the brain may **handle** the syntax and vocabulary of language, but the right side controls the accent, speed and intonation of speech. Neurologists have found that if one side of the brain is removed, the other side can take over some of its roles, such as speech, by creating connections or pathways (synapses) between brain cells (neurons). Will we ever fully understand our own brains? Probably not. However much research we might do, the human brain is probably capable of much more than we will ever discover!

Check these words

organ, hunger, thirst, play a part, determine, identity, skull, hemisphere, be responsible for, logic, be related to, deal with, require, tendency, syntax, take over, pathway

b) 10.1.8 10.1.10 10.4.2 **Which hemisphere (left or right) of the brain do you think controls: *logic*? *details*? *creativity*? *general ideas*? *music skills*? *emotions*? *lists*? *language*? *imagination*?**
Listen and read to find out.

2 10.4.2 **Read the sentences (1-8) and decide if they are *T* (true), *F* (false) or *DS* (doesn't say).**

1 The human brain controls how the body works. .....
2 A laptop's CPU is smaller than the human brain. .....
3 The two sides of the human brain are not connected. .....
4 The right hemisphere controls the left side of the body. .....
5 The left hemisphere is dominant in both scientists and sculptors. .....
6 Both sides of the brain play a role in our use of language. .....
7 The human brain creates new brain cells all the time. .....
8 We might never fully understand the human brain. .....

3 10.3.2 **Answer the questions.**

1 What is surprising about the hemispheres of the brain?
2 How do neurologists think the brain repairs itself?
3 THINK! Which side of your brain do you think is dominant? Why?

4 10.4.5 **Match the highlighted words in the text to their definitions: *more powerful, purpose, complicated, deal with/manage, the five physical abilities (touch, taste, sight, smell and hearing), controls*.**

Grammar
see pp. GR12-GR13

Question types

5 10.6.5 **Read the examples and find more examples in the text.**

- Yes/No questions: *Does the skull protect the brain? **Yes**, it does.*
- *Wh-* questions: ***What** is your earliest memory?*
- Tag questions: *Tom can play the guitar, **can't he**?*
- Rhetorical questions: ***Wouldn't** it be great **if** we never forgot anything?*

6 a) 10.6.5 **Decide whether questions 1-4 are: *Yes/No, wh-, tag* or *rhetorical*. In pairs, ask and answer the questions.**

1 Wouldn't it be great to be happy all the time?
2 We can learn so much more about the brain, can't we?
3 Why do we sleep and dream?
4 Does your brain work better in the morning?

b) 10.6.5 **Make your own *Yes/No, wh-, tag* and *rhetorical questions*. Ask and answer in pairs.**

Listening

7 10.2.2 10.2.3 10.2.7 **Listen to two people talking about the human brain. For questions 1-5, choose the correct answer (A, B or C).**

1 Where is Max learning Spanish?
A at home
B at his school
C at a language school

2 Tina says that learning a new language
A is quicker when you are older.
B is easier when you are younger.
C takes the same time at any age.

3 Tina says that she
A can never decide what to do.
B wants to be able to focus more.
C likes to communicate on social media.

4 Soldiers who were taught new languages
A were less likely to get lost.
B had a larger hippocampus.
C were more physically active.

5 Research has shown that speaking more than one language
A helps people find jobs more easily.
B makes people feel younger.
C helps the brain work better.

Speaking & Writing

8 10.3.2 10.3.7 **Imagine you are an interviewer. Your partner is a neurologist. Read the text again, then ask and answer questions about the brain. Exchange roles.**

A: How much does the brain weigh?
B: It weighs about 1.4 kg. etc

9 a) 10.1.6 10.4.2 10.5.1 **Write a short summary of the text. Read it to the class.**

b) 10.1.2 10.1.4 10.1.10 10.4.4 10.4.8 10.5.8 ICT **Collect more facts about the human brain. Prepare a quiz.**

How many neurons does the brain have?
It has around 100 billion.

6b Intelligences

Vocabulary & Reading

1 a) 10.5.2 **Read the 'intelligences' below and match them to what they refer to. Tell your partner.**

1 ☐ spatial	6 ☐ interpersonal
2 ☐ bodily-kinaesthetic	7 ☐ intrapersonal
3 ☐ musical	8 ☐ naturalistic
4 ☐ linguistic	
5 ☐ logical-mathematical	

a seeing relationships between symbols and actions
b communicating well and being good with languages
c understanding the emotions and needs of others
d visualising space in the mind
e singing, playing or composing music
f understanding the natural world
g using your body to solve problems or create something
h understanding your own emotions and needs

Spatial intelligence refers to ...

b) 10.1.2 10.1.10 10.4.1 10.5.5 **What do you think the 'intelligences' in Ex. 1a are? How do you think they relate to you? Does everybody have them? Read to find out.**

2 10.4.4 10.4.7 **Read again and choose from the sentences A-F the one which fits each gap (1-5). There is one extra sentence. Listen and read to find out.**

A However, it is one that teachers must rise to.
B It is generally believed that intelligence is an inherited characteristic.
C These intelligences are located in different parts of the brain but sometimes work together.
D Most of us, though, have an IQ of between 85 and 115.
E Of course, we don't just have one intelligence.
F That means employing a variety of different teaching techniques from which all the students can learn.

VIDEO

The Theory of Multiple Intelligences

How smart are you? To answer that question as realistically as possible, you might try to find out your IQ. For many years, IQ (intelligence quotient) has been used to rate intelligence. You take a series of tests and receive a number – your IQ. The higher the number, the higher your IQ. Shakira has an IQ of 140, which almost makes her genius. Bill Gates' IQ is said to be between 160 and 170 – easily a genius. [1] ☐ According to this system, intelligence is easy to quantify, but one theory suggests that calculating intelligence is a lot more complicated. It is Howard Gardner's theory of multiple intelligences.

Gardner's theory first appeared in 1983 in his book, *Frames of Mind: The Theory of Multiple Intelligences.* The theory proposes that there is not just one 'intelligence', but eight or more 'intelligences' that we all have to a greater or lesser extent. [2] ☐ Gardner says, "Everything that we do involves the brain and so it's to be expected that different kinds of activities involve different brain areas—how could it not be the case?"

3 10.3.2 **Answer the questions.**

1 Why is Gardner's theory important for schools?
2 Which type of intelligence do you think best describes you? Why?
3 THINK! Do you agree with Gardner's theory? Why/Why not?

4 10.5.2 **Fill in:** *far-reaching, smart, calculated, proposing, excels, responded, memorise, rise.*

1 Miss White gave us two poems to ..... for next lesson.
2 Luke is not good at maths, but he ..... at languages.
3 Sally ..... how much money she could save every month.
4 Aizhan is a very ..... girl who always does well on tests.
5 Einstein's theories had ..... implications for the way we see the world.
6 It's not an easy task, but I'm sure you can ..... to the challenge.
7 They are ..... that his theory is included in all teacher training courses.
8 Ulan ..... to every question in the interview quickly and politely.

6b

Gardner identifies eight multiple intelligences: spatial, bodily-kinaesthetic, musical, linguistic, logical-mathematical, interpersonal, intrapersonal and naturalistic. Each intelligence is a skill which people are good at. For example, a dancer may not have a high IQ, but, according to Gardner, that does not mean she is not intelligent. She has bodily-kinaesthetic intelligence. She has the ability to move her body on a stage, where the movements she makes create a performance. [3] We have all of the various intelligences to some extent; it's just that we usually excel at just one.

Gardner's theory has far-reaching implications for how we rate intelligence, as well as how and what we learn. It's not enough these days to just present information and expect students to take it in. Educators must activate each intelligence to reach everyone in the classroom. [4] For example, linguistic intelligences prefer hearing, saying or seeing words whereas musical intelligences respond to music. In this case, a combination of memorising song lyrics might work well for both groups.

Adapting a learning situation to include all the intelligences is undoubtedly a challenge. [5] Everyone is intelligent in their own way. So let me rephrase the question I started with: What type of smart are you?

Check these words

smart, multiple, realistically, quotient, rate, quantify, calculate, propose, to an extent, be the case, movements, excel, far-reaching, implications, take sth in, activate, respond, combination, memorise, adapt, undoubtedly, rephrase, rise to a challenge, employ

Grammar

Relative clauses

see p. GR13

5 10.6.17 **Read the theory. Find examples in the text.**

Relative clauses can be **defining** or **non-defining**:

- a **defining relative clause** contains essential information to the meaning of the sentence and cannot be removed. It is not put in commas. *The psychologist **who came up with the theory of multiple intelligences** is Howard Gardner.*
- a **non-defining relative clause** contains non-essential information to the meaning of the sentence and can be removed. It is put in commas. *The university, **which has two large libraries**, is one of the best in the country.*

6 10.6.17 **Join the sentences using the relative pronoun/ adverb in brackets. Make any other necessary changes.**

1 We just met Dr Jones. He has written a book on multiple intelligences. **(who)**
2 This is the IT building. Professor Harris is working on important research there. **(where)**
3 Kairat recommended a documentary. It was very informative. **(which/that)**
4 1983 was the year. Howard Gardner's book was published then. **(when)**
5 Martha loves all sports. I understand the reason. **(why)**
6 This is the new student, Anna. Her IQ is very impressive. **(whose)**

Speaking & Writing

7 10.1.4 10.3.7 10.6.5 **Do a survey. Interview your classmates. Ask them what type of intelligence they are and why. Find out the most popular intelligence. Present the information on a poster. Display it around the classroom.**

A: What type of intelligence are you?
B: I'm linguistic because I love learning languages.

8 10.1.6 10.5.1 10.5.2 10.5.3 ICT **Collect information online about Howard Gardner. Write his biography. Make sure you plan your biography, edit it for any unnecessary information and proofread it for any mistakes. Find pictures to illustrate it. Present your biography to the class.**

6c Stress

VIDEO

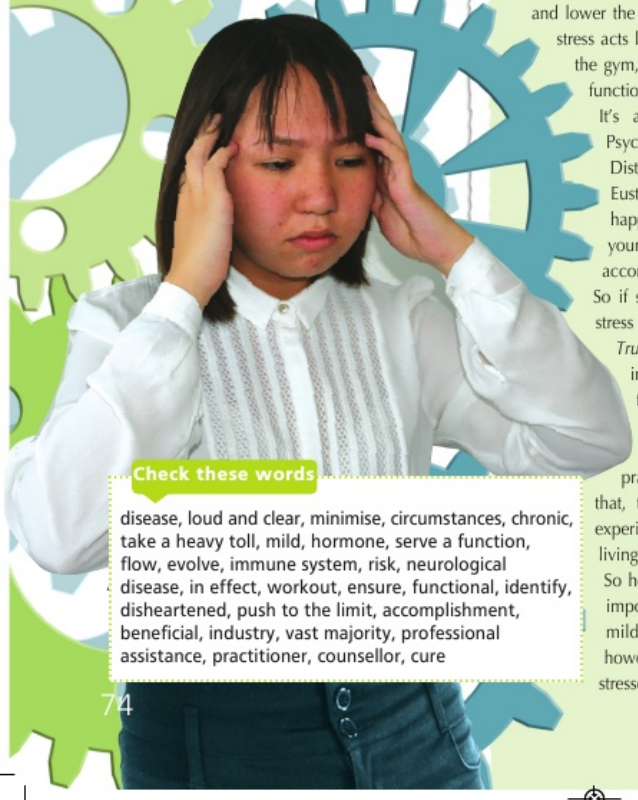
Vocabulary & Reading

1 10.5.2 **The words below appear in the text. Use them to complete the sentences.**

• psychologists • produce • media
• immune system • practitioners

1 Stress is rarely written about in the ..... .
2 Stress causes glands in the body to ..... a number of hormones.
3 Regular periods of stress can strengthen the body's ..... .
4 According to ....., there are two main types of stress.
5 In Britain, there are over 2 million stress management ..... .

2 10.2.2 10.2.3 10.4.2 **Which of the sentences in Ex. 1 are true about stress?**
Listen and read to find out.



Check these words

disease, loud and clear, minimise, circumstances, chronic, take a heavy toll, mild, hormone, serve a function, flow, evolve, immune system, risk, neurological disease, in effect, workout, ensure, functional, identify, disheartened, push to the limit, accomplishment, beneficial, industry, vast majority, professional assistance, practitioner, counsellor, cure

Who says STRESS is bad for you?

Think stress is your enemy? Think again. To be happy and healthy, we all need a little stress in our lives!

'Stress: the disease of our times', 'Stress-related illnesses the number one cause of doctors' visits' – it seems like you can't pick up a newspaper or magazine these days without seeing a headline about stress and how bad it is for your health. The message is loud and clear: you should do everything you can to minimise stress in your daily life.

Is stress really the monster it is made out to be by the media? Surprisingly, most experts believe nothing is wrong with occasionally experiencing a little bit of stress. As physiologist Monika Fleshner states, "Only under circumstances of chronic stress do we suffer its negative effects." This type of stress comes when we face a situation that takes a heavy toll on us – a stressful job or an unhappy home life, for example. On the other hand, experiencing mild stress, according to Fleshner, can be good for us.

When we feel stressed, hormones are produced from glands in our body. These hormones (such as adrenaline and cortisol) serve a number of functions. They make the heart beat faster and blood flow to the brain and muscles is increased, making us ready for action. If we hadn't developed this reaction, we might not have survived as a species. In this case, stress is not a problem, but a condition that humans have evolved over thousands of years to deal with problems!

Stress not only has short-term benefits. Recent research suggests that regularly experiencing short periods of mild stress can strengthen your immune system and lower the risk of neurological diseases such as Alzheimer's. In effect, stress acts like a 'workout' for the brain. Just like exercising muscles in the gym, stress exercises the brain, ensuring it stays strong and fully functional.

It's also worth thinking about the consequences of stress. Psychologists identify two main types: distress and eustress. Distress is negative stress which often makes us feel disheartened. Eustress, however, is positive stress that results in us feeling happy. Take physical exercise for example. It is stressful pushing your body to the limit, but the health benefits and feeling of accomplishment afterwards make the stress worth it.

So if some stress is beneficial, why are we continually told that stress is our enemy? According to Angela Padmore, author of *The Truth about Stress*, the answer lies with the stress management industry. According to Padmore, the vast majority of us do not feel stress to the point where we need to buy products or seek professional assistance. Yet, in Britain alone, there are over 15 million websites and 2 million stress management practitioners selling a huge variety of treatments for a condition that, to a large extent, does not need to be treated. As one experienced counsellor put it, "They've turned a normal part of living into a disease that needs to be cured."

So how does this help us in our everyday lives? Well firstly, it's important to recognise the difference between chronic stress and mild stress. If you are suffering from chronic stress, get help today; however, the next time that you feel mild stress, don't get too stressed about it - it's probably doing you some good.

3 10.4.2 10.4.5 **Read again and, for questions 1-3, choose the correct answer (A, B, C or D). Give reasons for your answers from the text.**

1 Monika Fleshner believes that stress
- **A** is very bad for everyone.
- **B** is very good for everyone.
- **C** is not as harmful as the media says.
- **D** at home is worse than stress at work.

2 The hormones released when we are stressed
- **A** help us feel a lot calmer.
- **B** help the body fight diseases.
- **C** help us deal with difficult situations.
- **D** may cause serious illness later in life.

3 The main purpose of the article is to
- **A** bust some myths about stress.
- **B** give the writer's opinion about stress.
- **C** warn us about the stress management industry.
- **D** give advice about how to avoid stress.

4 10.3.2 **Answer the questions in your own words.**

1 What occurs in the body when we feel stressed?
2 Why do so many people seek treatment for mild stress?

5 10.6.1 **Find examples of abstract and compound nouns in the text.**

Grammar
The passive

see p. GR13

6 a) 10.6.9 **Find examples of the passive in the text. How do we form the passive?**

b) 10.6.9 **Complete the sentences with the correct passive form of the verb in brackets.**

1 Junk food must ..... at all costs. **(avoid)**
2 Leaflets about stress ..... at school yesterday. **(hand out)**
3 Anxiety ..... to lead to many serious illnesses. **(say)**
4 All stress should ..... harmful. **(not/consider)**
5 Sleep patterns ..... by too much worrying. **(often/affect)**

Conditionals: type 3

see p. GR14

7 10.6.17 **Read the examples. How do we form the third conditional?**

A **Type 3 conditional** describes an imaginary situation in the past:
If I ***had passed*** *the exam, I* ***would have got*** *into university.*
(I didn't pass the exam and I didn't get into university.)

8 10.6.17 **Complete the sentences with the correct form of the verb in brackets to make Type 3 conditionals.**

1 If you ..... **(be)** at the lecture, you would have seen me.
2 What ..... **(you/do)** if you had been me?
3 If he had listened to my advice, he ..... **(not/have)** so much stress.
4 If only you ..... **(burn)** the cake, I wouldn't have had to buy one.
5 I ..... **(arrive)** on time if the bus hadn't been late.
6 If I ..... **(know)** your phone number, I would have called you last night.

Listening

9 10.2.3 10.2.5 10.2.6 **You will hear three people talking about what they do to reduce stress. Listen and match the speakers to the statements (A-E). There are two extra statements.**

- **A** I made sure I stopped any unhealthy habits.
- **B** I wasn't sure where my anxiety came from.
- **C** I shared my worries with the people close to me.
- **D** I still had to face what was worrying me.
- **E** I talked about my problems with my school friends.

Speaker 1	
Speaker 2	
Speaker 3	

Speaking & Writing

10 a) 10.1.5 10.3.3 10.3.4 10.3.7 10.6.2 **What things do you do to reduce stress? Tell the class.**

b) 10.3.5 10.5.1 10.5.2 10.5.3 10.5.5 10.6.4 ICT **What other ways can we use to reduce stress? Find information online and tell the class. Write a paragraph.**

6d Writing

An email giving advice

Writing Tip

Writing an email giving advice

An email giving advice is an informal piece of writing to a friend, relative or someone we know well. We usually start with *Dear/Hi* + first name. In the first paragraph, we give our opening remarks and the reason for writing *(I'm writing to ...)*. We give our pieces of advice in separate paragraphs. In the last paragraph, we express the hope that our advice was helpful as well as giving closing remarks. We sign off with an informal ending (e.g. *Bye for now!*) and our first name.

An email giving advice usually includes:

- an **introduction** in which you express sympathy for your friend's problem and offer to give some advice.
- a **main body** of two paragraphs which include pieces of advice and their possible results.
- a **conclusion** with a hope that your advice has helped and closing remarks.

1 10.5.4 **Read the rubric and look at the key words in bold. Answer the questions.**

Your **English friend** is having trouble studying for school at home. He/she has written an email to you asking for your **advice about how to study better**. Write your **email** (120-180 words).

1 What are you going to write?
2 Who is going to read it?
3 What should your piece of writing be about?
4 How many words should you write?
5 What style should you use?

2 10.5.7 **Read the email and match the paragraphs (A-E) to the descriptions below.**

1 ☐ first piece of advice and possible results
2 ☐ hope that things will go well and closing remarks
3 ☐ second piece of advice and possible results
4 ☐ sympathy for friend's problem and offer of help
5 ☐ third piece of advice and possible results

Mailbox REPLY MAIL

Hi Danny,

A ☐ Thanks for the email. Sorry to hear you're feeling a bit under the weather. I had trouble studying last year too, so perhaps I can give you some advice.

B ☐ To start with, if I were you, I'd make sure that I had a quiet place to study. You should turn off the TV, switch off your smartphone and only go online if it's for research. If you do that, you'll be able to concentrate a lot better.

C ☐ Why don't you plan your studying? Set yourself a time and a time limit. For example, you could say that you are going to study for two hours at 7 o'clock. That way you won't put off studying and do something else.

D ☐ Also, it would be a good idea to join an online study group. If you do this, you'll get lots of support from other students. This really helped me, and I made lots of new friends, too!

E ☐ Hope my advice helps. I'm sure you'll soon sort out the problem. Let me know what happens.

Best wishes,
Aizhan

3 10.5.4 **Decide whether the sentences are opening remarks or closing remarks. Mark the sentences as *OR* (opening remark) or *CR* (closing remark).**

1 Let me know how things turn out. .....
2 Say hello to your family for me. .....
3 How're things? .....
4 Thanks for your email. .....
5 Sorry to hear about your problems. .....
6 Well that's all for now. .....
7 Let me give you some advice. .....
8 Write back soon. .....
9 I thought I'd drop you a line to ... .
10 All the best and keep me posted. .....

4 10.5.4 **Replace the opening/closing remarks in the email in Ex. 2 with remarks from Ex. 3.**

6d

Writing Tip

10.5.4 **Informal style** is used to write to friends, relatives and other people we are close to. It is friendly and chatty. Informal style includes:

- short forms: *We're going to the art gallery tomorrow.*
- phrasal verbs: *Sorry I can't come, but I've got to look after my little brother.*
- colloquial expressions/idioms: *It was raining cats and dogs all day!*
- omission of pronouns: *I've got to go now!* → *Got to go now!*
- informal linkers: *Also, I've got football practice on Saturday morning.*

5 10.5.4 **Read the Writing Tip and find examples of informal style in the email in Ex. 2.**

6 10.5.4 **The first and last paragraphs below have been written in formal style. Rewrite them in informal style.**

A Dear James Thomson,
Thank you for your email. I am very sorry to hear about your problem. The same thing happened to me last year. Allow me to give you some advice.

B I have got to go now. Please write back and tell me if my advice helped. Could you say hello to all your family for me?
Yours sincerely,
Elizabeth Foley

7 10.5.6 **Read the Writing Tip and find the ways the writer of the email in Ex. 2 makes suggestions.**

Writing Tip

When we give advice, we make suggestions. We can do this in these ways:

- **How about** trying an after-school club?
- **Why don't you** make a list of the advantages and the disadvantages?
- **You could/should** ask your other friends for help.
- **It would be a good idea to** cut out junk food and fizzy drinks.
- **Have you thought of/about** volunteering at the local homeless shelter?
- **If I were you, I'd** tell your parents or a teacher.

8 10.5.6 **Make suggestions using the ideas (1-4).**

1 take up a sport and eat healthily
2 share your worries with your parents
3 focus on the cause of the stress
4 make time for fun and relaxation

Writing Tip

10.5.6 When we give a piece of advice, we always say what the result of the piece of advice is. We can do this in several ways:

- **This will help by** taking your mind off your problems.
- **If you do this/that, you'll** feel a lot better very soon.
- **This way**, you'll soon forget about all your worries.
- **Then** you'll have plenty of time to do what you want.

9 10.5.6 **Read the Writing Tip and give possible results for the pieces of advice in Ex. 8.**

10 10.1.5 10.5.1 10.5.2 10.5.7 10.5.8 10.6.15 10.6.16 **Your English friend is taking exams next month, but he/she is very stressed about them. He/She has written an email to you asking for your advice about dealing with stress. Write an email to your friend (120-180 words). Use the plan to write your email. You can use your own ideas or the ones in Exs 8 & 9. Edit and proofread your email.**

Plan

Hi (friend's first name),
Para 1: express sympathy for friend's problem; offer help
Para 2: first piece of advice and possible results
Para 3: second piece of advice and possible results
Para 4: third piece of advice and possible results
Para 5: express hope that things will go well; closing remarks
Best wishes,
(your first name)

6e Culture Corner

VIDEO

1 10.1.8 10.4.1 10.4.3 **What do you know about the Duke of Edinburgh's Award? Read through to find out.**

The Duke of Edinburgh's Award

DofE

The Duke of Edinburgh's Award (also called the D of E) is a very well-known and popular youth programme in **(0)** *the* UK that aims to help young people aged 14-24 reach their full potential! **1)** …… gives young people the chance to develop their character and their life skills as they take part **2)** …… all kinds of exciting extracurricular activities. Started as a small all-boys programme in 1956 by the Duke of Edinburgh, today 275,000 young people **3)** …… different backgrounds are working towards **4)** …… D of E at any one time in the UK!

Participants can progress through three levels of the D of E, the bronze (challenging), the silver (more challenging) or the gold (extremely challenging and **5)** …… for the faint-hearted). It's definitely not easy to achieve any of the awards. Activities are organised in four areas: Volunteering, which could mean volunteering **6)** …… an animal rescue centre or working in a charity shop for six months; Physical, which might be getting a certificate in parachuting or flamenco dancing; Skills, which could be doing a jewellery-making, first aid or cookery course; and Expedition, which could be planning a rowing trip **7)** …… the Danube in Germany. All this can take anything from three months to three years! The best thing is – young people can pick exactly **8)** …… activities they want to do in each category. Ultimately, it's all worth it and all the gold awards are presented **9)** …… the Duke of Edinburgh himself at a royal palace.

From beginning to end, it's great fun doing a D of E and employers, colleges and universities get excited if **10)** …… see it on a person's CV.

The important thing, though, is that "You learn to love something, work hard, be focused and disciplined and then you will be ready **11)** …… *when the right opportunity comes your way," as opera superstar Katherine Jenkins said* **12)** …… *completed her silver award.*

Study skills

Open cloze

Read the text once to get the general idea. Read again and try to identify what part of speech each missing word is e.g. verb, noun, conjuction, etc. Pay attention to the words before and after each gap. They will help you do the task. Read the completed text to see if it makes sense.

2 10.4.2 **Read the text and fill in the gaps 1-12 with a word which best fits.**

3 10.5.2 **Fill in:** *different, pick, full, easy, charity, comes, skills, rescue, gold.*

1 ..... potential
2 life .....
3 ..... background
4 ..... to achieve
5 animal ..... centre
6 ..... shop
7 ..... an activity
8 ..... awards
9 ..... your way

4 a) 10.2.2 **Listen and read. Explain the different types of this award.**

b) 10.1.10 THINK! **How can this award help young people? In three minutes write a few sentences. Tell the class.**

Check these words

aim, full potential, extracurricular activity, progress, challenging, animal rescue centre, charity shop, parachuting, first aid, expedition, rowing trip, pick, ultimately, royal palace, focused, disciplined

5 10.1.8 10.5.1 ICT **Find information about an award that young people can obtain or a youth organisation they can belong to in your country (e.g.** ***what it is, how it started, what it involves, why someone should do it/take part in it*****). Write a paragraph about it then read it to the class.**

Curricular: PSHE 6f

VIDEO

You forgot someone's name, you left your essay at home or maybe you can't remember where you parked your car! Memory is your ability to store, retain and recall information in your brain, but sometimes our memories let us down. Fortunately, there are lots of creative tricks you can use to keep your memory in top form!

Chunking

Try breaking down strings of information, **0)** *like* phone numbers, into smaller chunks. So instead of trying to remember 791845, remember it as 79 18 45. This works even **1)** ..... if you associate something meaningful with each chunk, too. Let's say you're **2)** ..... for a History degree at university. You could say 79 AD is the year Vesuvius erupted in Pompeii, 18 is your age and 45 is your room number in your hall of residence. Finding personal connections like this anchors information in your memory.

Thinking in pictures

Try thinking in images rather **3)** ..... words. Let's say you have a new part-time job and your boss's name is Alice Barker. To remind you **4)** ..... her name, make some connections: Alice with *Alice in Wonderland* and Barker with a huge barking dog. Now picture Alice falling down the rabbit hole closely followed **5)** ..... a snarling dog. The more vivid and weird the images, the better this technique works.

Word association

Mnemonics **6)** ..... as '30 days has September, April, June and November ...' have long been used by people to help **7)** ..... remember tricky information. So the next time you need to remember the spelling of a difficult word or the names of some people you've just met, why not try coming **8)** ..... with your own silly rhyme, song or poem? The sillier and funnier the better!

Location, location, location!

The Romans used a visualisation technique called 'loci' to remember lists of things. Imagine a room in your house. Mentally place the things you need to remember on the furniture. When you want to recall the items, **9)** ..... an imaginary walk around the room. When you recall the furniture, which is easy because the room is familiar **10)** ..... you, you'll recall the objects easily, too.

Practice makes perfect

This is true, but psychologists say that we remember more effectively when we space out our learning. So don't cram for tests and exams! When **11)** ..... to memorise new words in a foreign language, for instance, repeat them a few times, then take a break. Then come back to them. Perhaps put flashcards around the house with words written on them ... you will **12)** ..... seeing them and they will be slowly burnt into your long-term memory.

These are just a few tips. Experiment to see what works best for you! Above all, eat well and get plenty of sleep and exercise. Staying healthy will give your memory the best boost of all!

Check these words

retain, recall, let sb down, keep in top form, chunk, break down, string of information, erupt, personal connection, barking, snarling, weird, mnemonics, tricky, rhyme, visualisation, mentally, effectively, space out, cram for, take a break, burnt into your memory, long-term memory, boost

1 10.4.3 Read the title of the text, the introduction and the headings. How can we improve our memory? Read and check.

2 10.4.2 10.4.4 Read again and complete the gaps with the correct word. Compare with your partner.

3 10.5.2 10.6.15 Find all the phrasal verbs in the text. Make sentences using them.

4 10.5.2 Fill in: *remember, memorise, recall, remind.*

1 ..... me to call John tonight!
2 ..... to lock the front door!
3 ..... these 10 words for Monday.
4 I can ..... happy times playing in the park when I was young.

5 a) 10.1.1 10.2.6 10.4.2 Listen and read. Use the information in the text to explain how we can train our brains to remember things. Which techniques do you think can help you?

b) 10.5.1 ICT Do some Internet research on other memory techniques you can use. Use the key words: *ways to improve your memory*. Tell the class.

6 Language in Use

Phrasal verbs/Prepositions

1 10.5.2 10.6.15 **Choose the correct particle.**

set sth aside: save (money)
set off: start (a journey)
set up: start (a company)
take in sth: learn or understand sth
take over: begin to have control
take up: start (a hobby, sport)

1 Samal has set ..... her own language school.
2 Paul had difficulty taking ..... all the information.
3 I have £400 set ..... to buy a new laptop.
4 Damir has taken ..... crosswords to improve his vocabulary.
5 Kevin set ..... early to avoid the traffic.
6 One side of the brain can take ..... the opposite's functions.

2 10.5.2 **Fill in:** *for (x2), to (x2), with (x2).*

1 I can't deal ..... the stress; it's driving me crazy!
2 How did Sally react ..... Paula's rudeness?
3 Our brains are responsible ..... all our emotions.
4 I can't understand anything related ..... neurology.
5 Berik is cramming ..... his biology test.
6 Responsibility for the bad roads lies ..... the local council.

Words often confused

3 10.5.2 **Choose the correct word.**

1 Can you **remind/remember** me to buy some milk later?
2 Which household items did Thomas Edison **imagine/invent**?
3 Did you see that great **program/programme** about the brain on TV?
4 **Physical/Natural** exercise is good for reducing stress.
5 Scientists have shown that eustress has positive **effects/affects**.
6 Our English teacher used to **say/tell** the most amazing stories.

Word formation

4 10.5.2 **Fill in the correct word derived from the word in brackets.**

We can add the suffixes **-ly** *(intelligent – intelligent**ly**)*, **-ily** *(angry – angr**ily**)*, **-ally** *(basic – basic**ally**)* to adjectives to make adverbs.

1 Oliver climbed the mountain ..... . **(EASY)**
2 There are ..... eight multiple intelligences. **(PROBABLE)**
3 ....., we missed the heavy rain. **(LUCKY)**
4 The audience applauded the actors ..... **(ENTHUSIASTIC)**
5 I've never seen David dance so ..... before. **(ENERGETIC)**
6 I'm ..... sorry to hear about your problem. **(TERRIBLE)**

Kazakhstan in Action!

Read and fill in the correct word.

- In 2016, ten Nazarbayev Intellectual schools were recognised for **1)** ..... excellence and were internationally accredited.
- Students from Kazakhstan can study abroad for **2)** ..... with the government's Bolashak scholarship. This programme allows students to gain degrees and masters degrees from universities around the world **3)** ..... bringing their new skills back to Kazakhstan.
- A six-year old Maths genius **4)** ..... Ramzan Baidauletov from Kostanay city amazed everyone **5)** ..... solving 175 problems in just 8 minutes at an International Maths competition **6)** ..... the UAE.
- Schools in Kazakhstan use Lego to teach students about robotics. 7th-grade students have shown their skills **7)** ..... building amazing robots and programming them to carry **8)** ..... various tasks.

Progress Check 6

Reading

1 10.4.2 **Read the text. For questions 1-4 choose the best answer A, B, C or D. Give reasons for your answers.**

1 The writer implies that Chris Gardner
- **A** cannot believe his luck in life.
- **B** is not very modest.
- **C** doesn't like to be reminded of his past.
- **D** is driven by money and power.

2 Gardner's reason for wanting to become a stockbroker that day in 1981 was he
- **A** wanted to own a Ferrari.
- **B** wanted to be rich.
- **C** was tired of working in a parking lot.
- **D** knew he would be good at it.

3 Gardner was such a good stockbroker that, in 1987, he
- **A** became a multi-millionaire.
- **B** founded a homeless charity.
- **C** got himself and Chris Jr off the streets.
- **D** started his own company.

4 Gardner thinks people should understand the message of his life story is
- **A** gaining power over others is easy.
- **B** being lazy gets you nowhere.
- **C** life isn't hard if you don't want it to be.
- **D** doing what you feel strongly about.

4x5=20 marks

Listening

2 10.2.2 **Listen to a radio interview about bullying. For questions 1-5, complete the sentences.**

Every school should join in to [1] _____ of bullying.
If bullying isn't mentioned at your school, it doesn't mean that it [2] _____.
The plays will be discussed in the [3] _____ afterwards.
Students may [4] _____ into the poetry competition.
The winner will win [5] _____.

5x2=10 marks

In Pursuit of Happiness

Meet multimillionaire businessman and entrepreneur Chris Gardner today and you'd be forgiven for thinking he has led a charmed life. Rich and successful, with a $10,000 watch on each wrist, a contacts list that reads like a Who's Who of America's rich and powerful and a seemingly permanent smile on his face that is as big as his bank balance, Gardner simply oozes happiness and success. But the truth is far more interesting: Chris Gardner used to be homeless.

Christopher Paul Gardner was born in 1954, in Wisconsin, USA. As a child, Gardner did not get an easy start in life. He experienced poverty, abuse and foster care, but he had a deep desire to make something of his life. He had big dreams and he was determined to pursue them.

Gardner's unlikely journey from rags to riches started in a parking lot one day in 1981. Getting into his car, he spotted a man in a red Ferrari. On an impulse, Gardner stopped the man and asked him how he had become so wealthy. The man told him he was a stockbroker. Then and there, he knew exactly what he wanted to do in life.

It took almost a year of trying, but eventually Gardner succeeded in getting an unpaid internship at a brokerage firm. Unfortunately, he didn't earn enough money, so for the next year, Gardner led a double life. During the day, he worked in Wall Street; at night, he and Chris Jr slept in the streets. They washed in public bathroom sinks and ate at soup kitchens. It was the most difficult period of Gardner's life, but he recalls that not for one day did he ever stop believing his luck would change. Gardner's work colleagues never discovered his secret.

Eventually, Gardner became a successful stockbroker and got enough money together to get himself and Chris Jr off the streets. By 1987, Gardner had become so good at what he did, he founded his own brokerage firm. Fast forward to the present day and Gardner is CEO of his second multimillion-dollar firm and a philanthropist who gives a great deal of his time and money to helping the homeless and unemployed.

People tell Gardner his story is a modern day rags-to-riches fairytale, but Gardner disagrees. "Mine is a story about how to empower yourself and beat the odds stacked against you," he insists. "Many people make excuses to themselves about why they can't achieve things in life. My life shows that if you are determined enough, you can achieve anything you want to."

Today, Gardner is one of the richest men in the world, but his wealth has nothing to do with money. "Sometimes I can't sleep at night because my face hurts from smiling so much", says Gardner. The reason? "I'm doing the work I want to be doing." This, says Gardner, is the one secret that helped him to change his life and it is the key to his happiness. "Passion is everything. Find what makes you passionate and you will find success and fulfilment," says Gardner.

6 Progress Check

3 10.5.2 **Fill in:** *converts, heavy, challenge, senses, evolved, identified, serve, handle, implications, employ.*

1 We perceive the world using our five ..... .
2 John's illness took a ..... toll on his immune system.
3 Howard Gardner ..... eight multiple intelligences.
4 The human brain has ..... to perform a huge variety of functions.
5 Stress can sometimes ..... a positive purpose.
6 The process of reading ..... ink on a page into words in our head.
7 Our bodies ..... different strategies to deal with stress.
8 The team rose to the ..... and won the match easily.
9 Galileo's theory had far-reaching ..... for astronomers.
10 Frank can't ..... all the stress in his new job.

10x1=10 marks

4 10.6.17 **Choose the correct item in each sentence.**

1 Have you met the professor **who's/whose** taking over the physics department?
2 Dana bought a new computer **when/that** broke on the first day.
3 Do you remember the day **why/when** we first met?
4 Tracey lives in London, **where/that** she works as a chemist.
5 Kairat is going to a university **who/which** is over 400 years old.

5x2=10 marks

5 10.6.5 **Complete the questions below with the correct tag.**

1 Let's watch a documentary tonight, ... ?
2 Gardner will bring out his new book soon, ... ?
3 I'm right about the address, ... ?
4 You're going to the lecture, ... ?
5 I don't have to wait for you, ... ?

5x2=10 marks

6 10.6.9 **Use the verbs in bold to make passive sentences.**

1 Professor Yates new book ..... next year. **(publish)**
2 Our library ..... by a leading architect ten years ago. **(design)**
3 The laboratory ..... every day. **(clean)**
4 The star ..... through a telescope. **(could/only/see)**
5 Leaflets ..... after today's lecture. **(hand out)**

5x2=10 marks

7 10.6.17 **Complete the sentences using the verbs in brackets to make third conditionals.**

1 If I ..... **(win)** the lottery, I would have bought a huge house.
2 I ..... **(not/go)** to college if I hadn't passed my exams.
3 If you'd gone to bed earlier, you ..... **(not/be)** so tired.
4 I ..... **(talk)** to Josie if I had seen her, but I didn't.
5 If you'd studied harder, you ..... **(might/do)** better on the test.

5x2=10 marks

8 10.5.1 10.5.7 **Read the rubric and write your email.**

Your **English friend** has just moved to a new school and he/she is having trouble making friends. He/she has written an email to you asking for your a**dvice about how to make friends**. Write your **email** (120-180 words).

20 marks

Total: 100 marks

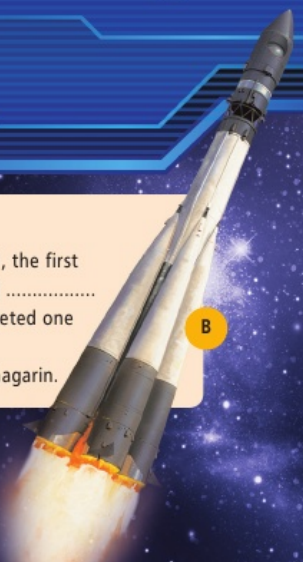
Check your Progress

- talk about the human brain ____
- talk about multiple intelligences ____
- talk about ways to reduce stress ____
- use different question types ____
- use relative clauses and the passive ____
- use the third conditional ____
- write a quiz about the human brain ____
- write a short biography ____
- write an email giving advice ____

GOOD ✓ VERY GOOD ✓✓ EXCELLENT ✓✓✓

Module 7
Breakthrough technologies

Vocabulary: major breakthroughs; science/medicine; nanotechnology; robotics; characteristics for success
Grammar: reported speech; reported questions, quantifiers & countable/uncountable nouns
Phrasal verbs: verbs with *down*
Writing: a for-and-against essay
Culture Corner: *Science Museum, London*
Curricular *(Science & Technology)*: *Artificial Intelligence*



• unmanned • launched • orbit

In 1957, Russia **1)** ..... Sputnik 1, the first **2)** ..... satellite to successfully **3)** ..... Earth. Then, in 1961, Vostok 1 completed one orbit around the Earth carrying the 27-year-old Russian cosmonaut Yuri Gagarin.

B

VIDEO

Vocabulary
Major breakthroughs

1 a) 10.5.2 **Fill in the gaps in the texts (A-D) with words in the lists.**

b) 10.4.1 **Which description is related to: *space exploration*? *medicine*? *archaeology*? *technology*?**

C

• lit up • pioneered • supply

Nikola Tesla **1)** ..... the use of alternating current (A/C) to send power over huge distances. He paved the way for our modern electricity **2)** ..... and is referred to as the man who **3)** ..... the world.

A

• led • discovered • revolutionised

In 1928, Alexander Fleming **1)** ..... penicillin by chance when he forgot to clean a dish. This **2)** ..... medicine and **3)** ..... to the development of life-saving antibiotics.

• writing • unreadable • came across • work out

In 1799, French soldiers **1)** ..... a flat stone near Rosetta, Egypt. 'The Rosetta Stone' had **2)** ..... in Egyptian hieroglyphics and Greek on it and by comparing the two, experts were able to **3)** ..... the meaning of the hieroglyphics, which had been **4)** ..... for centuries.

D

Over to you! 10.1.9 10.3.2 10.3.7 10.6.3

- **Which of these breakthroughs do you think has had the biggest impact on our lives? Why?**
- **Name some other major breakthroughs and why you consider them important.**

7a Nanotechnology

Vocabulary & Reading

1 10.2.1 **These words/phrases appear in the text:**

- microscopic robot • molecules of DNA
- molecular biology • nanotechnology • spider-bots
- medical applications • perform operations
- miniature robot surgeons • allow treatments

10.4.1 **What could the text be about?**

Listen, read and check.

2 a) 10.2.3 10.2.8 10.4.6 10.4.7 10.4.9 **Listen and read the text again and for questions (1-6) choose the correct answer (A, B, C or D). Give reasons for your answers.**

The Nanobots!

A Scientists recently created a microscopic robot that can crawl along molecules of DNA. Combining the science of molecular biology and nanotechnology, this unique mechanism, dubbed a 'nano-spider', was developed by a team of researchers from Columbia University in New York with the help of colleagues in Arizona, California and Michigan. The groundbreaking device measures a mere four nanometres in width – an amazing 100,000 times smaller than the diameter of a human hair.

B Needless to say, this nano-spider is no WALL-E, but it can still be classified as a robot. A robot is defined as a mechanism that can understand its surrounding environment, make decisions and move automatically. The little spider-bots can certainly do that. They can walk, turn left and right and even create their own products. One day, such microscopic devices could actually be used to build tiny computer chips or to detect and treat diseases such as cancer at a molecular level.

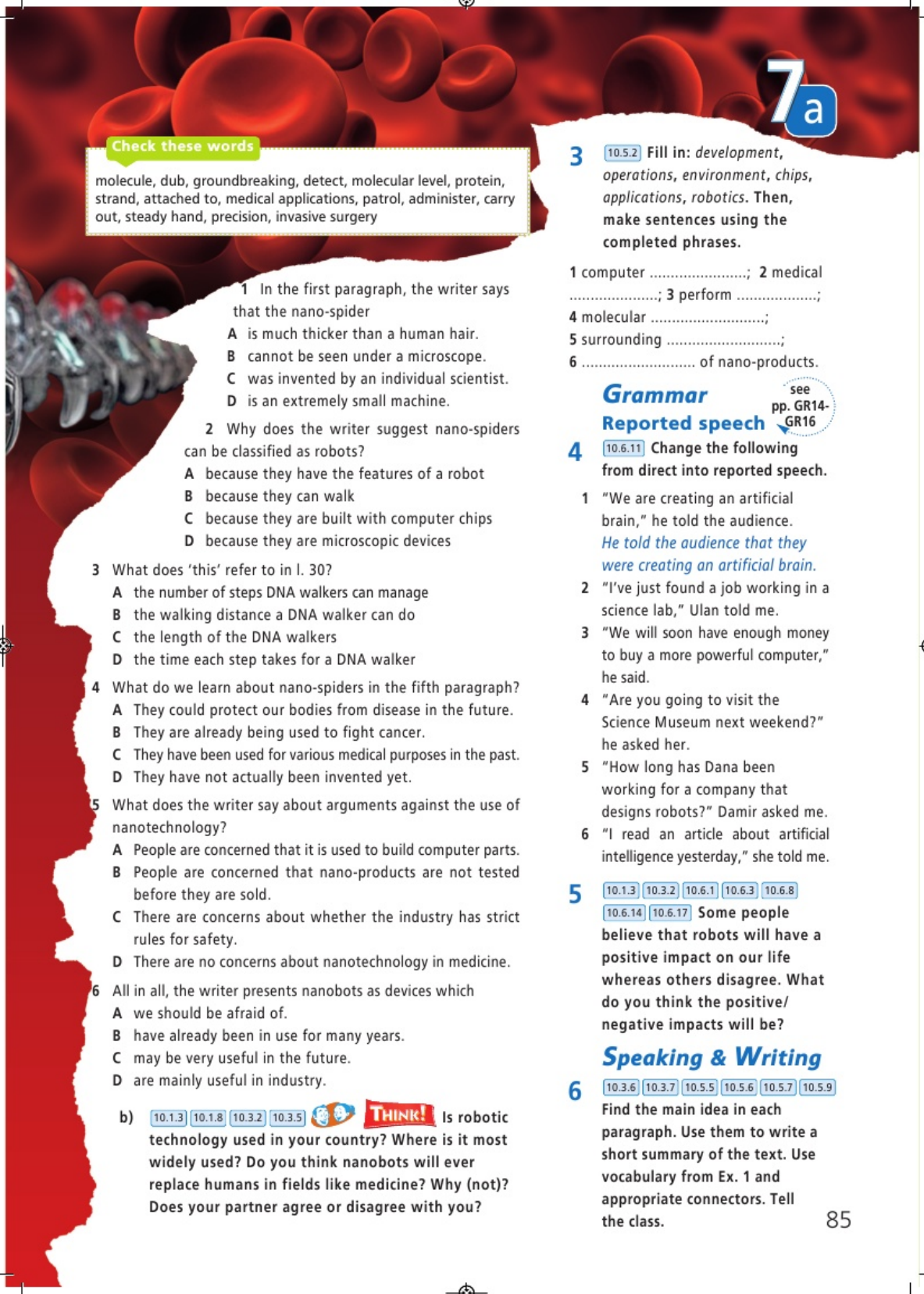
C It is interesting to note that the nano-spiders are made of DNA molecules. The spider's body is composed of a common protein called stretavidin. Unlike a real spider, however, the nano-spider has only got four legs which are single strands of DNA protein attached to the body.

D Microscopic DNA walkers have been developed in the past, but they have never managed more than three steps. These ones can manage as many as 50 steps, which means a possible walking distance of around 100 nanometres. Taking up to one hour to complete, this is more like a marathon for the nano-spider. However, researchers hope to be able to make the spiders walk faster and further in the future. Furthermore, present research is focusing on making the nano-spiders able to follow more commands and to make more decisions.

E Molecular robotics is a new field in scientific research. Although it has not produced a long list of great inventions yet, scientists believe that nanotechnology could become one of the most important industries in the near future. The nano-spider is considered to be an important step in research which could one day lead to devices being created for various medical applications. One day, people could live their lives with miniature robot surgeons patrolling and protecting the insides of their bodies. For example, the spiders could be programmed to check a cell in the body, decide if it is cancerous, and then administer an anti-cancer drug.

F On the other hand, there are a number of arguments against the use of nanotechnology. Most of these concerns are over safety regulations. People are concerned that nanotechnology is not only being used to build small computer parts, but that it is also being used in food, clothing and medicine. Those with concerns would like to see stricter rules applied to the nanotechnology industry and they would like further tests to be carried out on products before they are allowed to enter the market.

G Billions of dollars are being invested in the research and development of nano-products worldwide. Robots are already working in hospitals around the world, often performing operations that require a steadier hand or more precision than a human is capable of. These microscopic robots, therefore, will allow treatments to be given that are currently impossible or which call for more invasive surgery.



7a

Check these words

molecule, dub, groundbreaking, detect, molecular level, protein, strand, attached to, medical applications, patrol, administer, carry out, steady hand, precision, invasive surgery

1 In the first paragraph, the writer says that the nano-spider
- **A** is much thicker than a human hair.
- **B** cannot be seen under a microscope.
- **C** was invented by an individual scientist.
- **D** is an extremely small machine.

2 Why does the writer suggest nano-spiders can be classified as robots?
- **A** because they have the features of a robot
- **B** because they can walk
- **C** because they are built with computer chips
- **D** because they are microscopic devices

3 What does 'this' refer to in l. 30?
- **A** the number of steps DNA walkers can manage
- **B** the walking distance a DNA walker can do
- **C** the length of the DNA walkers
- **D** the time each step takes for a DNA walker

4 What do we learn about nano-spiders in the fifth paragraph?
- **A** They could protect our bodies from disease in the future.
- **B** They are already being used to fight cancer.
- **C** They have been used for various medical purposes in the past.
- **D** They have not actually been invented yet.

5 What does the writer say about arguments against the use of nanotechnology?
- **A** People are concerned that it is used to build computer parts.
- **B** People are concerned that nano-products are not tested before they are sold.
- **C** There are concerns about whether the industry has strict rules for safety.
- **D** There are no concerns about nanotechnology in medicine.

6 All in all, the writer presents nanobots as devices which
- **A** we should be afraid of.
- **B** have already been in use for many years.
- **C** may be very useful in the future.
- **D** are mainly useful in industry.

b) 10.1.3 10.1.8 10.3.2 10.3.5 THINK! **Is robotic technology used in your country? Where is it most widely used? Do you think nanobots will ever replace humans in fields like medicine? Why (not)? Does your partner agree or disagree with you?**

3 10.5.2 **Fill in:** *development, operations, environment, chips, applications, robotics.* **Then, make sentences using the completed phrases.**

1 computer .....; **2** medical .....; **3** perform .....;
4 molecular .....;
5 surrounding .....;
6 ..... of nano-products.

Grammar

see pp. GR14-GR16

Reported speech

4 10.6.11 **Change the following from direct into reported speech.**

1 "We are creating an artificial brain," he told the audience.
He told the audience that they were creating an artificial brain.
2 "I've just found a job working in a science lab," Ulan told me.
3 "We will soon have enough money to buy a more powerful computer," he said.
4 "Are you going to visit the Science Museum next weekend?" he asked her.
5 "How long has Dana been working for a company that designs robots?" Damir asked me.
6 "I read an article about artificial intelligence yesterday," she told me.

5 10.1.3 10.3.2 10.6.1 10.6.3 10.6.8 10.6.14 10.6.17 **Some people believe that robots will have a positive impact on our life whereas others disagree. What do you think the positive/ negative impacts will be?**

Speaking & Writing

6 10.3.6 10.3.7 10.5.5 10.5.6 10.5.7 10.5.9 **Find the main idea in each paragraph. Use them to write a short summary of the text. Use vocabulary from Ex. 1 and appropriate connectors. Tell the class.**

7b Robotics

Vocabulary

1 10.4.1 **What is artificial intelligence? Read the definition to find out.**

artificial intelligence (n) = the ability of computers or machines to have some qualities that the human mind has, such as decision-making and problem-solving, etc

Listening

2 10.1.2 10.2.2 10.4.2 **The robot in the picture is an example of artificial intelligence. Which of the following can it do? Decide in pairs. Listen, read and check.**

- cook meals • move around • tell jokes
- give health advice • sing and dance
- do housework • analyse body language
- understand different languages

Reading

3 10.4.2 10.4.9 **Read the text and for questions (1-4) choose the correct answer (A, B, C or D).**

1 The first Pepper robots were bought in
A 2000. C 2015.
B 2014. D 2016.

2 Pepper can see using cameras on its
A head. C wheels.
B arms. D hands.

3 In two Belgian hospitals Pepper robots
A find out patients' illnesses.
B help children with schoolwork.
C have replaced human nurses.
D help patients find their way around.

4 Pepper's creators say that it
A can learn on its own.
B can't accept new software.
C doesn't live for a long time.
D will be replaced by a new robot.

PEPPER the Emotional Robot

Imagine a robot which can tell how you feel just by listening to the sound of your voice and looking at your body language. It sounds like something from a sci-fi film but this technology is already here! Meet Pepper, the 'social robot' which can understand human emotions!

Pepper was created by a French company called Aldebaran in 2014 and went on sale in Japan in 2015, and in the USA the following year. And even though it costs more than $2,000, the robot is very popular!

Pepper is a humanoid robot. This means that it looks a bit like a person. It is 1.2m tall with a head and two arms, and two wheels to move around. Its head has got four microphones and two HD cameras (one in its mouth and one on its forehead), and these allow it to move around and connect with people. Pepper can understand 20 languages and it can know if it's talking to a man, woman or child. Also, of course, the robot can understand how a person is feeling by the tone of their voice and their body language. Then, if you're feeling sad, it tries to make you happy! It can tell you a joke, sing a song and even dance to cheer you up!

Pepper might not sound very useful – after all, it can't cook food or help with the housework. But in many places this robot is making a big difference in people's lives. Two hospitals in Belgium, for example, use Pepper as a receptionist. These upgraded models can do various jobs around the hospitals.

Check these words

body language, emotion, humanoid, forehead, connect, upgraded

For example, they can greet new patients and walk with them to the correct department. Also, they can cheer up sick children and help them to do their physical exercises!

The inventors of Pepper are always creating new software to improve the robot. They also say that Pepper has the ability to learn itself over time! So, who knows what Pepper will think of next to put a smile on our faces!

4 a) 10.3.2 10.4.6 **Read again and answer the questions.**

1 What is a 'humanoid' robot?
2 How can Pepper move around?
3 In what ways do Pepper robots help young patients in Belgian hospitals?
4 Apart from hospitals where else could people use Pepper robots? In what way?
5 Would you like to own a robot like Pepper? Why?/Why not?

b) 10.1.9 10.3.5 THINK! **Why do you think scientists are trying to develop robots that look like and behave like humans?**

7b

5 10.5.2 **Complete the advert. Use:** *cheer, greet, move, understand, make, tell.*

Electronics

New in store

– the latest in Japanese robot technology!

Pepper – the social robot

- Pepper can **1)** ..... human emotions!
- It can **2)** ..... people up when it recognises a sad voice or body language!
- It can **3)** ..... jokes, and sing and dance!
- It has cameras and microphones and can **4)** ..... around on two wheels.
- Perfect for your home or business. It can **5)** ..... customers and show them around!
- Pepper can **6)** ..... a big difference in people's lives. Buy yours today.

Study skills

Gap filling listening
Try to work out what information (e.g. number, noun, etc) is missing from each gap. This will help you do the listening task.

Listening

6 10.2.3 **Listen and complete the gaps.**

Robot Technology

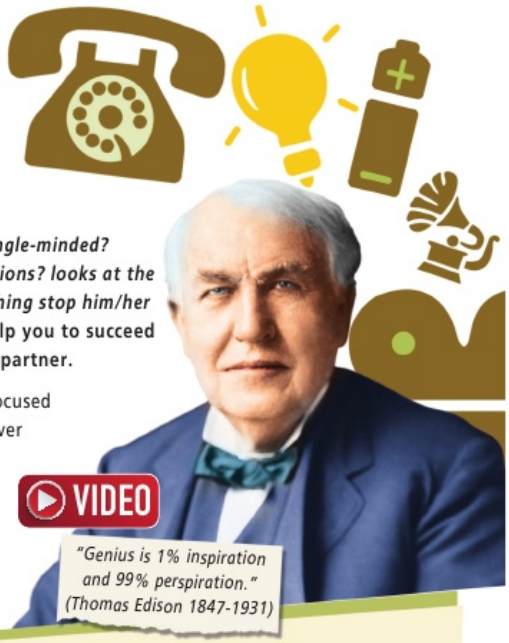
Name of robot: Octobot
Creators: **1)** ..... at Harvard University, USA
Special feature: has no **2)** ..... parts
Looks like: a(n) **3)** .....
Powered by: a **4)** ..... called hydrogen
Can last for: around **5)** ..... minutes
Can be used for: difficult or dangerous work

Speaking & Writing

7 10.1.8 10.3.6 10.3.7 THINK! **Why do you think Pepper is so popular in Japan? Are robots popular in your country? Could Pepper be part of your family? Why (not)?**

8 10.1.1 10.5.1 10.5.7 10.6.8 **Design your own robot. Think about:** *name – what it looks like – special features – abilities – any future improvements*. **Present your robot to the class. The class votes for the best idea.**

7c The road to success



Vocabulary
Characteristics for success

1 10.1.3 10.1.10 **Listen and say. Which word means: *single-minded? doesn't give up? brave? willing to accept ideas/suggestions? looks at the positive? really wants to be successful? won't let anything stop him/her doing sth?* How important is each characteristic to help you to succeed in life and reach your goals? Why? Discuss with your partner.**

• persistent • determined • creative • courageous • focused
• hardworking • relaxed • risk-taker • organised • clever
• optimistic • open-minded • ambitious • confident

A: I believe that it's really important to be determined and persistent if you want to achieve something because if you don't give up you will succeed in the end.
B: I agree. However, I believe it's more important to be courageous because ...

VIDEO

"Genius is 1% inspiration and 99% perspiration." (Thomas Edison 1847-1931)

ON THE PATH TO TRUE GENIUS

1 Most people immediately think of the light bulb when they think of Thomas Edison. But although this genius did in fact invent the first practical, long-lasting light bulb, he **had a hand in** creating many more things we can still see around us today. He invented or contributed to recorded music, electrical systems, the telephone, the alkaline battery, X-rays and an early cinema projector. Incredibly, by the end of his life he held 1,093 patents and he is responsible for more inventions than any other inventor in history!

2 Edison was undoubtedly a very clever person. Would you believe, though, that as a child, his teacher told his mother that he was too slow to learn? Later on, as an inventor, many of his inventions failed. So what were the secrets of Edison's success? We all have dreams and ambitions and who better than Mr. Edison to provide us with a few tips for achieving them!

3 Perhaps Edison's greatest strength was that he absolutely refused to **give up**. He said, "Many of life's failures are people who did not realise how close they were to success when they gave up." Unbelievably, it took Edison thousands of tries before he found the right filament to use for his light bulb. He wasn't afraid of failure. He simply saw his bad ideas as **stepping stones** to better ones. Even after his factory was almost totally destroyed by fire, he said, "There is great value in disaster. All our mistakes are burned up and we can start anew." Three weeks later, Edison delivered the first phonograph*.

4 Edison was also very **intolerant of** laziness and believed in pushing himself to reach his goals. He set himself a target, for instance, to come up with a small invention every 10 days and a major one every 6 months. So, **try taking a leaf out of Edison's book**. If you want to write a book, aim to write a chapter every day. If you want to become a photographer, teach yourself one new skill or trick every day or week. When you put your brain under a little pressure, you'll be amazed by how much your power of thought improves.

5 Another **effective** little rule Edison had was to take time out to relax while he was working at his 'invention factory' in Menlo Park, New Jersey. He would **drift off to sleep** with several small metal balls in his hand. If he fell into a deep sleep, the balls would fall noisily onto the floor and wake him up and he'd **scribble down** whatever was in his mind! So next time you are **stuck on** a problem, why not sleep on it? Scientists now agree that relaxation and short naps can improve our concentration and creativity.

6 Also, amazingly, historians have so far discovered around 4 million pages of Edison's notes including sketches, cartoons and even poems. It seems he had many new ideas simply by relaxing, letting his mind **wander** and allowing one idea to flow on to another. So maybe you too should keep a journal where you write down your ideas and thoughts. Who knows what it could lead to?

7 All in all, Thomas Edison succeeded because he was determined, persistent and knew how to use his mistakes to his advantage. So, what are you waiting for? **Tap into** your inner genius and get busy achieving your dreams. You might not create anything as important as the light bulb in your lifetime, but we can all light up the world in our own way!

Check these words

genius, alkaline battery, projector, patent, undoubtedly, failure, filament, burn up, anew, push oneself, reach one's goals, set oneself a target, skill, trick, under pressure, nap, concentration, flow, inner

* an early machine for recording music

Reading

2 a) **What do you know about the inventor Thomas Edison?**

b) 10.4.1 **Read the quotation. What kind of person do you think he was?**
Listen and read the text to find out.

3 a) 10.4.7 **Read the text again and match the headings (A-H) to the paragraphs (1-7). Use each heading once. There is one extra heading. Give reasons for your answers.**

A Set goals to achieve your dreams
B How to avoid failure
C Success against the odds
D The value of keeping records
E Start now to reach your potential
F Inventor of more than you might think
G Strong belief in persistence
H Take it easy for good ideas

b) 10.4.6 **What is the author's purpose in writing this article? To entertain, to persuade the reader to believe in himself/herself or to inform the reader about something? Give reasons.**

see pp. GR16-GR17

Grammar

Quantifiers & countable/uncountable nouns

4 10.6.2 **Underline the correct words. Find more examples in the text. Which words are used with: *countable* or *uncountable nouns?* or *both?***

1 Almost **none/every** of Da Vinci's inventions were built during his lifetime.
2 Gulnara only has **a few/a little** time left to finish her science project.
3 The scientists don't have **much/many** money for the project.
4 There are **a small amount of/hardly any** light bulbs in this shop.
5 Thomas Edison invented **much/a lot of** useful things.
6 **All/Every** of these inventions are amazing!
7 **Either/Both** Berik and Sultan want to be inventors.
8 **Few/Little** people realise how **many/much** inventions Edison was responsible for.
9 Damir has been working on his invention for **a little/several** years.
10 Edison experienced **many/much** failures in his life.
11 Miras spends **a great deal of/all** time working in his lab.
12 That scientist's name is **either/or** Sanjar or Yerasyl; I can't remember.
13 Are there **any/much** light bulbs in the cupboard?

5 10.5.2 **Choose the correct words.**

1 A lot of Edison's inventions were **realistic/practical** ones that were useful in real life.
2 This is a **never-ending/long-lasting** light bulb; it lasts for 1,000 hours.
3 You have to work hard to **reach/manage** your goals in life.
4 Teams of people **contributed to/achieved** Edison's inventions.
5 You've been working too hard; you should take some time **out/down**.
6 Harry was so tired that he **fell/dropped** into a **heavy/deep** sleep.
7 I couldn't work out what to do so I decided to sleep **over/on** it.

6 10.4.5 **Match the words in bold in the text with their meanings:** ***slowly fall asleep, a way to make progress, stop trying, unable to do, not willing to accept/put up with, participated in, make use of, behave the same way as Edison, move from topic to topic, write down quickly, successful.***

Writing & Speaking

7 10.1.9 10.1.10 THINK! **Read Edison's quotes again in the text and explain their meaning. Which do you find the most inspirational? Why? Tell the class.**

8 10.1.9 10.3.2 10.3.7 THINK! **Why was Thomas Edison so successful? What changes does he inspire you to make in your own life? Why? In a few minutes, write a few sentences about this, then read them to the class.**

9 10.1.6 10.5.1 ICT **Find out more information about Thomas Edison. Report your information back to the class.**

7d Writing

A for-and-against essay

1 10.5.5 **Read the rubric. Identify the key words and answer the questions.**

> You've had a class discussion about using robots. Now your teacher has asked you to write an essay discussing the pros and cons of using robots. Write your essay justifying your ideas (120-180 words). Write about: **1)** safety **2)** cost **3)** ... (your own idea)

1 What do you have to write?
2 What should the essay contain?
   A only arguments for the topic
   B only arguments against the topic
   C both arguments for & against the topic

Model analysis

2 a) 10.5.5 **Read the model. Which paragraph:**

A ☐ gives arguments for the topic?
B ☐ summarises the writer's opinion?
C ☐ states the topic?
D ☐ gives arguments against the topic?

b) 10.5.5 **Is the writer in favour of or against the topic?**

c) 10.5.4 10.5.5 **Replace the topic sentences with other appropriate ones.**

Robots: the pros and cons

1 Did you know that there are over 8.5 million robots in the world? Robots are being used more and more in our factories, fields and even in our homes, to carry out difficult or repetitive tasks. However, people do not always agree on whether using robots is a good thing.

2 There are a number of benefits to using robots. **To begin with**, the use of robots increases efficiency and improves safety in factories. **This means that** people do not have to do dangerous jobs and we are able to produce goods faster and easier. **Moreover**, the number of employees needed to do a task is reduced. **As a result**, profits increase for the company.

3 **On the other hand,** the use of robots has its drawbacks. For one thing, robots tend to be quite expensive to buy and maintain. As a result, large financial investments are required. **In addition to this**, using robots means that there are fewer jobs for people. This means that there can be higher unemployment and more social problems.

4 **All things considered**, although there are disadvantages to using robots, I believe that the benefits far outweigh them. Technology is an important part of our world today and if we use it wisely, our daily lives will be easier and less stressful.

3 10.4.5 **Replace the words in bold in the model with phrases from the list.**

• Therefore • However • First • Additionally
• Consequently • Also • To conclude

4 10.6.16 **Choose the correct item.**

1 Many people are in favour of robots, **in spite of/however** there are those who are not.
2 The new technology is very efficient, **besides/in addition** being a lot more convenient.
3 There are many advantages to introducing robots, **although/despite** there are also some disadvantages to consider.
4 **In spite of/However** being a modern miracle, nano-technology makes some people very nervous.
5 **Despite/Although** helping students learn, robots cannot be role models.
6 Robots cannot think like humans, **however/in spite of**, they can perform many human tasks.

5 10.6.16 **Study the box, then join the sentences using the words in brackets.**

even though/though/although + clause **despite/in spite of** + noun/***-ing*** form/ the fact that

1 Robots make teacher's job easier. They cannot help teach students social skills. **(despite)**
2 Robots can be used in distance learning. They are not able to replace a human teacher. **(in spite of)**
3 Robots are very useful in the classroom. They are expensive. **(although)**
4 Robots can be exciting for students. They can't display any human emotions. **(even though)**

6 10.6.16 **Expand the prompts into complete sentences. Then write an appropriate topic sentence for each paragraph.**

A
- robots/be/good/way/teach students/not attend school
- be/program/to provide information for students/without access to teacher

B
- robots/be/expensive for some schools
- robots may be fun/but/not display/emotions

Your turn

7 a) 10.5.5 **Read the rubric and find the key words.**

You have had a class discussion about robots in education. Now your teacher has asked you to write an essay. Write your essay using all the notes and justifying your points.
Notes
Write about: **1)** social interaction **2)** usefulness **3)** ... (your own idea). Write your essay (120-180 words).

b) **Match the arguments (1-4) to the justifications (a-d).**

1 ☐ useful
2 ☐ enables distance learning
3 ☐ expensive
4 ☐ lack of emotion

a not cheap to purchase or maintain
b can allow students who can't attend school to participate in lessons
c can program them to perform a variety of tasks
d cannot display emotions towards students

c) **Which are arguments for? against?**

8 10.6.16 **Use phrases from the Useful Language box to join the sentences in Ex. 7b.**

Useful language

Listing points: To begin/start with .../First of all .../First ... ; Secondly,/Furthermore,/In addition,/What's more
Concluding: To sum up,/In conclusion,/All things considered/ It is clear that/All in all
Giving examples/Justifications: For example/This way .../ Consequently, This means that ..., As a result ..., Therefore ...

9 10.5.1 10.5.3 10.5.4 10.5.5 10.5.9 10.6.14 **Use your answers in Ex. 8, and the plan to help you write your essay in formal style. Make sure you use full verb forms and appropriate linkers.**

Plan

Introduction
Para 1: state the topic
Main Body
Para 2: arguments for & justifications/examples
Para 3: arguments against & justifications/examples
Conclusion
Para 4: summarise arguments/state your opinion

7e Culture Corner

1 a) 10.1.9 10.4.1 **What do you know about the Science Museum in London? What do you think someone can see/do there? Read to find out.**

b) 10.4.7 **Read the text again. Five sentences are missing. Match the sentences (A-F) to the gaps (1-5). There is one extra sentence.**
Listen and read to check.

A Visitors can learn about different areas of science, from the history of our everyday household appliances to aerobatics inside a flight simulator.
B There is also a gallery and an e-shop.
C The museum has free Wi-Fi and a whole range of apps that allow visitors to review information, play games or even interact with the exhibits.
D Another 2017 exhibition at the Science Museum included a space travel exhibit.
E Visitors could learn all about robotics and view over 100 different robots.
F In fact, from 2015 to 2016, there were more than 3,400,000 visitors.

2 10.3.7 10.4.5 **Fill in:** *headset, exhibits, documentary, admission, experience, phenomena, simulator*. **Use the completed phrases to make sentences to talk about the Science Museum in London.**

1 interactive .....
2 science .....
3 virtual-reality .....
4 flight .....
5 scientific .....
6 free .....
7 hands-on .....

3 10.5.6 ICT **Find information about a science museum in your country. Find out:** ***when it was founded, where it is, when it is open, what you can see/do there, what special exhibitions it has, any other interesting information.*** **Write a paragraph about it and then read it to the class.**

The UK's most famous science museum is the Science Museum, London. Each year, it welcomes millions of people through its doors. [1] The museum is open seven days a week and admission is free. The Science Museum has five floors full of exciting exhibits and exhibitions for people of all ages to enjoy.

Hands-on science

There is a lot to see and do at the museum. [2] The Science Museum gives young people the chance to observe and learn about a variety of scientific phenomena in a fun way. Many of the museum's exhibits are interactive and give visitors the chance to get a hands-on experience. The museum even has its own iMax cinema where visitors can watch fascinating science documentaries with amazing 3D effects.

Amazing exhibitions

The Science Museum has different exhibitions each year. In 2017, there was a fantastic robot exhibition. [3] They could have a conversation with a social robot or get up close to life-like android robots that look just like humans. [4] Visitors can put on virtual reality headsets and take a realistic 400 km trip from the International Space Station (ISS) all the way back to Earth.

High-tech

If all of the exciting exhibits aren't enough, visitors can have an even more engaging experience by downloading the Science Museum's apps onto their smartphone or tablet. [5] No matter what your interests are, there is something for everyone at this incredible museum.

Check these words

exhibit, aerobatics, simulator, android robot, virtual reality headset

Curricular: Science & Technology 7f

1 10.4.1 **Read the title of the text. What do you know about the topic?**
Listen and read. Does the text contain information you already know?

2 10.4.2 **Read the text and decide if the statements below are *T* (True), *F* (False) or *DS* (Doesn't say).**

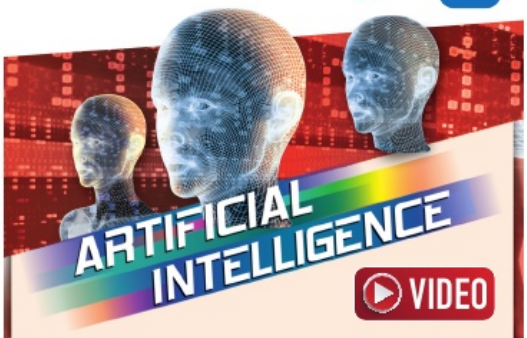
1 AI is the idea that we can create machines that look like humans. .....
2 Scientists want to create a machine that is more intelligent than a human. .....
3 Machines are programmed to respond to specific events. .....
4 Creating AI is a simple task. .....
5 AI machines are able to converse. .....
6 AI can be used to interpret hospital test results. .....
7 AI has reduced the amount of nurses in hospitals. .....
8 People think machines will be more intelligent than us. .....

3 10.5.2 **Fill in: *processes, affair, breakthrough, ultimate challenge, stimuli, morality.***

1 Scientists want to create machines that have the same thought ..... as humans.
2 Developing artificial intelligence is the ..... for scientists.
3 Robots can be programmed to respond to ..... .
4 Fictional robots lack emotions and a sense of ..... .
5 AI researchers are still hoping for a ..... .
6 Multi-robot planetary exploration would be a complex ..... .

4 10.5.1 10.5.2 ICT **Collect more information about AI. Present it to the class.**

5 10.3.5 THINK! **Imagine AI was a reality. How would it affect your everyday life? Discuss in pairs.**



What is AI?
AI stands for artificial intelligence. It is the idea that a machine can be 'intelligent'. By this, we mean it is able to display human levels of intelligence. Artificial intelligence refers to a machine's ability to carry out human thought processes and display human-like responses. For example, machines that can speak, think, learn and even be emotionally aware. The ultimate challenge in AI is for scientists to create an equally intelligent being.

How does it work?
All actions performed by machines are carefully programmed using commands and algorithms (mathematical equations) which instruct the machine how to respond to specific stimuli (prompts). Some machines are able to 'learn' but this isn't truly AI. It just usually means that the machine can retain new information that is presented to it or that it can recognise and respond to new stimuli. In fact, it is so difficult to create AI that scientists haven't even been able to create a robot that can hold a basic conversation yet.

How can it be used?
One application of AI is in healthcare. Some hospitals in the UK are trying out AI systems to ensure that the patients who require the most urgent care get it. The technology analyses test results and assesses the risk of abnormal results. It then communicates directly with the correct specialist or doctor by displaying a notification on a smartphone. This technology is already saving lives and saving nurses up to two hours per day, meaning they can spend more time with the patients who need it most.

AI ethics
The creator of any new technology should consider the impact of their new technology on society. For instance, AI could improve our lives and make them easier in many ways. However, if we manage to create machines with human-like intelligence and capabilities, we may have to worry about if they will ultimately take control of us.

Check these words
human thought process, commands, abnormal results, ethics, impact

7 Language in Use

Phrasal verbs/Prepositions

1 10.5.2 10.6.15 **Complete the sentences with the phrasal verbs in the diagram in the correct form.**

1 Jill was driving an old truck so she hoped it wouldn't ..... . **(stop working)**
2 Ulan should ..... on the amount of junk food he eats. **(reduce)**
3 Berik painted his house pink and now his friends will never let him ..... it ..... . **(forget it)**
4 After weeks of negotiating the funding for his experiments, the professor finally ..... and accepted a lower offer. **(admitted defeat)**
5 Akbota was offered a job as a professor, but she ..... it ..... . **(didn't accept)**
6 Everything in that shop is half price because it's ..... . **(ceasing to operate)**

2 10.5.2 **Choose the correct preposition.**

1 Aizhan is doing research **about/on** a new cancer drug.
2 Berik purchased the goods **in/at** a good price.
3 Cameron advises people **to/for** pursue their dreams.
4 Kanat wants to follow **in/after** the footsteps of his father and become an explorer.
5 Fatiha works best when she is **under/below** pressure.

Collocations

3 10.5.2 **Fill in:** *body, huge, artificial, invasive, molecular, medical, operations, lifesaving, virtual reality.*

1 ..... surgery
2 ..... applications
3 ..... language
4 ..... antibiotics
5 ..... biology
6 perform .....
7 ..... headset
8 ..... distances
9 ..... intelligence

Word formation

4 10.5.2 **Complete the sentences with a word formed from the word in capitals.**

1 Building a human brain will be one of the greatest ..... breakthroughs in history. **(SCIENCE)**
2 Edison's greatest challenge was the .... of a practical light bulb. **(DEVELOP)**
3 Taking a nap can improve ..... . **(CONCENTRATE)**
4 One day, nano-robots may be used for the ..... of serious diseases. **(TREAT)**

Words often confused

5 10.5.2 **Choose the correct word.**

1 The nano-spider can be **classified/identified** as a robot.
2 What is the robot's body **consisted/composed** of?
3 He has **gained/won** a lot of awards for his work.
4 The museum has free **permission/admission**.

Kazakhstan in Action!

Read and fill in the correct word.

- From the countries **1)** ..... the Commonwealth of Independent States, Kazakhstan **2)** ..... the third place for the number of inventions.
- Lots of inventions that help prepare national food products such **3)** ..... kurt, kumis, shubat, tary and zhent have **4)** ..... patented.
- Victor Hegay from Semey, Kazakhstan invented a robot guide **5)** ..... blind people while he was in the 7th grade. The robot guide can help blind people navigate without help from **6)** ..... people.

Progress Check 7

INSECT FARMING: is this the future?

The nutritional benefits of entomophagy (or eating insects) are well known. Insects are a low-cholesterol, low-fat source of protein. A burger patty, for example, contains roughly 18% protein and 18% fat. Cooked grasshopper, meanwhile, contains up to 60% protein and only 6% fat. What is more, the fat in insects is of the healthy unsaturated kind rather than the unhealthy saturated kind.

Entomophagy has been practised throughout Asia, Africa, and Latin America for centuries. Among westerners, however, the practice is barely existent. Indeed, it is virtually taboo to consume insects in Europe and North America. But this could one day change as traditional sources of protein (i.e. meat) become insufficient to feed the world's growing population.

Supporters of entomophagy believe insect farming may solve world food shortages as it is far more efficient than animal farming. One hundred pounds of animal feed, for example, produces 45 pounds of cricket but just 10 pounds of beef.

British entomologist Stuart Hine, however, believes that while insect farms will be helpful, they may not be the entire answer. Hine points out that insect diseases can spread rapidly enough to kill a farm's entire stock in a day. "Insects aren't the ultimate solution if the world desperately needs food," says Hine. "We would need to turn to something more efficient – like huge vats of worms."

Reading

1 10.4.2 10.4.6 **Read the text and answer the questions.**

1 Why are insects a good dietary choice?
2 How is the practice of entomophagy distributed across the world?
3 Why might insect farms one day become a reality in Europe and the USA?
4 In what way is insect farming more efficient than cattle farming?
5 What is one possible drawback to insect farming?

5x2=10 marks

Listening

2 10.2.8 **You are going to listen to someone talking about a scientific development. Listen and decide if the following statements are *T* (true) or *F* (false).**

1 The giant robot worm has been designed by search and rescue researchers. .....
2 The robot worm is based on an actual animal. .....
3 Previous robotic worms bumped into obstacles. .....
4 One current problem with the robot is that it can get stuck. .....
5 In the future, the robot worm will be coated in different materials to deal with different environments. .....

5x2=10 marks

7 Progress Check

3 10.5.2 **Fill in:** *launched, administer, set, reach, revolutionised, retain, create, detect, perform.*

1 Some people think robots will make it difficult for humans to ..... their jobs.
2 John's job is to ..... software that can help doctors diagnose patients.
3 Nanobots could be programmed to ..... drugs to specific cells in the body.
4 Robots could ..... operations soon.
5 In the future, spider-bots could be used by doctors to ..... disease.
6 If you are very determined, you will ..... your goal.
7 You will achieve more if you ..... yourself a target.
8 Sputnik 1 was ..... in 1957.
9 Alexander Fleming ..... medicine when he accidentally discovered penicillin.

9x2=18 marks

4 10.5.2 **Choose the correct option.**

1 There are hundreds of **interactive/effective** exhibits at the museum.
2 A robot could perform **molecular/invasive** surgeries with more precision than a human.
3 There are many medical **appliances/applications** for robots in the future.
4 In the future, nanobots could treat disease at a molecular **grade/level**.
5 Some museum exhibits allow visitors to get **life-like/hands-on** experience.

5x1=5 marks

5 10.5.2 **Fill in:** *optimistic, confident, focused, persistent, open-minded, ambitious.*

1 Aidar is very .....; he gives all of his attention to his work.
2 Assel always looks on the bright side – she's very ..... .
3 Ulan is .....; he is happy to accept other people's ideas.
4 Saule is so ..... that she plans to build the world's most advanced robot.
5 I'm very ..... in my own ability to design a great invention.
6 Nurlan is very .....; he never gives up.

6x2=12 marks

6 10.6.11 **Change the following from direct into reported speech.**

1 "Researchers will probably develop more nano products in the future," he said.
2 "Have you seen the documentary on nano-robots?" he asked her.
3 "My brother visited the Natural History Museum last week," she said.
4 "I was studying for my school exams," Kanat said.
5 "How long have you been living here?" he asked me.

5x2=10 marks

7 10.6.2 **Choose the correct word.**

1 There were **lots of/a little/much** people at the conference.
2 **Every/Few/All** of these ideas are fantastic!
3 **Any/Many/Much** of Edison's inventions failed.
4 Jim spends **many/a good deal of/several** time checking his equipment.
5 Only **a few/no/any** explorers attempt to reach the North Pole.

5x2=10 marks

8 10.6.15 **Choose the correct particle.**

1 Put **on/up** the headset and watch the simulation.
2 In the future, robots could be used to carry **in/out** surgeries.
3 Don't give **up/out**. Try again.
4 Yesterday, she came **up/across** some old photos.
5 A group of scientists worked **out/up** how to build a humanoid robot.

5x1=5 marks

9 10.5.5 **Write a for-and-against essay about using robots in everyday life (120-180 words).**

20 marks

Total: 100 marks

Check your Progress

- talk and write about inventions & scientific experiments ____
- design/write about a robot ____
- talk and write about successful people ____
- write a for-and-against essay ____

GOOD ✓ VERY GOOD ✓✓ EXCELLENT ✓✓✓

Module 8
Space

Vocabulary: space, mysterious events, space colonisation, computer-generated imagery (CGI)
Grammar: the passive, conditionals: types 2 & 3, mixed conditionals, reported speech (revision)
Phrasal verbs: *keep, let, pick*
Word formation: forming abstract nouns from verbs/adjectives
Writing: a film review
Culture Corner: *NASA: Reaching for the stars*
Curricular *(Literature)*: *The Day of the Triffids*

Vocabulary
Amazing facts about space

1 a) 10.5.2 **Fill in:** *atmosphere, surface, stars, radio, dwarf, particles, waves, solar, telescopes.*

b) **Listen and check.**

VIDEO

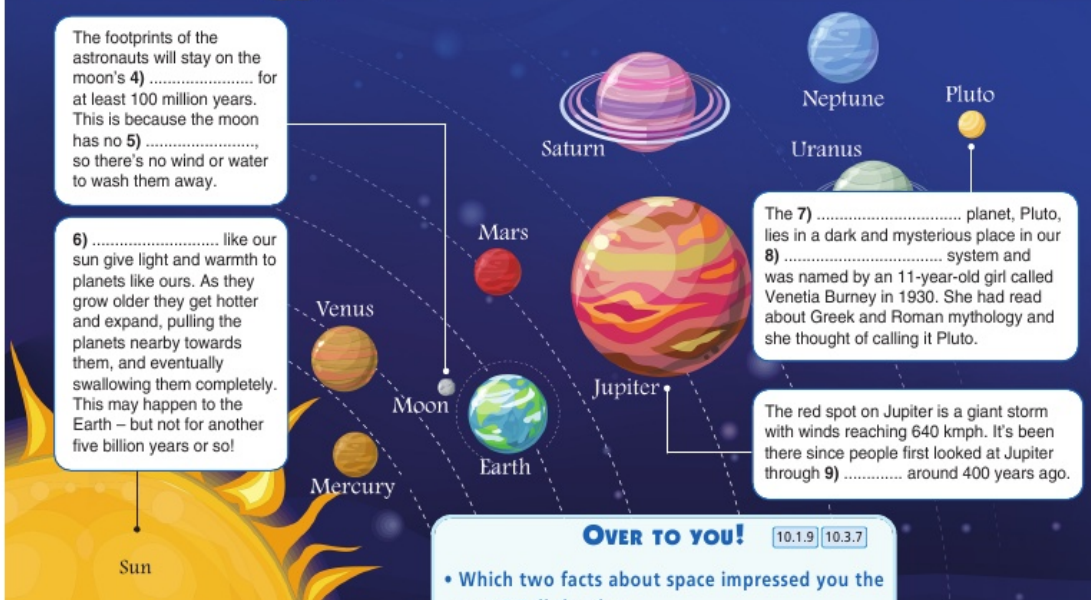
SPACE FACTS

DID YOU KNOW?

You cannot hear sound in space because there are not enough 1) ..... for sound 2) ..... to travel through. However, astronauts can communicate thanks to 3) ..... waves.

The footprints of the astronauts will stay on the moon's **4)** ..... for at least 100 million years. This is because the moon has no **5)** ....., so there's no wind or water to wash them away.

6) ..... like our sun give light and warmth to planets like ours. As they grow older they get hotter and expand, pulling the planets nearby towards them, and eventually swallowing them completely. This may happen to the Earth – but not for another five billion years or so!

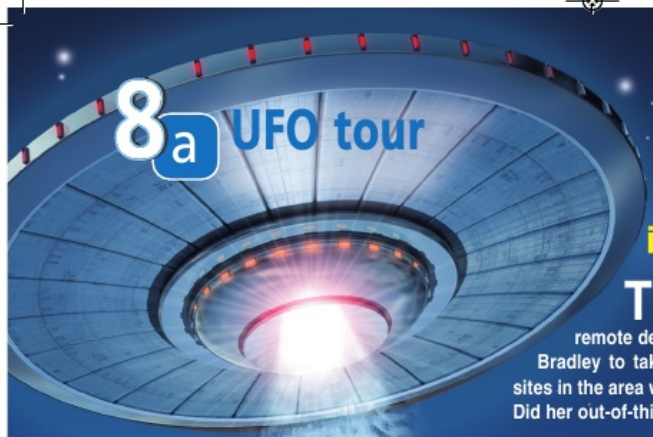


The **7)** ..... planet, Pluto, lies in a dark and mysterious place in our **8)** ..... system and was named by an 11-year-old girl called Venetia Burney in 1930. She had read about Greek and Roman mythology and she thought of calling it Pluto.

The red spot on Jupiter is a giant storm with winds reaching 640 kmph. It's been there since people first looked at Jupiter through **9)** ..... around 400 years ago.

OVER TO YOU! 10.1.9 10.3.7

- Which two facts about space impressed you the most? Tell the class.
- What else would you like to know about space? Discuss in groups.



8a UFO tour

VIDEO

THE TRUTH isn't out there... or is it?

The annual UFO festival in Roswell, New Mexico attracts thousands of visitors each year to this remote desert town. This year, we sent travel journalist Ruth Bradley to take part in a new UFO Discovery Tour to visit key sites in the area where the famous 1947 Roswell UFO case unfolded. Did her out-of-this-world experience make her a true believer?

When I was first asked by my editor to report on a UFO discovery tour, my heart sank. 1 A few days later, I was greeted at the airport in New Mexico by the tour's friendly guide and the other enthusiastic UFO-spotters in my group. We were driven to the hotel along busy freeways lined with UFO diners, UFO souvenir shops and even UFO motels. Little grey aliens stared down at us from billboards and road signs with huge insect eyes. 2 If nothing else, I had the feeling I would be having some fun on this assignment!

The following morning, we were taken to the spot in Roswell where a cattle farmer, Mack Brazel, came across some large pieces of metal and a huge hole in the ground on 8th July, 1947. Our guide told us that shortly after Mr Brazel reported what he had seen, the newspaper wrote that he had seen a flying saucer. The next day, however, they changed the story and reported that it wasn't a UFO at all, but simply a weather balloon. I **wandered away** from the group and looked around in the grass, half hoping to find one last piece of **debris** from the craft. 3 I had to admit, the story so far was fascinating and I found myself looking forward to the next stage of the tour where we would be shown 'Building 84'. This was the huge aircraft hangar on the old army base where the remains of the strange craft were taken to be examined. It was an impressive sight. 4 They said it was made of a material as light as plastic, as strong as steel, impossible to burn and covered in strange hieroglyphics. Others described seeing alien bodies. The day ended with a visit to the UFO Museum and I was fascinated by some **creepy** sketches of alien bodies on autopsy tables which were drawn by a nurse working in the base hospital at the time. 5

The next day, we visited the town of Socorro where, in 1964, Lonnie

Check these words

unfold, report (on), sceptic, freeway, lined with, billboard, assignment, spot, cattle farmer, weather balloon, debris, aircraft, hangar, army base, remains, eye-witness account, hieroglyphics, autopsy, oval-shaped, burst, hotspot, weird, formation, doubtful, eerie, rattlesnake

Vocabulary & Reading

1 10.2.6 Listen and read the headlines. What do you think happened in these incidents?

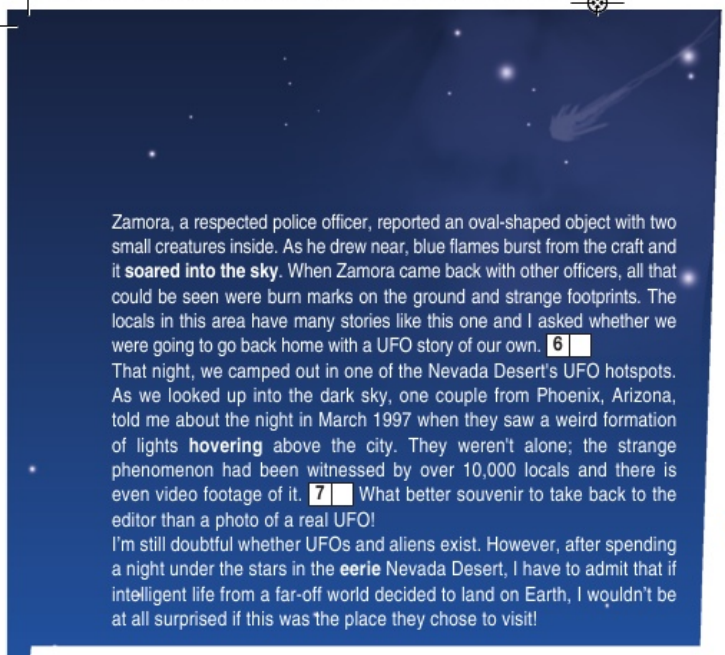
A 8th July, 1947
FLYING SAUCER CAPTURED ON RANCH IN ROSWELL REGION

B Strange Wreckage & Alien Bodies Examined At Roswell Army Base

C POLICE OFFICER REPORTS SIGHTING OF ALIEN SPACECRAFT IN SOCORRO, NEW MEXICO

D THOUSANDS WITNESS STRANGE LIGHTS OVER PHOENIX, ARIZONA

2 10.4.1 Now read the title of the text and the introduction. What do you expect to read about? Read through to find out.



Zamora, a respected police officer, reported an oval-shaped object with two small creatures inside. As he drew near, blue flames burst from the craft and it **soared into the sky**. When Zamora came back with other officers, all that could be seen were burn marks on the ground and strange footprints. The locals in this area have many stories like this one and I asked whether we were going to go back home with a UFO story of our own. 6 ☐

That night, we camped out in one of the Nevada Desert's UFO hotspots. As we looked up into the dark sky, one couple from Phoenix, Arizona, told me about the night in March 1997 when they saw a weird formation of lights **hovering** above the city. They weren't alone; the strange phenomenon had been witnessed by over 10,000 locals and there is even video footage of it. 7 ☐ What better souvenir to take back to the editor than a photo of a real UFO!

I'm still doubtful whether UFOs and aliens exist. However, after spending a night under the stars in the **eerie** Nevada Desert, I have to admit that if intelligent life from a far-off world decided to land on Earth, I wouldn't be at all surprised if this was the place they chose to visit!

3 10.4.7 10.4.8 **Read the text again. Seven sentences are missing. Match each sentence (A-H) to the gaps (1-7). There is one extra sentence. Justify your answers.**

A Instead, I **disturbed** an enormous rattlesnake and quickly made my way back!
B I was a bit **disappointed** that I saw nothing worth photographing that night.
C "Wait until tonight," the tour guide told me.
D I couldn't help smiling at these amusing sights.
E I started to lose hope during the night.
F As we headed back to the hotel, I stared up into the starry night and couldn't help wondering if anyone – or anything – was looking down!
G I just couldn't understand why I was being sent – me, a true sceptic!
H Eye-witness accounts later described the craft as unlike anything that had ever been seen on Earth.

4 10.2.5 10.2.6 THINK! **Listen to the text. What is the writer's purpose? How has her attitude towards aliens changed?**

5 10.4.5 **Choose the correct words in bold. Then make sentences using the other options.**

1 The **trip/tour** to New Mexico wasn't very long.
2 We were shown the exact **spot/mark** where the spacecraft crashed.
3 They lost their way around the **dessert/desert**.
4 The experts **examined/experienced** the remains of the spacecraft.
5 We had a great view of the crash **site/sight** from the hilltop.
6 The **locals/natives** in Roswell are used to UFO-spotters.
7 People disagree about the **events/facts** that took place in Roswell.

8a

6 10.4.5 **Match the words/phrases in bold with their meanings:** ***moved quickly up, bothered, felt unhappy, destroyed remains, walked without a purpose, strange & frightening, floating in the same position, scary.***

Grammar
The passive

see pp. GR17-GR18

7 a) 10.6.7 10.6.8 10.6.9 10.6.10 **When do we use the passive? How is it formed? Which tenses do not have a passive form?**

b) 10.6.7 10.6.8 10.6.9 10.6.10 **Find examples of the passive in the text.**

c) 10.6.7 10.6.8 10.6.9 10.6.10 **Rewrite the following sentences in the passive.**

1 Kanat put up the tent.
2 The mayor has recently opened the UFO museum.
3 Lots of UFO-spotters visit Roswell, New Mexico.
4 People are making preparations for the town's first UFO festival.
5 Ulan is starting a UFO tour in the area.
6 Locals have seen many strange lights in the desert.
7 They will publish Nurlan's book about local mysteries next month.

8 10.6.7 10.6.9 **Rewrite the headlines in Ex. 1 in the passive.**

Speaking & Writing

9 10.1.9 10.5.1 10.5.6 **You went on the tour with Ruth. Write a paragraph about your experience. Read it to the class.**

8b Moving out

Vocabulary

Space

1 10.5.2 Say the names of the planets in our solar system. Listen and check.

Reading

2 10.1.1 10.2.1 10.4.1 Read the title of the text and the quote. What could the problems of space colonisation be? How could these problems be solved? Read to find out.

"I don't think the human race will survive the next 1,000 years unless we spread into space."

Stephen Hawking,
English physicist & cosmologist

VIDEO

SPACE COLONISATION: Future or Fantasy?

Since Neil Armstrong set foot on the moon on 20th July, 1969 and declared "One small step for man, one giant leap for mankind", people have been dreaming about creating futuristic communities in space. Science fiction films such as *2001: A Space Odyssey* and *Star Wars* have filled our minds with images of spacecraft travelling at the speed of light to colonies on other planets in another solar system. Until now, these ideas have just been fantasy, but now leading scientists such as Stephen Hawking say that colonising space is the only answer for the future survival of mankind; otherwise we will die out. 1 But is space colonisation really possible? One solution would be for us to move to space stations orbiting near Earth. After all, astronauts have already been living on NASA's International Space Station (ISS) continuously since 2000. The ISS gets its power from solar panels, it generates its own oxygen and even recycles water, but there's still a huge problem; all of its food and other supplies have to be sent from Earth.

2 So maybe colonising the moon would be a better solution! The moon has rich resources which could be used to construct a colony. Also, in 2009, scientists found water on the moon, which could be used to extract oxygen for breathing. 3 There is no atmosphere on the moon and it is boiling hot during 13 days of sunlight and then freezing cold during 13 days of darkness. So any human colony there would have to live in a huge indoor biosphere*.

Mars would be another option, but the problems there would be similar to those on the moon. Scientists have suggested creating a more Earth-like atmosphere there by releasing carbon dioxide and warming it up, but this could take about 1,000 years! Stephen Hawking believes that the best solution is to look for Earth-like planets to colonise. "If only 1% of the 1,000 or so stars within 30 light years of Earth had an Earth-sized rocky planet in just the right place for life, there would still be 10 planets for colonisation in our 'neighbourhood'," Hawking said. 4 Travelling on Voyager 1, the fastest spacecraft we've ever sent into space, it would take over 700,000 years to get to Alpha Centauri, the closest star system. Hawking, though, believes that new technologies could soon help us to travel just below the speed of light. 5

If we had endless amounts of money for space exploration, we would have already overcome these problems and built the first space colonies. The fact is, it costs about £6,000 to put half a kilo of anything into near-Earth orbit. 6 Just imagine – if people hadn't given Columbus money for his voyage to America in 1492, NASA probably wouldn't even exist today!

So, although there are many challenges to overcome, Professor Hawking still believes it will only be a matter of time before we are living in space. 7 What do you think? Is space truly 'the final frontier'?

* an environment that supports life

Check these words

colonisation, leap, mankind, wipe out, catastrophe, meteor, nuclear war, orbit, solar panel, generate, supplies, resources, construct, colony, extract, atmosphere, carbon dioxide, warm sth up, endless, exploration, overcome, afford, centuries, millenia, final frontier

3 10.4.7 10.4.8 **For each gap 1-7, choose from the sentences A-H the one that best fits each gap. One sentence is extra. Compare with your partner. Justify your answers.**

A Humans would need to be self-sufficient to survive in space long-term.
B The only question is whether this happens in years, centuries or millennia.
C Exploring space, however, is not without risk.
D This costs a lot of money.
E Nevertheless, Professor Hawking believes that we can afford to give 0.25% of the world's financial resources to colonise space.
F He believes that sooner or later we will be wiped out by a catastrophe such as a meteor or nuclear war.
G That way, we could reach the next star to Earth in just 6 years.
H However, even if we found the perfect planet, we might not be able to get there at the moment.

4 10.5.2 **Fill in:** *self-sufficient*, *overcome*, *warm up*, *afford*, *release*.

1 Eventually, they managed to ..... their problems.
2 The ISS isn't ..... because it can't produce or make everything that it needs.
3 Climate change could ..... the Earth by 3°C by 2100.
4 Power stations ..... carbon dioxide and other greenhouse gases into the atmosphere.
5 Only the world's richest can ..... to be a space tourist; it costs about $20 million!

5 10.5.2 **Choose the correct words. Check in your dictionaries.**

1 **Supplies/Resources** such as food and equipment are sent to the ISS from Earth.
2 Hawking believes we can **pass/overcome** all the problems and colonise space.
3 Some scientists believe a huge asteroid or comet could **extract/wipe out** life on Earth.
4 There are many options for colonising space; the possibilities are **endless/continuous**.

8b

Grammar

see p. GR18

Conditionals: types 2 & 3

6 a) 10.6.17 **When do we use Conditional types 2 and 3? Give an example for each type.**

Mixed conditionals

b) Study the table. Find examples in the text.

IF-CLAUSE	MAIN CLAUSE
(type 2) *If we* ***had*** *the technology to travel faster,* (but we don't)	(type 3) *we* ***would have colonised*** *other planets by now.* (we haven't)
(type 3) *If Tim* ***had studied*** *Medicine,* (but he didn't)	(type 2) *he* ***would be*** *a doctor now.* (he isn't)

7 **Rewrite the sentences using mixed conditionals, as in the example.**

1 Angie doesn't like science-fiction films, so she didn't go to the cinema with the others. *If Angie liked science-fiction films, she would have gone to the cinema with the others.*
2 Mark didn't hand in his project, so he won't pass the astronomy course.
3 Greg was studying all night, so he's tired now.
4 Janet is interested in astronomy, so she visited the planetarium yesterday.

Speaking & Writing

8 10.1.6 10.1.10 10.2.1 10.2.7 10.3.3 **Listen and read the article in Ex. 2 again, then tell your partner three reasons why colonising space is difficult. Add one more reason of your own.**

Colonising space is difficult because colonies would have to be self-sufficient.

9 10.1.9 THINK! **Close your eyes and imagine you're in a spacecraft. What are you doing and what can you see and hear? How do you feel? Tell your partner.**

I'm wearing a spacesuit and I'm floating around in the spacecraft. Out of the window I can see stars ...

10 10.1.7 10.1.9 THINK! **Would you like to live in a space colony? Why (not)? Write a few sentences on this topic. Tell the class.**

8c Sci-fi films

Vocabulary

1 10.5.2 **Check these words in the Word List.**

- computer-generated imagery
- three-dimensional • visual effects
- virtual image • simulation camera

Study skills

Predicting content

The key words of a text help you predict its content.

Check these words

computer-generated imagery, three-dimensional, visual effects, virtual images, reflector, headgear, integrate, simulation camera, state-of-the-art technology

VIDEO A New Dimension to Art

A Computer-generated imagery (CGI) has greatly influenced and changed the way we see and do things that would have been impossible to even imagine before. Over the years, three-dimensional computer graphics and animation have been applied to all areas of the media such as, films, television programmes and video games to enhance the visual and special effects. Each project added new inventions or techniques to make the virtual images more realistic, but one film came along to combine the media and bring the technology many light years ahead; *Avatar*.

B When James Cameron, the director and creator of *Avatar*, first imagined the world of Pandora and the Na'avi humanoid tribe, there was no available technology to help him make his dream come true. He had to wait a few years for technology to catch up to him and finally start filming in 2001. Although CGI was widely used in many box-office hits, there were some limitations. Motion capture techniques were used to create digital or animated characters. This was done by having actors wear suits full of markers with reflectors on them which recorded their movements on a computer. Graphic artists would then combine these images with their 3D graphic designs and animation and produce realistic movement and action for their characters. However, this technology could not show detailed human expressions or realistic landscapes. Cameron found a way to do just that.

C In *Avatar*, the characters not only have a full range of natural body movements, but complete facial expressions as well. Cameron helped develop a one-of-a-kind technique to copy the movements of lips, eyes and mouths. Actors were given special **headgear** to wear equipped with a camera. As a result, every muscle and eye movement was recorded and used to make the digital characters in the film truly authentic and lifelike.

To make the world of Pandora even more realistic, many fields of knowledge were used and integrated with art. Experts in biology, engineering and physics worked closely with talented artists and illustrators to create this magnificent world. Great attention to detail was applied to each creature, character and the surrounding environment, including every plant and leaf. Somehow, that wasn't enough for the director; he had to take it a step further.

D After years of dreaming about it, Cameron developed the first 3D camera that combined the live action scenes with the computer-generated scenes. Video-gaming technology was used along with a virtual camera and a simulation camera to create a virtual production stage for the director through a computer. But how is that possible, you might ask? CG images were sent to the virtual camera while the simulation-cam combined CG characters and the designed environments into the 3D Fusion camera. After all, fusion means to join many things together to make one. All the director had to do was look through the eyepiece and direct these virtual scenes as if he would a live action scene. This had never been done before. With the use of state-of-the-art technology, a strong team of experts and creative artists and loads of imagination, the director had managed to interact with and control every aspect of the virtual film he was directing.

E The film, *Avatar*, with its 3D effects, managed to absorb the audience into the world of Pandora and give them a feeling of interaction like that of a video game. While video games have not succeeded yet in creating such realistic 3D worlds for players, the ground breaking technology used in the film will certainly lead the way. The same teams that worked on the film released a 3D *Avatar* game, but they are also working on improving the three dimensional experience for future projects.

2 a) 10.1.10 10.3.2 **How could the words in Ex. 1 be related to Cameron's *Avatar*? What else would you like to know about it? Write down three questions.**

b) 10.2.1 10.2.7 10.4.2 **Listen to the text. Can you answer your questions in Ex. 2a?**

3 10.4.2 10.4.6 **Read the article. For questions 1-6, choose the best answer A, B, C or D. Give reasons for your answers.**

1 How does CGI improve virtual images?
- **A** It makes them three-dimensional.
- **B** It animates them.
- **C** It combines all areas of the media.
- **D** It makes them more believable and true-to-life.

2 The director of the film *Avatar*
- **A** based it on a real tribe.
- **B** came up with the idea himself.
- **C** saw it all in a dream.
- **D** started filming immediately.

3 The writer finds Cameron's 'headgear' (para C)
- **A** unique.
- **B** very realistic.
- **C** not good enough.
- **D** beautiful.

4 Specialists were used
- **A** to study the world of Pandora.
- **B** to visit the world of Pandora.
- **C** to create a believable environment.
- **D** to record all movements.

5 According to the text, what did Cameron accomplish in this film?
- **A** He interacted with his audience.
- **B** He introduced innovative technology to the field.
- **C** He did something impossible.
- **D** He played all the characters.

6 In paragraph E we learn that *Avatar*
- **A** will soon be available as a game.
- **B** gave audiences a more interactive experience.
- **C** was as authentic as a video game.
- **D** has successfully helped create 3D video games.

4 10.3.6 **Answer the following questions.**

1 Why did it take Cameron a long time to produce Avatar?
2 How did Cameron manage to combine live-action scenes with computer-generated scenes?

5 10.4.5 **Find words in the text which mean:**

- **Para A:** affected, was developed
- **Para B:** broadly, join together
- **Para C:** produce, really, combined
- **Para E:** fascinate, sense, made available to the public

see p. GR18

Grammar

Reported Speech (Revision)

6 10.6.11 **Rewrite the sentences in reported speech.**

1 "*Avatar* has spectacular special effects," he said.
2 "Can we make the characters look more realistic?" she asked.
3 "We used state-of-the-art technology to create the film," they said.
4 "Who are the main characters in the film?" David asked me.
5 "Do you think the film will be a box office hit?" she asked him.
6 "We need to improve computer technology further," the scientist says.

Speaking & Writing

7 a) 10.1.6 10.4.1 10.5.1 10.5.6 10.5.8 **Use the main ideas in each paragraph to give the class a summary of the text.**

b) 10.1.7 10.1.10 10.3.3 10.3.7 THINK! **What makes *Avatar* a special film? In three minutes write a few sentences. Tell your partner or the class.**

8 10.1.6 10.4.8 10.5.1 10.5.2 10.6.2 ICT **Use the Internet and other resources to find out more information about CGI. Talk about: *what it is*, *applications*, *future uses*. Present your findings to the class.**

8d Writing

A film review

Writing Tip

A **film review** is a short description to inform readers of a TV show or film you've watched. Present tenses are usually used as well as a variety of adjectives to make your description more specific and interesting. A review usually includes:

- **an introduction** giving background information about the film e.g. the title, type of film, the name of the director.
- **a main body** consisting of two paragraphs, one presenting the main points of the plot and the other with general comments on the plot, the main characters, special effects, etc.
- **a conclusion** in which you recommend/don't recommend the film, giving reasons.

1 *Rogue One*, directed by Gareth Edwards, is one of the latest instalments in the world-famous *Star Wars* film series. It is an exciting sci-fi fantasy film that is a prequel to the original *Star Wars* film, *A New Hope* which was released in 1977.

2 In the film, a group of people called the Rebel Alliance work together to try to steal the plans for the Death Star, a space station that is being built by the Galactic Empire. The Rebel Alliance try to discover the Death Star's weaknesses so that they can destroy it before it destroys them.

3 The storyline is gripping from start to finish. The characters are well-developed and the film has an impressive cast, too. The lead role of Jyn Erso is played by Felicity Jones who gives a superb performance. The film's fast-moving plot, action-packed battle scenes and spectacular special effects will keep you on the edge of your seat.

4 I thoroughly enjoyed watching this film and would highly recommend it. If you've enjoyed the other films in the *Star Wars* series then you won't be disappointed by *Rogue One*. It's a must-see.

1 10.5.7 **Read the review and match the paragraphs (1-4) to the headings A-D below.**

A ☐ a summary of the plot
B ☐ background information about the film
C ☐ writer's opinion/recommendation with reasons
D ☐ general comments on the film

2 10.5.2 **Choose the correct word/phrases. Check in a dictionary.**

1 The film is **set/based** at the beginning of the 20th century.
2 This film **is set in/is based on** a true story.
3 The **main/chief** character is 12-year-old Artemis.
4 Overall, I found the film **thick/dull**, but it had an interesting **plot/twist** at the end.
5 This exciting film is sure to be a **bestseller/box office hit**.
6 Tom Cruise plays the **lead/main** role in this film.
7 The film had **stunning/fast-paced** special effects.

3 10.5.2 **Which adjectives has the writer used to describe the following in the review in Ex. 1?**

1 ..... sci-fi fantasy film
2 ..... plot
3 ..... battle scenes
4 ..... cast
5 ..... performance
6 ..... special effects

4 10.5.2 **Fill in:** *gripping, well-developed, predictable, likeable, surprising.*

1 The plot is so .....; you can guess what's going to happen right from the beginning.
2 This is an absolutely ..... film – I just couldn't stop watching.
3 The ..... characters are so ..... that you feel like you know them personally by the end of the film.
4 The ending is very ..... – I definitely wasn't expecting it!

8d

Recommending

5 a) 10.5.2 **Fill in the gaps with the phrases in the list.**

- well worth seeing • is definitely for you
- make sure it's this one • in my opinion
- box office hit • you are looking for
- won't regret it • would definitely recommend

A I **1)** ..... this film to anyone who enjoys action-packed films. Bradley Cooper's performance is superb. It's **2)** ..... .

B If **3)** ..... a fast-paced, gripping plot, this film **4)** ..... . It's sure to be of the year's **5)** ..... .

C If you watch one film this year, **6)** ..... . You **7)** ..... . **8)** ....., it's the director's best film so far.

b) 10.5.4 **Which sentences does the writer use to recommend the film in the review in Ex. 1?**

see pp. GR17-GR18

Grammar

The passive (Revision)

6 10.6.7 10.6.8 10.6.9 10.6.10 **Find the passive forms in the film review. Then, rewrite these sentences in the passive.**

1 James Gunn directed *Guardians of the Galaxy*.
2 In the film, the aliens were attacking the astronauts.
3 Thousands of people are watching the new sci-fi film at the cinema.
4 Ryan Gosling plays the lead role in *Blade Runner 2049*.
5 The film uses simplistic special effects.
6 Lots of people are highly recommending this film.
7 In this film, the spaceship's crew are exploring the depths of outer space.
8 In the past, directors did not use 3D technology in their films.

Your turn

7 10.5.7 **Read the rubric and underline the key words, then answer the questions.**

A website is asking for film reviews. Write your review of a sci-fi film you have seen, describing the plot, making general comments about it and giving your recommendation (120-180 words).

1 What do you have to write?
2 Who is going to read it?
3 What tense(s) will you use?
4 Which of the following should you include?

- title & type of film ☑
- how the film ends ☐
- name of director ☐
- how many of your friends have seen it ☐
- whether you recommend it ☐
- main points of plot ☐
- where you can buy it ☐
- general comments on characters/plot/etc ☐

8 10.5.1 10.5.4 10.5.6 10.5.7 10.6.16 **Use the plan and the phrases from the Useful language box to write your review in Ex. 7.**

Plan

Para 1: background information *(title, type, director)*
Para 2: main points of the plot
Para 3: general comments *(plot, special effects, etc)*
Para 4: recommendation & reasons

Useful language

Background: This is a fascinating/exciting/etc film directed by ...; The film is set/takes place in ... .
Main points of the plot: The film is about/In the film/It tells the story of ... .
General comments: The plot/storyline is boring/ predictable/ thrilling/gripping/fast-paced/dramatic/clever etc ...; The main character(s) is/are well-developed/ likeable/etc. There is a(n) impressive/talented cast. (Name) gives a superb/ excellent/amazing performance in the lead role as ... . The special effects are spectacular/simplistic/ stunning/ imaginative etc.
Recommendations: I thoroughly recommend this film with its ...; This is bound to be a box office hit.; This is a highly entertaining/fantastic film.; Don't bother watching this. It's a must-see/well worth seeing ... .

8e Culture Corner

Reaching for the stars

NASA – the United States' National Aeronautics and Space Administration agency – was created in the 1950s. Its mission was to lead the way in the exploration of space both near Earth and beyond it, and in particular to transport people to the moon and back by the end of the 1960s. This ambition of President John F Kennedy's was, of course, achieved in 1969. In fact, 12 astronauts walked on the moon during a number of missions between then and 1972.

NASA is divided into four departments. The aeronautics research division is concerned with improving transport into, and through, space. The space technology department develops hardware, software and machinery to improve space exploration. The human exploration and operations department oversees activity that involves people, including missions to the International Space Station (ISS), which is in orbit around Earth constantly. Finally, the science division helps to further understanding of the universe, including the Earth, which it studies by satellite. This division also includes the Office of Planetary Protection, and one of this office's responsibilities is defending the Earth from hostile aliens!

NASA launches spacecraft from Cape Canaveral in Florida, which was chosen for its southerly position. Because the state of Florida is closer to the equator than most other US states, NASA rockets get maximum help from the rotation of the planet when they take off for space. However, NASA astronauts who are sent to the ISS now begin their journeys in Kazakhstan, as the US brought its space shuttle programme to an end in 2011. ISS missions now begin and end at the Baikonur Cosmodrome near Tyuratam in southern Kazakhstan. This is the very same location from which Yuri Gagarin, the first man to go to space, began his journey back in 1961.

Did you know?

If you're interested in observing the International Space Station, you can ask NASA to send you an email or text message alert when it passes over where you live.

Check these words

mission, hardware, orbit, equator, rotation

1 10.1.8 10.4.1 **What do you know about NASA? What do the acronyms NASA and ISS stand for? Think of two questions about NASA.**
Listen and read the text. Can you answer your questions?

2 10.4.2 **Read the text again, and mark the statements as *T* (true), *F* (false) or *DS* (doesn't say).**

1 NASA made a lot of money from its early achievements. .....
2 Astronauts first walked on the moon in 1972. .....
3 The ISS constantly travels around the Earth. .....
4 One NASA department protects the planet from alien invasions. .....
5 Trips to the ISS launch from Florida. .....
6 The US space shuttle programme ended due to a lack of money. .....

3 a) 10.3.7 10.5.2 **Fill in: *operations*, *technology*, *aeronautics*, *exploration*, *science*, *planetary*.**

1 ..... of space
2 human exploration and ..... department
3 ..... division
4 space ..... department
5 Office of ..... Protection
6 ..... research division

b) 10.5.2 **Use the completed phrases to talk about NASA.**

4 10.3.7 **Tell the class three things that impressed you from the text.**

5 10.5.6 ICT **Find out more information about the Baikonur Cosmodrome near Tyuratam. Present your information to the class.**

Curricular: Literature 8f

The Day of the Triffids

by John Wyndham

VIDEO

"I wish", I told Susan, irritably, "you'd not keep on saying 'they hear', as if they were animals. They're not. They don't 'hear'! [1] "
"All the same, they do hear, somehow," Susan said. "Well — anyway, we'll do something about them," I promised.

As time went on, the numbers collected along the fence continued to increase in spite of our traps. [2] They simply settled down, **wriggled** their roots into the soil, and remained. At a distance they looked as inactive as any other hedge. But if one doubted their alertness it was only necessary to take a car down the lane. To do so, you had to battle through such **viciously** slashing stings that it was necessary to stop the car at the main road and wipe the windscreen clear of poison.
Early one morning, Susan came running in to tell us that the things had broken in, and were all around the house. The sky outside her bedroom window was grey, but when she went downstairs, she found everything there in complete darkness. [3] The moment she saw leathery green leaves pressed against the windows, she guessed what had happened.
[4] Even as it closed a sting whipped up from below and **smacked** against the glass. We looked down on a group of triffids standing ten or twelve deep against the wall of the house. The flame-throwers were in one of the outhouses.
[5] In thick clothing and gloves, with a leather helmet and goggles under a wire mask I hacked my way through the triffids with the largest carving knife I could find. The stings whipped and slapped at the wire mask so frequently that the poison began to come through in a fine spray. [6] I didn't dare use a thrower more than once to clear my way back for fear of setting the door and window frames on fire, but it moved them enough for me to get back unharmed.

... Two more days passed before Susan and I could be sure that we had searched every corner of the enclosure and accounted for the very last of the **intruders**. [7]

Check these words

irritably, trap, settle down, hedge, doubt, alertness, lane, slashing sting, wipe, break in, whip up, smack, flame-thrower, outhouse, wire, hack, unharmed, enclosure, account (for), mist

1 10.1.8 10.4.4 **The picture shows some triffids. What do you know about the book *The Day of the Triffids*? Listen to find out.**

2 10.4.7 **Read the text. For each gap (1-7), choose from the sentences (A-H) the one that best completes each gap. There is one extra sentence.**

A She realised that should not be so, and turned on the light.
B To my amazement, the window was wide open.
C I crossed the bedroom on **tiptoe** and pulled the window shut sharply.
D It misted the goggles, and the first thing I did in the outhouse was to wash it off my face.
E They didn't try anything or do anything there.
F I took no risks when I went to fetch them.
G Four months later they broke in again.
H They're just plants.

3 10.4.5 **Match the words in bold with: *the front part of your foot, hit sharply, invaders, violently, turned quickly*.**

4 10.6.1 **Write the adjectives the author uses to describe the following:**

1 ..... stings
2 ..... sky
3 ..... darkness
4 ..... leaves
5 ..... clothing
6 ..... helmet
7 ..... knife
8 ..... spray

5 10.1.9 THINK! **Listen and read the text. Imagine you are in a car surrounded by triffids. What can you hear and see? How do you feel? Tell your partner.**

8 Language in Use

Phrasal verbs/Prepositions

1 10.5.2 10.6.15 **Choose the correct particle.**

keep away: prevent access to, hold back
keep off: stay away, prevent from stepping/climbing on sth
keep on: continue
keep up with: move at the same speed
let down: disappoint
let out (of): release (from prison/captivity)
pick on: treat unkindly
pick out: choose
pick up: 1) lift with hands 2) take someone away in a car

1 Please keep **off/away** the grass!
2 Don't worry. Anna will never let you **out/down**.
3 The girls kept **up with/on** talking.
4 Mark has just been let **out/down** of prison.
5 I'll pick you **up/out** at 7:00 at the airport.

2 10.5.2 **Choose the correct preposition.**

1 They had lots of things **in/at** common.
2 He is an expert **for/on** strange creatures.
3 He blamed himself **for/on** the mistake.
4 Why is that man staring **to/at** us?
5 Some species of animals are few **in/at** number.

Words often confused

3 10.5.2 **Choose the correct word.**

1 The festival **attracts/draws** a lot of visitors.
2 Her heart **dropped/sank** as the plane took off.
3 They **wandered/wondered** away from the group looking for any remaining debris.
4 We all **admitted/accepted** the tour was great.
5 Is it possible to **take/bring** dinosaurs back to life?

Word formation

4 10.5.2 **Fill in the sentences with the correct word derived from the word in brackets.**

Forming abstract nouns from verbs/adjectives
We can use **-ance** (*import – import**ance***), **-ence** (*occur – occurr**ence***), **-cy** (*accurate – accura**cy***), **-ion** (*predict – predict**ion***), **-(i)ness** (*lazy – lazi**ness***), **-ity** (*popular – popular**ity***) to form nouns from verbs/adjectives.

1 The ..... of the strange lights over the city was reported on the evening news. **(APPEAR)**
2 The Smiths enjoy the ..... **(QUIET)** and ..... **(PRIVATE)** of their beautiful home in the country.
3 Loren Coleman owns a large ..... of artefacts from strange creatures. **(COLLECT)**
4 What's the ..... between an allosaurus and a T-rex? **(DIFFER)**
5 UFO-spotting is a popular ..... in New Mexico. **(ACTIVE)**

Collocations

5 10.5.2 **Fill in:** *weather, lifelong, annual, demand, native, travel, video, full, welcome, drive, highly, closely.*

1 ..... festival
2 ..... journalist
3 ..... balloon
4 ..... footage
5 ..... passion
6 to ..... evidence
7 ..... tribes
8 ..... secretive
9 a ..... addition
10 to ..... you crazy
11 ..... moon
12 ..... resemble

Kazakhstan in Action!

Read and choose the correct word.

- The 16th International Astronomy Olympiad took **1) part/place** in Almaty and was a very successful event for all who took **2) part/place**.
- The Baikonur Cosmodrome is the largest operational spaceport **3) in/of** the world. It is located in a semi-arid region **4) when/where** temperatures go from 45 degrees Celsius in summer to -40 degrees Celsius in the winter.
- An 8th grade student from **5) –/the** Kostanay region called Oleg Lilo **6) created/formed** a mini-laboratory with a camera and a laser to study the Moon.
- In order to visit the Baikonur Cosmodrome you **7) have/need** special permission **8) if/unless** you are travelling with a tour group.

Progress Check 8

Reading

1 10.4.7 **Choose from the sentences (A-H) the one which fits each gap (1-7). There is one extra sentence.**

A bucketful of worlds

It's raining planets. Members of the science team for NASA's Kepler telescope have recently discovered more than 1,200 worlds orbiting distant stars. Of these, approximately 50 could be Earth's doubles. In other words, worlds that might be fit for life. This is big news and the search for radio transmissions from these worlds has already begun. [1] Simply because it would tell us that a planet is home to inhabitants with technological knowledge.

For 200 millennia, our species knew of only seven bodies: the sun, moon and five bright planets with names from Roman mythology. [2] His discovery of Uranus suggested that more planets might be hiding in the dark, outer areas of our solar system. Within a century and a half, Neptune and Pluto were also discovered. Then there was nothing until 1995, when Swiss astronomers announced that a planet was racing around a rather ordinary star, 50 light years away. [3] It was so close to its sun that daytime temperatures on the surface would be several thousand degrees.

In the years since then, teams of astronomers have used large, ground-based telescopes to hunt for more planets. So far they've found more than 500 extrasolar planets, which is nearly one a week. [4] This incredible NASA telescope is able to find many planets at the same time.

Apart from Kepler's ability to uncover multiple new worlds, it has another talent that the traditional methods don't yet have; the ability to find small planets that aren't too close to their suns. Planets that are the size of Earth and in orbits that mean they might enjoy temperatures that could support life. This is an obvious motivation for the SETI Institute* to point their antennas in their direction. [5] No clearly extraterrestrial transmissions have been found.

Here's the promise though. These early results from Kepler suggest that approximately 3 percent of all stars could have a habitable planet. Within a thousand light years of Earth there are at least 30,000 of these habitable worlds. Perhaps they're only habitable and not inhabited. [6] Or perhaps they have intellectually-challenged life. Maybe, but Kepler is still searching. [7] Sure, nothing has been found so far, but 30,000 is a big number!

* SETI = Search for Extraterrestrial Intelligence

A It was a world at least half the size of Jupiter.
B It's possible that they could all be dry and empty.
C More Earth-like planets will be found in the next few years, and they'll be observed very carefully for the telltale signs of intelligence.
D Then in 1781, the English astronomer William Herschel saw a new world beyond Saturn.
E But this is not likely.
F So far, they have searched these worlds for signals over one small slice of the radio dial.
G That is, until Kepler's big announcement.
H Finding a signal would be very shocking.

7x2=14 marks

Listening

2 10.2.2 **You will hear an interview with an author about her book. For questions 1-10 fill the gaps.**

The interviewer describes Kelly's book as a _____ 1 and a combination of styles.

Kelly says in her book a _____ 2 meets an alien.

The alien in the book is based on an _____ 3 description.

People who usually read _____ 4 will also enjoy the book.

Kelly spent a year studying well-known _____ 5 .

Kelly gives the example of the _____ 6 as strong proof of supernatural phenomena.

Kelly has written numerous _____ 7 on the supernatural.

Kelly consulted with UFO _____ 8 while writing her book.

The book will be in bookshops in _____ 9 .

Kelly's next project is to work on a _____ 10 about a haunted town.

10x1=10 marks

8 Progress Check

3 10.5.2 **Fill in:** *soared, wandered, absorbed, extract, hovering, interact, construct, overcome, generate, applied.*

1 He reported seeing a flying saucer ..... above the city.
2 3D computer graphics can be ..... to films and video games.
3 We could live on Mars after we have ..... all the challenges.
4 The spaceship ..... straight up into the sky.
5 Social robots can ..... with us using microphones and cameras.
6 We can ..... electricity using solar panels.
7 She ..... away from the group to look for some signs of UFOs.
8 It is possible to ..... oxygen from water.
9 The audience were ..... by the spectacular special effects.
10 There are resources on the moon that we can use to ..... a colony.

10x1=10 marks

4 10.5.2 **Fill in:** *imagery, particles, dioxide, atmosphere, surface.*

1 Releasing carbon ..... on Mars would make it warmer.
2 The scenery in the film was created using computer-generated ..... .
3 Space is a vacuum because it contains no ..... .
4 It would be difficult to live on the moon because it doesn't have a(n) ..... .
5 Mars is called the 'red planet' because it has got a red ..... .

5x2=10 marks

5 10.6.17 **Rewrite the following as conditional sentences.**

1 Didar was writing a report all night, so she's tired now.
2 Kairat isn't careful. He broke his camera.
3 They didn't program the machine, now it isn't working.
4 Sanzhar's alarm didn't go off. He was late for his science class.
5 I don't like robots. I didn't join the robotics club.
6 They ran out of money. They weren't able to run the mission.

6x2=12 marks

6 10.6.10 **Rewrite the sentences in the passive.**

1 NASA's Cassini spacecraft was gathering data from Saturn for 13 years.
2 Last week, the astronauts were planning a mission to Mars.
3 Sultan is writing a report about the moon landings.
4 Nowadays, directors are creating better films because of advanced equipment.
5 Last year scientists developed new spacecraft to travel to the moon.
6 Scientists monitor the giant storm on Jupiter.
7 Creative artists are using state-of-the-art technology to create the film.

7x2=14 marks

7 10.6.11 **Rewrite the following in reported speech.**

1 "I'm watching a documentary on space colonisation," he told her.
2 "I was studying for my chemistry exam," he told her.
3 "When will we visit the UFO museum?" the boy asked his mum.
4 "Have you ever heard of the UFO festival in Roswell?" she asked Kanat.
5 "You must finish your project on space as soon as possible," the teacher told the students.

5x2=10 marks

8 10.6.9 **Write a review of your favourite film for a magazine (120-180 words).**

20 marks

Total: 100 marks

Check your Progress

- talk and write about space ____
- talk and write about UFOs ____
- talk and write about space colonisation ____
- write a review of a film ____

GOOD ✓ VERY GOOD ✓✓ EXCELLENT ✓✓✓

Module 9
Independent project

Vocabulary: scientific breakthroughs, celestial bodies, human anatomy, chemistry elements
Grammar: compound nouns/adjectives, *-ing/-ed* adjectives, comparisons, conditional Type 3, *wish/if only*, prepositional phrases, linkers
Phrasal verbs: *hand, hang, join*
Word formation: prefixes used with nouns to form nouns
Writing: an opinion essay
Culture Corner: *British Science Week*
Curricular *(Science)*: *Body Talk*

VIDEO

Vocabulary
Scientific breakthroughs

1 10.1.9 **Look at the pictures. What do you know about these scientific breakthroughs? Tell the class.**

2 10.5.2 **Fill in:** *universe, DNA, helix, elements, properties.* **Listen and check. Match the texts to the pictures.**

1 The periodic table of the elements – Dmitri Mendeleev – 1869

This Russian chemist organised all of the chemical **1)** ..... into groups based on their **2)** ..... and left spaces for new elements to be discovered. This information is known as the periodic table of the elements and is used all over the world.

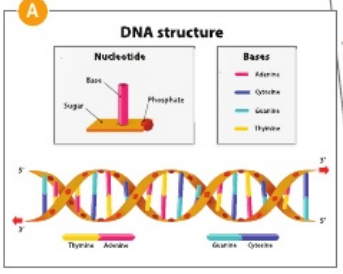
2 The Big Bang Theory – Georges Lemaître – 1920s

A Belgian physicist and astronomer was the first to suggest that our **3)** ..... is expanding from a single point. His ideas became known as the Big Bang Theory which is one theory for how the universe was created.

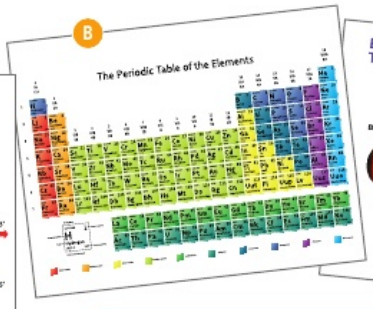
3 DNA structure – James Watson & Francis Crick – 1953

American scientist James Watson and British scientist Francis Crick discovered that our **4)** ..... is not flat, but a 3D structure that twists around in a double-**5)** ..... .

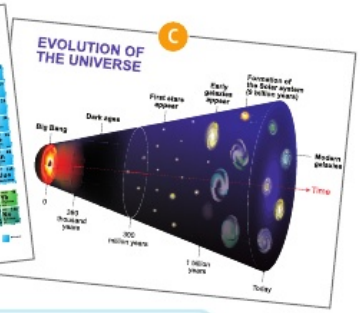
A



B



C



OVER TO YOU!

10.3.7 **Think of two scientific breakthroughs. Present them to class.**

9a The universe

Vocabulary
Celestial bodies

1 a) 10.5.2 Listen and say. Then, read the dictionary entries.

planet /plænɪt/ (n) a large round object in space that moves around a star e.g. the Earth

asteroid /ˈæstərɔɪd/ (n) a small celestial body that moves around the sun (mainly between the orbits of Mars and Jupiter)

comet /ˈkɒmɪt/ (n) a bright object with a long tail that travels around the sun

galaxy /ˈgæləksi/ (n) a large group of stars and planets that extends over many billions of light years

star /stɑː/ (n) a large ball of burning gas in space

meteor /ˈmiːtiə/ (n) a small mass travelling through space

moon /muːn/ (n) any planet's natural satellite

constellation /ˌkɒnstəˈleɪʃən/ (n) a group of stars that form a pattern and are named after it

b) Can you name the planets in our solar system? Listen and check.

Reading

2 10.2.1 What do you know about the origins of the universe? What would you like to know about it? Write down two questions. Listen and read the text. Can you answer your questions?

Check these words

eternally, exist, startling discovery, expand, logically, explode, widely accepted, hypothesis, collapse, prior, trillion, endless, countless, expansion, contraction, infinite, motivation

Study skills

Setting a purpose

Before you read a text, think what you already know about the topic. This will help you think what else you would like to learn about it.

3 10.4.2 10.4.9 Read the article again, then for questions 1-8, choose from theories A-C. The theories may be used more than once. Which theory/theories:

1 say space, time, and matter have existed forever with no beginning or end? ....
2 do most physicists support? .....
3 suggests a reason why our universe has the ideal conditions for supporting life? .....
4 says our universe came from an earlier universe? .....
5 say only one universe exists at any one time? ....
6 is supported by evidence we can see? .....
7 says our universe will eventually disappear? .....
8 says our universe we are living in is unique? .....

9a

A The Big Bang Theory

Before the 20th century, people believed that the universe had existed forever, and had looked the same way forever. But in 1929, astronomers made a **startling** discovery. Looking through their telescopes they noticed that the galaxies in our universe are actually moving away from each other at enormous speed – our universe is expanding!

If our universe is expanding, then logically at some point in the past the entire universe was contained in a single point in space. The Big Bang Theory states that about 14 billion years ago, our universe exploded out of nowhere from a single point and it has been expanding ever since to form the universe we know today. Our universe, in other words, has not existed forever. It had a definite beginning. Before our universe came into existence there was nothing … no time, space, matter, energy … nothing! The Big Bang created time, space and matter.

The Big Bang Theory is currently the most **widely accepted** hypothesis for the origin of the universe. However, it still leaves many questions unanswered. For instance, it doesn't explain *why* the big bang happened in the first place.

B The Cyclical Universe Theory

The Cyclical Universe Theory addresses the question, "What caused the big bang?" The answer it gives is the collapse and expansion of a prior universe.

According to the Cyclical Universe Theory, our universe began when another universe collapsed violently into a **single point** then exploded out again. Trillions of years from now, our own universe will stop expanding and begin to contract. Eventually, it will also collapse into a single point and explode out again giving rise to a new universe. Our universe is therefore just **the latest** in an endless series. Countless universes have preceded this universe and countless others will follow it. Space and time had no beginning. Cycles of expansion, contraction, collapse, and explosion have been going on forever.

C The Multiple Universe Theory

According to the Multiple Universe Theory, what we have been calling the universe is actually nothing like we thought! It is just a single bubble in an infinite number of universes. We are actually living in a multiverse consisting of trillions of universes. The multiverse has existed forever, and each universe in it is different.

The main motivation behind the Multiple Universe Theory is to provide an explanation as to why our universe seems to be so perfectly suited towards supporting life. For many people, this fact demands an explanation. They feel it is too much of a coincidence that the conditions in our universe just happen to be right to make life possible.

The Multiple Universe Theory states that there is nothing mysterious about this. There are trillions upon trillions of universes in the multiverse and therefore at least a few of them will have conditions that make life possible. We simply happen to be living in one of these universes.

4 10.5.2 **Fill in:** *expanding, exploded, collapse, prior, infinite.*

1 Astronomers have discovered that our universe has been ..... since it was formed.
2 Many universes may have existed ..... to the one we are living in.
3 Our universe might actually be just one of a(n) ..... number of other universes.
4 One day our universe may ..... and give rise to a new universe.
5 According to the Big Bang Theory, our universe ..... into existence from a single point.

Study skills

Avoid repetition

Writers use pronouns to avoid repeating the same nouns again and again. Identifying the nouns they refer to will help you understand the text better.

Identifying pronoun references

5 10.4.5 **Look at the underlined pronouns in the text. Decide which noun each one refers to.**

Grammar

see p. GR19

6 10.6.1 10.6.3 **Look at the words in bold. Which one is: a *compound noun*? *an -ing adjective*? *a compound adjective*? *a superlative adjective*? Check in the *Grammar Reference* section. Give one more example from each one of these.**

Speaking & Writing

7 a) 10.3.2 **Write one question for each theory in the text. Write the answers on a separate piece of paper.**

How did the universe start according to the Big Bang Theory?

b) 10.1.2 10.3.2 10.5.8 **Swap papers and answer your partner's questions. Check with your partner.**

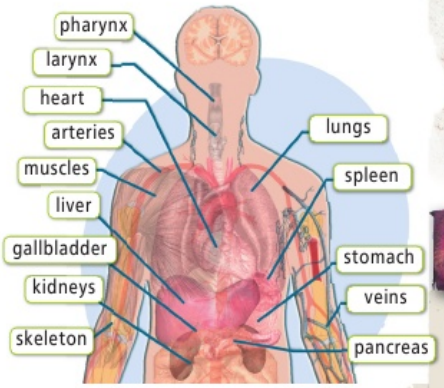
8 10.4.4 10.5.6 10.5.7 ICT **Do some Internet research and find out another theory about the origin of the universe. Write a short text. Present it to the class.**

9b Human biology

Vocabulary

Human anatomy

1 Listen and repeat.



Reading

Study skills

Identifying the author's purpose

Authors write in order to inform, entertain, and persuade. Identifying the author's purpose helps us understand the text better.

2 10.4.3 **Read the title then skim the text. What is the text about? What does the author want us to know about the topic?**

3 10.4.1 **Find the main idea in each paragraph. Compare with your partner.**

Study skills

Identifying main ideas

Paragraphs are usually laid out so that each one contains a main idea. Identifying the main idea helps us to understand what the paragraph is about. The main idea is usually found in the first or the last sentence of the paragraph. These sentences are called topic sentences.

1 The results of a recent experiment to slow the effects of the aging process in mice amazed scientists in Boston, USA. The scientists increased the amount of an enzyme called telomerase in the cells of the mice. Telomerase is an important enzyme because it repairs DNA. With increased telomerase in their cells, the mice's fertility improved, their fur began to look healthier, even their brains worked better. The scientists were hoping simply to slow the aging process in mice but, much to their surprise, they actually reversed it!

2 Could we use the same process to stop humans from aging? It's possible, but it wouldn't be without risks. Scientists believe increasing the level of telomerase in human cells would put people at greater risk of cancer. What's more, it's unlikely that simply increasing telomerase would be enough to keep us young because hundreds of enzymes are involved in the aging process.

3 Although scientists don't yet know exactly how and why we age, they have several theories. One theory is that as time passes, our bodies become less efficient at removing toxins from our cells. One way to try to stop the aging process is to keep cells as clean as possible. Scientists in New York successfully used this technique to restore the livers of old mice. The researchers bred special mice that did not lose their ability to remove damaged proteins from their livers. When

Check these words

aging process, enzyme, cell, repair, fertility, process, reverse, efficient, toxin, technique, restore, breed, ability, protein, youthful, combat, artificially, development, prevent, serving, compare, wrinkles, fantasy

these special mice were two years old, their livers were as healthy as the livers of ordinary one-month old mice. Although these special mice with youthful livers didn't live any longer than ordinary mice, scientists believe this study could eventually lead to ways of protecting humans from the diseases we get in old age.

4 Of course, if scientists ever do succeed in developing drugs that combat the aging process we will need to ask ourselves whether it is right to use them. For instance, should we keep people young and healthy artificially when, already, there are far too many people on the planet?

5 What if you can't wait for these future developments though? Well, scientists may not yet be able to stop you from aging, but they do know a way you can keep yourself looking younger – tomatoes! Tomatoes contain a substance called lycopene which helps prevent one of the main causes of skin aging: sun damage. Researchers in the UK asked a group of people to eat a serving of cooked tomatoes every day for 12 weeks. They then compared their skin to the skin of people who hadn't eaten any tomatoes. The skin of the people who ate the tomatoes was much less likely to burn in the sun. Eating tomatoes also increases the levels of procollagen in your skin. Procollagen helps keep skin firm, so the more you have in your skin, the less likely you are to get wrinkles. So while living forever is still just a fantasy, nature has at least provided a way for us to keep looking as young as possible, for as long as possible!

4 10.3.2 10.3.6 10.4.2 10.4.7 **Read the text and answer the questions. Discuss with your partner.**

1 What physical change did the Boston scientists see in the mice in their experiment?
2 What problem is there with performing the Boston procedure on people?
3 What builds up in our cells as we age?
4 What did the New York scientists achieve?
5 What global problem does the writer mention that could be affected by anti-aging treatments?
6 How does eating tomatoes help us achieve younger-looking skin?
7 Why might reversing the aging process one day become a reality?

5 10.1.9 10.3.5 THINK! **In three minutes, write four things that you have learnt from the text. Tell the class.**

6 10.5.2 **Fill in:** *reversed, serving, combat, efficient, enzymes.*

1 Scientists are trying to find ways to ..... the aging process and keep people looking young.
2 Our bodies are more ..... at removing toxins from our cells when we are young, than when we are old.
3 Eating a daily ..... of cooked tomatoes can help protect your skin against sun damage.
4 Scientists haven't just slowed down the aging process in mice; they have ..... it.
5 Telomerase is just one of hundreds of ..... involved in the aging process.

Grammar

Conditionals: type 3 (Revision)

see p. GR19

7 10.6.17 **How do we form the 3rd conditional? Give an example.**

Wish/If only

see p. GR19

8 a) 10.6.17 **Read the examples. When do we use *wish/if only*? Which sentence refers to the present? past?**

I wish/If only I were taller.
I wish/If only I hadn't put on weight.

b) 10.6.17 **Make wishes using the prompts below, as in the example.**

- I wish/If only I were/had/could
- I wish/If only I had (past – regret)
- I wish/If only (my dad/mum/friend, etc) (present & past)

Speaking & Writing

9 10.1.1 10.1.3 10.5.6 10.5.9 THINK! **How do you think your life today would be different if scientists had found a way to stop people from aging? In three minutes, write a few sentences. Tell the class.**

9c Elements

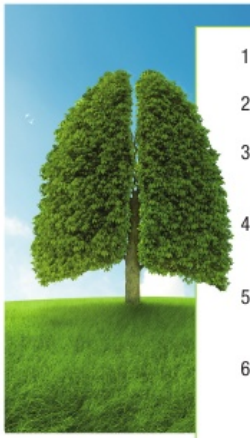
Vocabulary
Chemical elements

1 10.5.2 **Match the chemical symbols (1-8) to the correct elements (a-h). Listen and check, then say.**

1	O	a	nitrogen
2	C	b	gold
3	Fe	c	oxygen
4	N	d	carbon
5	Na	e	hydrogen
6	Ag	f	sodium
7	Au	g	silver
8	H	h	iron

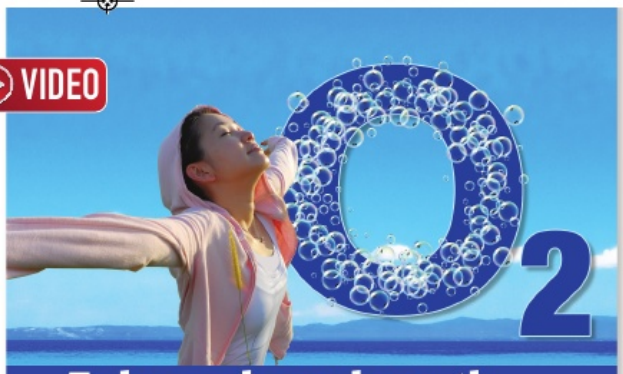
Reading
Using prior knowledge

2 10.2.2 10.4.2 **What do you know about oxygen? Which of the sentences below are true? Listen, read and check.**



1 Oxygen powers our bodies.
2 Oxygen is toxic in large amounts.
3 The first life forms needed oxygen to survive.
4 Oxygen is the main product of photosynthesis.
5 Animals were smaller in the past because of oxygen.
6 The amount of oxygen in the atmosphere has been constant through time.

VIDEO



Take a deep breath...

Surprising Facts about Oxygen

They say too much of anything is bad for you. Believe it or not, that's true of the oxygen that powers our bodies. If we breathed air that was more than 75% oxygen, we could die within days. Our lungs couldn't cope. Our bodies are used to air that's 21% oxygen – and even that's harmful over a lifetime.

The body makes use of around 98% of the oxygen it takes in and the rest transforms into free radicals – molecules that attack and damage our cells over time. Oxygen, then, is actually toxic in large doses. But after 3-4 billion years of evolution of life on Earth, shouldn't our bodies be better at processing oxygen?

To try to answer that question, it's important to understand that oxygen wasn't always present in the atmosphere. Because of this, scientists believe that the first life forms on the planet were anaerobic; they were able to survive without oxygen. It was only after plants established themselves that oxygen appeared in the atmosphere. This appearance of oxygen in the Earth's atmosphere some 2.2 billion years ago is known as the Great Oxidation Event.

Plants, unlike animals, don't need oxygen, but produce it through photosynthesis – the process by which they convert sunlight, water, and carbon dioxide into energy. Because oxygen is a by-product of photosynthesis, it took more than a billion years for enough of it to build up in the atmosphere and give rise to animal life.

Fossil evidence suggests animals first appeared about 700 million years ago, in the oceans. The first animal life forms had extremely thin bodies in relation to their size. Scientists believe this allowed them to make maximum use of the low amounts of oxygen present in the ocean. Around 500 million years ago, atmospheric oxygen levels were high enough to enable animals to venture out of the ocean and onto land.

The amount of oxygen in our atmosphere has not increased steadily. In fact, 300 million years ago, oxygen was actually more abundant in the air than it is now, making up 50% of it. As a result, animals were much bigger than they are today. There were insects, for example, which measured more than 2.5 feet from the tip of one wing to another. Scientists recently bred dragonflies this size in 50%-oxygen environments. They say the dragonflies were able to grow so big because in oxygen-rich atmospheres, insects don't need the large breathing systems which normally limit the size of their bodies. By 240 million years ago, though, oxygen levels had fallen to just 12% of the air.

If it's surprising that the amount of oxygen in the atmosphere has varied during animal evolution, it's perhaps even more surprising to learn that the planet is more dependent on oxygen produced in the oceans than on land. Scientists estimate that sea algae replace around 90% of the oxygen in the biosphere. So, today's most complex life forms not only originated in an environment in which they now cannot breathe – the ocean – they rely on it for their survival!

Check these words

power, cope, free radical, molecule, toxic, dose, evolution, establish oneself, photosynthesis, process, convert, by-product, give rise to, fossil evidence, venture, steadily, abundant, wing, breed, dependent, sea algae, biosphere, rely on

Study skills

Multiple choice

Read through the text once to get a general idea what the text is about. Read the questions and possible answers and underline the key words. Read the text again. Find the parts of the text that contain the answer to each question. Look for paraphrases.

3 10.4.2 10.4.6 **Read the article on oxygen in the atmosphere. For questions 1-5, choose the correct answers (A, B, C or D). Justify your answers.**

1 Air that is mainly oxygen is
- **A** low in free radicals.
- **B** useful to the body.
- **C** dangerous to humans.
- **D** bad for evolution.

2 Oxygen is
- **A** 50% of the atmosphere.
- **B** necessary in order for life to exist.
- **C** the result of atmospheric chemistry.
- **D** unnecessary for plants.

3 According to the article, animals
- **A** couldn't have evolved without plants.
- **B** took a long time to get big in size.
- **C** were anaerobic at first.
- **D** needed large breathing systems in the past.

4 The dragonfly experiment suggests
- **A** large creatures need less oxygen.
- **B** insects develop more quickly in high – oxygen environments.
- **C** low levels of oxygen will result in large creatures.
- **D** insects fly more easily in high-oxygen environments.

5 Without sea algae
- **A** there would be no oxygen in the atmosphere.
- **B** animals would stop evolving.
- **C** all life in the oceans would die.
- **D** all life on Earth would be in danger.

4 10.5.2 **Fill in:** *carbon, large, support, breathe, sea, grow, make, animal.*

1	..... air	5	..... life
2	..... use of	6	..... big
3	..... doses	7	..... algae
4	..... dioxide	8	..... evolution

5 10.5.2 **Use words from the *Check these words* box in their correct form to complete the sentences.**

1 Our lungs can't ..... with too much oxygen.
2 In the past, insects had bigger ..... than they do today.
3 Oxygen is ..... in large doses because it produces free radicals.
4 Scientists think that animals first ..... onto land about 500 million years ago.

Prepositional phrases

6 10.4.2 10.6.14 **Fill in the gaps with the correct prepositions. Then, correct the statements. Compare with your partner.**

1 Life ..... Earth arose in an oxygen-rich environment.
2 Our bodies process oxygen ..... 100% effectiveness.
3 Oxygen has always been present ..... the atmosphere.
4 The appearance of photosynthesis ..... plants is known as the Great Oxidation Event.
5 Evidence suggests animal life appeared ..... land and ..... the oceans ..... about the same time.
6 Land animals depend ..... land plants for most of their oxygen.

Speaking & Writing

7 10.3.6 10.3.7 **Tell your partner five things you have learnt from the text.**

8 10.4.6 THINK! **What was the author's purpose in writing this article? Write a few sentences. Justify your answer. Tell the class. Discuss.**

9d Writing

An opinion essay
Rubric Analysis

1 10.5.5 10.5.7 **Read the task. Underline the key words and answer the questions.**

You have had a class discussion about 'designer babies'. Your teacher has asked you to write an opinion essay answering the question '*Should we create designer babies?*' (120-180 words).

1 What are you going to write?
2 Who is going to read it?
3 What is going to be about?
4 How many words should you write?
5 What style should you write in?
6 What is your opinion on the topic? Give reasons.

2 10.5.7 **Read the model. Copy and complete the table in your notebook.**

	Viewpoints	Examples & Reasons/Results
1	*we can prevent genetic diseases*	
2		
3		

Useful language

Linkers
Listing points
• In the first place/To begin with/To start with/Firstly, ... • In addition/Moreover/Furthermore/Secondly, ...
Introducing examples/reasons/results
• For example/For instance, ...
• In particular, ... • ... because/as/since ...
• The reason (for) ... is ... • That's because/why ...
• As a result/In this way, ... • Consequently
• This means/would mean that ...
Giving opposing viewpoints
• On the other hand, ... • However/ Alternatively, ...
• in spite of/despite/although/even though ...
Concluding
• In conclusion/All in all/All things considered/To sum up, ...
Expressing opinion
• I think/believe/feel (that), ... • In my opinion, ...
• To my mind, ... • As far as I am concerned, ...
• It seems to me (that) ...

In the future, genetic engineering may allow us to choose desirable characteristics for our children. To my mind, there are many advantages to creating 'designer babies'.

Firstly, genetic engineering means we can prevent genetic diseases. **For example**, there would be fewer children affected by genetic diseases. **This would mean** more healthy children and less strain for parents because they don't have to look after an ill child.

Moreover, being able to enhance the looks and intelligence of a baby would result in smarter and more beautiful people. **As a result**, children wouldn't be bullied for their looks or how clever they are.

On the other hand, many people believe that no one has the right to change an unborn human and that every unborn child should have the right to remain genetically unmodified. After all, there is no guarantee parents would like the final outcome.

In conclusion, it seems that being able to create healthier, smarter and more beautiful children has its advantages. However, I believe that if this technology is not available to everyone, it will introduce a whole new set of social problems.

Linkers

3 10.6.16 **Replace the linkers in bold in the essay in Ex. 2 with linkers from the Useful language box.**

4 10.6.16 **Choose the correct linker.**

A **1) To begin with/Such as,** space exploration could help us find other planets that could support life. **2) First of all/For instance,** we could find planets that have similar conditions to ours. **3) This is because/As a result,** humans have an alternative place to live if Earth becomes too dangerous.

B **4) In conclusion/However,** there is no doubt that space exploration is expensive. **5) In particular/In contrast,** building spacecraft and preparing missions costs taxpayers a lot of money. **6) That is why/For instance** many people feel the money would be better spent on public services.

Expressing opinion

5 10.5.4 **Find the phrases the writer uses to express their opinion in the essay in Ex. 2. Replace them with appropriate ones from the useful Language box.**

6 10.5.4 **Rewrite the statements using phrases for expressing opinion from the Useful Language box.**

1 People should take more interest in scientific discoveries.
In my opinion, people should take more interest in scientific discoveries.
2 We should spend taxpayers' money on improving hospitals, schools and other public services.
3 Space exploration is responsible for many developments in science and technology.
4 It is a waste of money to keep funding space exploration.
5 It is very important to find another planet that supports life.

Your turn

7 10.5.5 **Read the task and underline the key words. Then answer the questions.**

You have had a class discussion about 'space exploration'. Your teacher has asked you to write an opinion essay answering the question '*Should we spend huge amounts of money on space exploration?*' (120-180 words).

1 What are you going to write?
2 Who is going to read it?
3 What is going to be about?
4 How many words should you write?
5 What style should you write in?
6 What is your opinion on the topic? Give reasons.

8 a) 10.5.5 **Match the viewpoints (1-4) to the examples/reasons/results (A-D).**

Viewpoints

1 ☐ We could find another planet that supports life.
2 ☐ It is very expensive.
3 ☐ It leads to advances in science/ technology.
4 ☐ The area is very large.

Examples/Reasons/Results

A Taxpayers' money could be spent to improve public services.
B Space exploration research has led to the development of computers and lasers.
C The distances are huge and so we can only explore a small area.
D Humans could have somewhere else to live if the Earth becomes uninhabitable.

b) 10.5.5 **Which of the viewpoints in Ex. 8a are in favour of space exploration? Which are against?**

9 10.5.5 10.5.7 10.5.9 10.6.8 10.6.11 **Write your essay. Use three viewpoints from Ex. 8a. Use appropriate techniques to start/end your essay. Follow the plan.**

Plan

Para 1:	present the topic & state your opinion
Paras 2 & 3:	viewpoints – in favour & examples/reasons/ results
Para 4:	viewpoint – against & examples/reasons/ results
Para 5:	restate your opinion & conclude

9e Culture Corner

1 10.1.8 10.1.9 10.3.5 10.4.1 **Read the title of the text. What do you think happens during this week? Tell the class.**
Listen and read to check.

2 10.4.2 **Read the text again and mark the following sentences as *T* (true), *F* (false) or *DS* (doesn't say).**

1 People all over the world celebrate British Science Week. .....
2 The event lasts for one week. .....
3 You can buy British Science Week stamps from the post office. .....
4 There is a photography competition every year. .....
5 Some students wear costumes during British Science Week. .....
6 The student who bakes the best cake wins a prize. .....

3 10.4.5 **Match the words in bold in the text to their synonyms.**

• directed • presentations
• breakthroughs • search
• effect • displays • organisation

4 10.1.9 10.3.5 THINK! **Would you like to attend these events? Which part would you enjoy most? Why? Tell the class.**

5 10.5.6 ICT **Find information about a similar event in your country. Collect information. Tell the class.**

Check these words
hold, logo, science-themed, impact

VIDEO

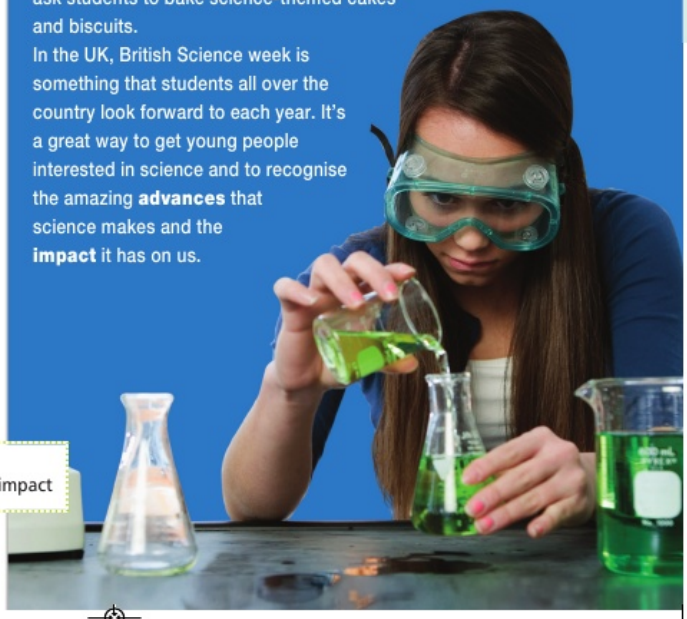
British SCIENCE Week

Every year, people all over the UK celebrate British Science Week. The event celebrates science and its importance in our everyday lives. It is organised by the British Science **Association** and is **aimed** at young people. British Science Week usually takes place in March and lasts for around 10 days. During this time exciting and fun science events are held around the country. There are also fascinating science documentaries on television and lots of museums hold exciting science exhibitions.

British Science Week has a different theme each year, so that people can learn about different areas of science. For instance, in 2017 the theme was 'change' and in 2018, '**exploration** and discovery'. Even the UK's postal service, Royal Mail, prints the British Science Week logo onto all of the envelopes they deliver to remind everyone about this special event.

There is a lot to see and do during British Science Week. In addition to the TV shows and museum **exhibits**, the British Science Association holds annual poster and photography competitions for young people so that they can get involved with their friends and families. Most primary and secondary schools also arrange a variety of activities for their students to do in school, for example; preparing tasks for them to do in their lessons or inviting scientists to speak to them. Some schools have a 'Demo Day' where teachers can show the students some amazing science **demonstrations** and other schools hold creative competitions for their students. These might include fancy dress competitions where students dress up as their favourite scientists or baking competitions that ask students to bake science-themed cakes and biscuits.

In the UK, British Science week is something that students all over the country look forward to each year. It's a great way to get young people interested in science and to recognise the amazing **advances** that science makes and the **impact** it has on us.



VIDEO

BODY Talk

We can't help it, but we all sneeze, yawn, blush, hiccup, cough or even snore from time to time. But what exactly is going on in our bodies when we do all these things?

No one knows for sure why we yawn, but one theory is that when you're tired or bored, you don't breathe as deeply as usual, so yawning helps you to take more oxygen into the blood. Other scientists say that yawning stretches the muscles and lungs and increases the heart rate, helping us to stay more alert. Most people seem to agree about one thing, though … yawning is contagious!
Even animals and unborn babies yawn!

A cough is an important way of clearing your airways, throat and lungs of irritations. When you cough, you breathe in and close your vocal cords. As you release the air, you make a barking noise – a cough.

It's no secret that we blush when we're embarrassed, but why? Well, when you feel self-conscious, your body releases adrenalin which increases the blood flow to your face. Babies don't blush. You only blush when you become aware of other people's thoughts and feelings.

We get hiccups when something irritates the diaphragm muscle below the lungs that helps pull air into them. When we eat or drink too much, or when we feel nervous or excited, the diaphragm pulls down air in a jerky way. When this air meets your voice box, you make a hiccup sound.

When something such as dust, pollen or a virus irritates the inside of our nose, a message goes to the brain. The brain then tells six different muscles including your eyelids to push air out through your nose at up to 160 kmph.

When you are asleep and air can't move freely through your mouth or nose, parts of your mouth and throat vibrate and cause snoring. Reasons why the air can't get through might include an allergy, a cold or being overweight. Studies say that about 45% of men and 30% of women snore regularly.

1 10.4.1 **Read the headings in the text. What causes these to happen?**
Listen and read the text to find out.

2 10.4.2 **Write: *sneeze, yawn, blush, hiccup, snore* or *cough* next to each sentence.**

1 You may do this if you need to lose weight. .....
2 It might help you stay awake. .....
3 It happens when you think about what others think of you. .....
4 You might do this if you are worried about something. .....
5 It happens extremely fast. .....
6 You may sound like a dog when you do this. .....

Check these words

stretch, muscle, lung, increase, airways, throat, vocal cords, release, adrenalin, flow, jerky, voice box, dust, pollen, virus, irritate, brain, vibrate, allergy

3 10.4.5 **Match the highlighted words with their meanings: *know about, shake, awake, sudden and fast, infectious, bothers, uncomfortable around others.***

4 10.3.3 **Tell your partner one thing you remember about each of the reflex actions in the text.**

5 10.4.8 10.5.6 10.5.7 10.6.9 ICT **Find out more interesting facts about these reflex actions. Use textbooks, encyclopaedias or the Internet. Present your facts to the class.**

9 Language in Use

Phrasal verbs/Prepositions

1 10.5.2 10.6.15 **Choose the correct particle.**

hand in: submit
hand out: distribute
hand over: give (usually without wanting to)
hang out: spend time relaxing (usually with friends)
hang on: wait a short time
join in: become involved in an activity with others
join up: become a member of (a club, etc)

1 Miras is planting trees in the park this weekend. Why don't we join **in/up**, too?
2 Ulan found a wallet on the street yesterday and he handed it **out/in** at the police station.
3 Hang **on/out** a minute and I'll come with you.
4 Sally hangs **on/out** with friends on Saturdays.
5 The cashier handed **in/over** £100,000 in cash.
6 People were handing **out/over** leaflets about environmental protection in town today.

2 10.5.2 10.6.14 **Choose the correct preposition.**

1 Poverty can lead **in/to** crime.
2 He managed to survive **on/in** very little food.
3 The world's rainforests are **under/at** threat.
4 Meirzjan donates money **for/to** the homeless.
5 Can success contribute **on/to** happiness?
6 Gulnara succeeded **in/on** raising money for charity.

Collocations

3 10.5.2 **Fill in:** *natural, long-term, free, process, startling, toxic.*

1 ..... discovery
2 ..... aim
3 ..... waste
4 ..... radical
5 ..... resources
6 aging .....

Word formation

4 10.5.2 **Complete the sentences with the correct word derived from the words in brackets. Use appropriate prefixes.**

Prefixes used with nouns to form nouns
Some of the prefixes used to form new nouns in English are: **auto-(self)** (*automobile*), **co-(joint)** (*co-founder*), **ex-(former)** (*ex-chairman*), **inter-(between)** (*interchange*), **super-(more than)** (*superpower*), **tele-(distant)** (*telemarketing*).

1 Superman and Spider-Man are ..... . **(HEROES)**
2 New technology has improved .... greatly. **(COMMUNICATIONS)**
3 He decided to write his ..... . **(BIOGRAPHY)**
4 She met her ..... with his new wife at the children's party. **(HUSBAND)**
5 They need to make ..... with the site easier. **(ACTION)**

Words often confused

5 10.5.2 **Choose the correct word. Check in your dictionaries.**

1 He **wondered/wandered** around Europe for months before he **settled/lived** in London.
2 He wanted to **grab/hold** people's attention and raise **public/private** awareness.
3 He **spent/passed** the night in the **chilling/biting** cold.
4 If you are in **question/doubt**, ask someone to help you.

Kazakhstan in Action!

Read and choose the correct word.

- Dimitri Mendeleev's periodic table contains around 110 **1) choices/elements**. From these 110, 99 have **2) been/being** detected in Kazakhstan.
- The science, technology and entertainment festival, EXPO 2017 **3) brought/put** Nur-Sultan on the map when it attracted more **4) than/from** four million visitors from around the world.
- There **5) is/are** an estimated 300 significant deposits of the precious metal element gold in Kazakhstan.
- In 1973 the Archaeological Museum of the Kazakhstan National Academy of Sciences **6) put/set** up exhibits **7) to/for** show Kazakh culture and traditions between the ancient period and the Middle Ages.

Progress Check 9

GLIESE 581G

In September 2010, after a decade of observation, astronomers announced the discovery of a planet with the greatest recognized potential for harbouring life. The planet, named Gliese 581g, is 20 light years from Earth. It orbits a red dwarf star in the Libra Constellation.

Gliese 581g is the right size, and just the right distance from its star to harbour life. Unfortunately, current technologies don't allow scientists to study the atmosphere of Gliese 581g for chemical signs of life. But astronomers expect many more life-friendly planets to be discovered soon. If any of the planets cross the face of their parent star, relative to our line of sight, then scientists will be able to gather atmospheric data from them.

The detection of Gliese 581g after such a short period of searching and at such close proximity to Earth, leads astronomers to believe the proportion of stars in the universe with potentially-habitable planets may be greater than ten percent. If this is indeed the case, this would mean there are potentially billions of Earth-like planets in the Milky Way alone!

Reading

1 10.4.2 10.4.9 **Read the text and mark the sentences *T* (true), *F* (false) or *DS* (doesn't say).**

1 Astronomers discovered Gliese 581g in 2010. .....
2 Gliese 581g is situated in the Libra Constellation. .....
3 Chemical analysis of Gliese 581g's atmosphere has been conducted. .....
4 Gliese 581g does not cross the face of its red dwarf star relative to our line of sight. .....
5 Astronomers think most stars in the universe have potentially-habitable planets orbiting them. .....

5x4=20 marks

Listening

2 10.2.2 10.2.3 10.2.8 **You'll hear an interview with a woman called Lesley about body image. For questions 1-5, mark them as *T* (true) or *F* (false).**

1 Lesley talks to groups of teenagers. .....
2 She says body image affects behaviour. .....
3 She says a lot of celebrities have a poor body image, too. .....
4 She doesn't think teens should change their appearance. .....
5 She advises teens with poor body image to talk to a friend their own age. .....

5x2=10 marks

9 Progress Check

3 10.5.2 **Fill in:** *biosphere, fertility, venture, rely on, motivation, prior, technique, hypothesis, free radicals.*

1 The large Hadron Collider was invented to test the ..... of the Big Bang Theory.
2 Telomerase is an enzyme that can increase the ..... of mice.
3 Some scientists believe in the existence of another universe ..... to this one.
4 Some scientists believe ..... damage our cells and cause aging.
5 Researchers are developing a ..... for the early detection of Alzheimer's disease.
6 The first creatures to ..... onto land from the sea did so about 500 million years ago.
7 Many people like the idea of exercise, but lack the ..... to actually do any.
8 All life on Earth exists in the ..... .
9 Math skills ..... logic as well as language to represent large numbers.

9x2=18 marks

4 10.5.2 **Choose the correct option.**

1 The poison cyanide is highly **toxic/toxin** to animals and humans.
2 There are **endless/countless** stars in the sky.
3 Carbon dioxide is a **contraction/by-product** of cellular respiration.
4 Life expectancy around the world has increased **steadily/eternally** for nearly 200 years.
5 Their results have not been widely **accepted/reversed**.

5x2=10 marks

5 10.6.14 **Choose the correct preposition.**

1 Space exploration gives rise **to/in** many scientific breakthroughs.
2 The human body consists **with/of** trillions of cells.
3 The Earth is very small **in/at** relation **with/to** Jupiter.
4 Living organisms rely **to/on** oxygen for their survival.

4x2=8 marks

6 10.6.3 10.6.17 **Complete the sentences with two to five words, including the word in bold.**

1 I've never heard of such an amazing discovery.
the This is .... I've ever heard of.
2 They ran out of money; that's why they didn't complete the research.
would If they hadn't run out of money, ... the research.
3 Earth is warmer than Mars.
as Mars .... Earth.
4 Stephen Hawking is the best scientist of all.
than Stephen Hawking .... anyone else.
5 I regret not studying harder for my science test.
only If .... harder for my science test.
6 Rosie's experiment was easier than Mark's.
less Rosie's experiment .... Mark's.
7 It's a pity I cannot attend the Science Festival tomorrow.
only If .... Science Festival tomorrow.

7x2=14 marks

7 10.5.5 10.5.7 **Write an opinion essay answering the question *'Should the government spend money on anti-aging research?'* (120-180 words).**

20 marks

Total: 100 marks

Check your Progress

- talk about scientific breakthroughs ____
- talk about the universe ____
- use the 3rd conditional & 'I wish/If only' ____
- write an opinion essay ____

GOOD ✓ VERY GOOD ✓✓ EXCELLENT ✓✓✓

Grammar Reference

Starter

Present simple

Form

AFFIRMATIVE	I/You/We/They **run**. He/She/It **runs**.
NEGATIVE	I/You/We/They **do not/don't run**. He/She/It **does not/doesn't run**.
INTERROGATIVE	**Do** I/you/we/they **run**? **Does** he/she/it **run**?
SHORT ANSWERS	**Yes**, I/you/we/they **do**. **Yes**, he/she/it **does**.
	No, I/you/we/they **don't**. **No**, he/she/it **doesn't**.

Spelling (3rd-person singular affirmative)

- Most verbs take ***-s*** in the 3rd-person singular. *I sit – She sit**s***
- Verbs ending in ***-ss***, ***-sh***, ***-ch***, ***-x*** or ***-o*** take ***-es***.
  *I pass – he pass**es**, I wash – he wash**es**, I teach – he teach**es**, I fix – he fix**es**, I do – he do**es***
- Verbs ending in **consonant + *y*** drop the ***-y*** and take ***-ies***.
  *I fly – he fl**ies***
- Verbs ending in **vowel + y** take **-s**. *I say – he say**s***

Use

We use the **present simple** for:

- **daily routines/repeated actions** (especially with adverbs of frequency: ***often***, ***usually***, ***always***, etc)
  *She **starts** work at 9 am.*
- **habits.** *They always **do** their shopping on Friday.*
- **permanent states.** *He **works** as a teacher.*
- **timetables/schedules** (present/future meaning).
  *The museum **opens** at 10 am.*
- **general truths** and **laws of nature.** *Water **boils** at 100°C.*
- **reviews/sports commentaries/narrations**
  *The young actor **gives** an excellent performance in Cats.*

Time expressions used with the *present simple*: every day/month/hour/summer/morning/evening, etc, usually, often, sometimes, always etc, on Sundays/Tuesdays, etc.

Adverbs of frequency

- **Adverbs of frequency** tell us how often sth happens. These are: always (100%), usually (75%), often (50%), sometimes (25%), never (0%).
- **Adverbs of frequency** go **before** the **main verb** but **after** the auxiliary verbs ***be***, ***have***, ***do*** and modals such as ***will***, ***may***, etc. *He **usually** sleeps early on Sundays.*
  *They are **usually** at work at this time of day.*

Present Continuous

Form: verb ***to be*** (am/is/are) + main verb ***-ing***

AFFIRMATIVE	NEGATIVE
I**'m eating**. You**'re eating**. He/She/It**'s eating**. We/You/They**'re eating**.	I**'m** not **eating**. You **aren't eating**. He/She/It **isn't eating**. We/You/They **aren't eating**.

INTERROGATIVE	
Am I **eating**? **Are** you **eating**?	**Is** he/she/it **eating**? **Are** we/you/they **eating**?
SHORT ANSWERS	
Yes, I am. **Yes**, you **are.** **Yes**, he/she/it **is.** **Yes**, we/you/they **are.**	**No**, I'm **not**. **No**, you **aren't**. **No**, he/she/it **isn't**. **No**, we/you/they **aren't**.

Spelling of the present participle

- Most verbs take ***-ing*** after the base form of the main verb.
  *ask – ask**ing**, spend – spend**ing***
- Verbs ending in ***-e*** drop the ***-e*** and take ***-ing***.
  *wake – wak**ing**, dance – danc**ing***
- Verbs ending in **vowel + consonant** and which are stressed on the last syllable, **double the consonant** and take ***-ing***. *stop – sto**pping**, regret – regre**tting***
  BUT *happen – happen**ing*** (stress on 1st syllable)

Use

We use the **present continuous** for:

- actions happening **now**, at the moment of speaking
  *Tim **is swimming** right now.*
- actions happening **around the time of speaking**.
  *They **are painting** their house these days.*
- **fixed arrangements** in the **near future**, especially when we know the time and the place.
  *Ben **is having** a party on Saturday.*
- **temporary situations.**
  *Patty **is working** at her uncle's shop this summer.*
- **changing or developing situations.**
  *He **is getting** better at tennis.*
- frequently **repeated actions** with ***always***, ***constantly***, ***continually*** to express annoyance or criticism.
  *He**'s always forgetting** to bring his wallet.*

Note: **The following verbs do not usually have a continuous form:** have (= possess), like, love, hate, want, know, remember, forget, understand, think, believe, cost, etc. *I **want** to ask you something.*

Time expressions used with the *present continuous*: now, at the moment, at present, nowadays, these days, today, tomorrow, next month, etc.

Present simple vs Present continuous

PRESENT SIMPLE	PRESENT CONTINUOUS
timetables *The film **starts** at 6.*	**future arrangements** *I**'m going** out on Sunday.*
permanent states & facts *They **live** in the country.*	**temporary situations** *He**'s working** from home this week.*
habits/routines *He **goes** jogging every morning.*	**actions happening now/ around the time of speaking** *She**'s sleeping** at the moment.*

Grammar Reference

Stative verbs

Stative verbs are verbs which describe a state rather than an action, and do not usually have a continuous form.
These are:

- verbs of the **senses** (*appear, feel, hear, look, see, smell, sound, taste,* etc.). *This jumper **feels** soft.*
- verbs of **perception** (believe, forget, know, understand, etc.). *I don't **understand** what the problem is.*
- verbs which express **feelings** and **emotions** (*desire, enjoy, hate, like, love, prefer, want,* etc.). *I **like** swimming.*
- other verbs: ***belong***, ***contain***, ***cost***, ***fit***, ***have***, ***keep***, ***need***, ***owe***, ***own***, etc. *She **owes** me £25.*

Some of these verbs can be used in continuous tenses, but with a difference in meaning.

PRESENT SIMPLE	PRESENT CONTINUOUS
*I **think** he's lying.* (= believe)	*I **am thinking** of moving.* (= am considering)
*He **has** a sports car.* (= owns, possesses)	*I **am having** dinner.* (= eating) *She **is having** a break.* (= taking)
*I can **see** the river from my room.* (= it is visible) *I **see** what your point is.* (= understand)	*He's **seeing** a new client tomorrow.* (= meeting)
*This tea **tastes** very sweet.* (= it is/has the flavour of)	*Tom **is tasting** the sauce to see if it has enough pepper.* (= is trying)
*These flowers **smell** nice.* (= have the aroma)	*The cat **is smelling** its food.* (= is sniffing)
*You **appear** to be angry.* (= seem)	*Liz **is appearing** in New York this week.* (= is performing)

Note: The verb ***enjoy*** can be used in continuous tenses to express a **specific preference**.
*I really **enjoy** eating out.* (general preference)
BUT
*I'**m enjoying** a nice dinner at home.* (specific preference)
The verbs ***look*** (when we refer to somebody's appearance), ***feel*** (when we experience a particular emotion), ***hurt*** and ***ache*** can be used in simple or continuous tenses with no difference in meaning.
*Beth **looks** very elegant tonight. = Beth **is looking** very elegant tonight.*

Past simple

Form
The **past simple** affirmative of regular verbs is formed by adding ***-ed*** to the verb. Some verbs have an irregular past form (see list of Irregular Verbs).

AFFIRMATIVE	
I/You/He/She/It/We/They **stayed/ran**.	
NEGATIVE	
Long Form	**Short Form**
I/you/he/she/it/we/they **did not stay/run.**	I/you/he/she/it/we/they **didn't stay/run.**

INTERROGATIVE	SHORT ANSWERS
Did I/you/he/she/it/we/they **stay/run**?	**Yes**, I/you/he/she/it/we/they **did**. **No**, I/you/he/she/it/we/they **didn't**.

Spelling

- We add ***-d*** to verbs ending in ***-e***. *I live – I live**d***
- For verbs ending in **consonant + *y***, we drop the ***-y*** and add ***-ied***. *I try – I tr**ied***
- For verbs ending in **vowel + *y***, we add ***-ed***. *I enjoy – I enjoy**ed***
- For verbs ending in one stressed vowel between two consonants, we double the last consonant and add ***-ed***. *I admit – I admit**ted***

Use
We use the **past simple** for:

- actions which happened at **a specific time in the past**. *Sue **came** home at 7 pm.* (When? At 7 pm)
- **past habits.** *Mum often **took** me to the park when I was little.*
- past actions which happened **one immediately after the other**. *Brad, **had** breakfast, **read** the morning paper and **left** for work.*

Time expressions used with the *past simple*: yesterday, yesterday morning/evening, etc, last night/week, etc, two weeks/a month ago, in 2010, etc.

Past continuous

AFFIRMATIVE	NEGATIVE
I/He/She/It **was walking**. We/You/They **were walking**.	I/He/She/It **wasn't walking**. We/You/They **weren't walking**.
INTERROGATIVE	**SHORT ANSWERS**
Was I/he/she/it **walking**?	**Yes**, I/he/she/it **was**. **No**, I/he/she/it **wasn't**.
Were we/you/they **walking**?	**Yes**, we/you/they **were**. **No**, we/you/they **weren't**.

We use the **past continuous** for:

- an action which was **in progress** at a stated time in the past. We do not know when the action started or finished. *Tom **was watching** a film at 9 pm last night.*
- a **past action** which was **in progress** when another action **interrupted** it. We use the past continuous for the action in progress (longer action) and the past simple for the action which interrupted it (shorter action).
  *He **was sleeping** when a loud noise **woke** him up.*
- two or more actions which were happening at the same time in the past **(simultaneous actions)**.
  *We **were taking** notes while the teacher **was talking**.*
- to give **background information** in a story. *The sun **was shining** and the birds **were singing** when Emma got up that morning.*

Time expressions used with the *past continuous*: while, when, as, all day/night/morning, yesterday, etc.

Grammar Reference

Past simple vs Past continuous

PAST SIMPLE	PAST CONTINUOUS
actions which happened at a **stated time** in the past *The accident **happened** at 4:30 pm.*	actions **in progress** at a stated time in the past *He **was watching** a hockey game at 8 in the evening.*
actions which happened **one after the other** in the past *They **paid** the bill and **left** the restaurant.*	two or more actions which were happening **at the same time** in the past *Ellie **was checking** her recipe while she **was preparing** the dish.*

used to/*would*/Past simple

AFFIRMATIVE	I/You/He/She/It/We/They **used to** play football.
NEGATIVE	I/You/He/She/It/We/They **didn't use to** play football.
INTERROGATIVE	**Did** I/you/he/she/it/we/they **use to** play football?
SHORT ANSWERS	**Yes**, I/you/he/she/it/we/they **did**.
	No, I/you/he/she/it/we/they **didn't**.

- We use ***used to*/past simple** to talk about past habits or actions that happened regularly in the past, but they no longer happen. *He **used to drive/drove** to work.* (He doesn't do that any more.)
- We use ***would*/*used to*** for repeated actions or routines in the past. We don't use ***would*** with stative verbs. *She **used to wake up/would wake up** early every day.* **BUT** *She **used to have** long hair.* (NOT: *She ~~would have~~ long hair.*)
- We use the **past simple** for an action that happened at a definite time in the past. *He **went** to work early yesterday.* (NOT: *He ~~used to go~~ to work early yesterday.*)

Present perfect

Form: ***have/has*** + past participle

AFFIRMATIVE	NEGATIVE
I/You/We/They **have/'ve passed**. He/She/It **has/'s passed**.	I/You/We/They **have not/ haven't passed**. He/She/It **has not/hasn't passed**.
INTERROGATIVE	**SHORT ANSWERS**
Have I/you/we/they **passed**?	**Yes**, I/you/we/they **have**. **No**, I/you/we/they **haven't**.
Has he/she/it **passed**?	**Yes**, he/she/it **has**. **No**, he/she/it **hasn't**.

Use

We use the **present perfect**:

- for actions which **started in the past** and **continue** up to the **present** especially with stative verbs such as ***be***, ***have***, ***like***, ***know***, etc. *Eddie **has lived** on this street for ten years.* (= He moved to this street ten years ago and he's still living here.)
- to talk about **a past action** which has **a visible result** in the **present**. *Someone **has crashed** into my car and it has a big dent in the door.*
- for actions which happened at an **unstated time** in the **past**. The action is more important than the time it happened. *She **has quit** her job.* (When? We don't know; it's not important.)
- with ***today***, ***this morning/afternoon/week***, ***so far***, etc when these periods of time are not finished at the time of speaking. *Nathan **has called** you three times today.* (The time period – today – is not over yet. He may call again.)
- for **recently completed actions**. *Mum **has** just **served** dinner.* (The action is complete. The dinner is now served.)
- for **personal experiences/changes** which have happened. *I **have never done** anything as exciting.*

Time expressions used with the *present perfect*: just, already, yet, for, since, ever, never, etc.

have gone (to)/*have been (to)*/*have been in*

- *Lisa **has gone to** the shop.* (She's on her way to the shop or she's there now. She hasn't come back yet.)
- *Linda **has been to** Hawaii.* (She went to Hawaii but she isn't there now. She's come back.)
- *We **have been in** Los Angeles for three weeks.* (We are in Los Angeles now.)

Present perfect continuous

Form: ***have/has*** + ***been*** + verb ***-ing***

AFFIRMATIVE	NEGATIVE
I/You/We/They **have/'ve been working**. He/She/It **has/'s been working**.	I/You/We/They **have not/ haven't been working**. He/She/It **has not/hasn't been working**.
INTERROGATIVE	**SHORT ANSWERS**
Have I/you/we/they **been working**?	**Yes**, I/you/we/they **have**. **No**, I/you/we/they **haven't**.
Has he/she/it **been working**?	**Yes**, he/she/it **has**. **No**, he/she/it **hasn't**.

Use

We use the **present perfect continuous**:

- to place **emphasis** on the **duration of an action** which started in the past and continues up to the present.
  *She **has been waiting** for her friends for over an hour.*
- for an action that **started in the past** and lasted for some time. It may still be continuing, or have finished, but it has left **a visible result in the present**.
  *It **has been raining** all day and the streets are flooded.*

Time expressions used with the *present perfect continuous*: since, for, how long (to place emphasis on duration)

Grammar Reference

Present perfect vs Past simple

PRESENT PERFECT	PAST SIMPLE
an action which happened at an **unstated time** in the past *She **has bought** a car.* (We don't know when.)	an action which happened at a **stated** time in the past *Sarah **went** to Spain last year.* (When? Last year. The time is mentioned.)
an action which started in the past and is still continuing in the present *Pete **has had** the same car for ten years.* (He still has the same car.)	an action which started and finished in the past *He **worked** in a bank for three years.* (He doesn't work in a bank anymore.)

Past perfect

Form: subject + ***had*** + past participle

AFFIRMATIVE	NEGATIVE
I/You/He, etc **had eaten**.	I/You/He, etc **had not/ hadn't eaten**.
INTERROGATIVE	**SHORT ANSWERS**
Had I/you/he, etc **eaten**?	**Yes**, I/you/he, etc **had**. **No**, I/you/he, etc **hadn't**.

We use the **past perfect:**

- for an action which **finished before another past action** or **before a stated time in the past**. *The children **had finished** all their chores before their mother got home.* (past perfect: ***had finished*** before another past action: ***got home***) *The meeting **had ended** by 11 o'clock.* (before stated time in the past: ***by 11 o'clock***)
- for an action which finished in the past and whose result was visible at a later point in the past. *He **had missed** his bus so he was really late.*

Time expressions used with the *past perfect*: before, after, already, just, for, since, till/until, when, by the time, never, etc.

Past perfect continuous

Form: subject + ***had*** + ***been*** + main verb ***-ing***

AFFIRMATIVE	
I/You/He/She/It/We/They **had been playing**.	
NEGATIVE	
I/You/He/She/It/We/They **had not/hadn't been playing**.	
INTERROGATIVE	**SHORT ANSWERS**
Had I/you/he, etc **been playing**?	**Yes**, I/you/he/she/it/we/they **had**. **No**, I/you/he/she/it/we/they **hadn't**.

We use the **past perfect continuous**:

- to put emphasis on the duration of an action which started and finished in the past, before another action or stated time in the past, usually with ***for*** or ***since***. *I **had been looking** for my camera for half an hour, when I remembered I had loaned it to a friend.*
- for an action which lasted for some time in the past and whose result was visible in the past. *They **had been walking** around the town all day and they were tired.*

Time expressions used with the past perfect continuous: for, since, how long, before, until, etc.

Module 1

Comparison of adverbs

- With adverbs that have **the same form** as their adjectives (*hard, fast, free, late, high, low, deep, long, near, straight*), we add ***-er/-est***. *fast – fast**er** – **the** fast**est***
- Adverbs formed by adding ***-ly*** to the adjective take ***more*** in the comparative and ***most*** in the superlative form. *slow**ly** – **more** slow**ly** – **the most** slow**ly***

IRREGULAR FORMS		
Adjective/Adverb	**Comparative**	**Superlative**
good/well	better	the best
much/many	more	the most
far	farther/further	the farthest/furthest
bad/badly	worse	the worst
little	less	the least

Study the examples:

- ***very*** + **adverb**: *Jason laughs **very loudly**.*
- ***much*** + **comparative form of adverb**: *Liz sings **much more beautifully** than her sister.*
- ***(not) as*** + **adverb** + ***as***: *Lions **don't run as fast as** cheetahs.*
- ***a bit/a little/far/slightly*** + **comparative form of adverb**: *Sam did **a bit better** than last time in his exams.*
- ***by far*** + **superlative form of adverb**: *Steven works **by far the hardest** of all his colleagues.*

Past modals of speculation & deduction *(must, may/might, can't)*

- ***Must*** = almost certain that this is/was true *This diamond ring **must** be very expensive. Jim isn't home; he **must** have left for football practice.* (I'm sure/certain that sth is true.)
- ***May/Might/Could*** = possible that this is/was true *I have the day off tomorrow, so I **might** visit some friends. He **may** have sent the invitation to the wrong address; you'd better check.* (It is possible./It is likely./Perhaps.)
- ***Can't*** = almost certain that this is/was impossible *This **can't** be Joe's car; he sold his a month ago.* (I'm sure that sth didn't happen.)

The passive

Form: We form the **passive** of the **present simple** and **past simple** with the verb ***to be*** in the appropriate tense *(is/are, was/were)* and the **past participle** of the main verb.

	ACTIVE	PASSIVE
PRESENT SIMPLE	*Sue **bakes** a cake.*	*A cake is **baked** by Sue.*
PAST SIMPLE	*Sue **baked** a cake.*	*A cake **was baked** by Sue.*

We use the **passive**:

- when the person/people doing the action is/are **unknown**, **unimportant**, or **obvious from the context**. *The vase **was broken**.* (We don't know who broke it).
  *The package **was delivered** yesterday.* (Who delivered it is unimportant).
  *My car **was repaired** yesterday.* (It's obvious that the mechanic repaired it).
- when the **action** itself is **more important** than the **person/people** doing it, as in **news headlines**, **newspaper articles**, **formal notices**, **advertisements**, **instructions**, **processes**, etc.
  *The new blockbuster movie **was released** last week.*
- when we want to **avoid taking responsibility** for an action or when we refer to an unpleasant event and we do not want to say who or what is to blame.
  *They **were cheated** out of their money.*
- to **emphasise** the agent.
  *The announcement was made **by the Prime Minister** himself.*
- to make statements **more formal** or **polite**. *My shirt **is torn**.* (More polite than saying, "You tore my shirt.")

Changing from the active to the passive:

- The object of the active sentence becomes the subject in the passive sentence.
- The active verb remains in the same tense but changes into passive form.
- The subject of the active sentence becomes the agent, and is either introduced with the preposition ***by*** or is omitted.

	Subject	Verb	Object
ACTIVE	*Mary*	*cooked*	*dinner.*
	Subject	**Verb**	**Agent**
PASSIVE	*Dinner*	*was cooked*	*by Mary.*

- Only transitive verbs (verbs that take an object) can be changed into the passive.
  *A house **collapsed** in the earthquake.* (intransitive verb; **no passive form**.)

Note: Some transitive verbs (*have*, *fit* (= be the right size), *suit*, *resemble*, etc) cannot be changed into the passive.
*The blue shirt **suits** you.* (NOT: ~~*You are suited by the blue shirt.*~~)

- ***Let*** becomes ***be allowed to*** in the passive.
  *They **let** us leave early. = We **were allowed to** leave early.*
- We can use the verb ***to get*** instead of the verb ***to be*** in everyday speech when we talk about things that happen by accident or unexpectedly.
  *The window **got smashed** in the storm.*
- ***By* + agent** is used to say who or what carries out an action. ***With* + instrument/material/ingredient** is used to say what the agent used.
  *This sculpture was created **by a young artist**. It was made **with recycled materials**.*
- The agent can be **omitted** when the subject is ***they***, ***he***, ***someone/somebody***, ***people***, ***one***, etc.
  *A lot of money **was raised** for the charity.* (= They raised a lot of money for the charity.)
- The agent **is not omitted** when it is a **specific** or **important person**, or when it is **essential** to the meaning of the sentence.
  *Comedies are enjoyed **by people of all ages**.*
- With verbs which can take two objects, such as ***bring***, ***tell***, ***send***, ***show***, ***teach***, ***promise***, ***sell***, ***read***, ***offer***, ***give***, ***lend***, etc., we can form two different passive sentences.
  *She **sent** me an email.* (active) ***I** was sent an email.* (passive, more common) ***An email** was sent to me.* (passive, less common)
- In passive questions with ***who***, ***whom***, or ***which*** we do not omit ***by***.
  *Who **wrote** this song? Who **was** this song **written by**?*
- The verbs ***hear***, ***help***, ***see***, and ***make*** are followed by a bare infinitive in the active, but a to-infinitive in the passive.
  *Mum **made me hoover** the rug.* (active)
  *I **was made to hoover** the rug.* (passive)

Module 2

Compound adjectives

We form compound adjectives with two words, usually joined by a hyphen. We often use **adjective/noun/number + noun + *-ed*** (*blue-eyed, two-legged*), **adjective/adverb/noun + past participle** (*well-behaved, brightly-lit*), **adjective/adverb/noun + present participle** (*record-breaking, time-saving*).

-ing form

The ***-ing* form** is used:

- as a **noun**. ***Swimming** is an enjoyable activity.*
- after certain verbs: ***admit***, ***appreciate***, ***avoid***, ***consider***, ***continue***, ***deny***, ***go*** (for activities), ***imagine***, ***mind***, ***miss***, ***quit***, ***save***, ***suggest***, ***practise***, ***prevent***. ***Have** you **considered moving** to a bigger house?*
- after ***love***, ***like***, ***enjoy***, ***prefer***, ***dislike***, ***hate*** to express general preference. *She **prefers walking** to work.*
  BUT for a specific preference ***(would like/would prefer/would love)*** we use **to-infinitive**. *She **would prefer to take** the bus to work today.*
- after expressions such as: ***be busy***, ***it's no use***, ***it's no good***, ***it's (not) worth***, ***what's the use of***, ***can't help***, ***there's no point (in)***, ***can't stand***, ***have difficulty (in)***, ***have trouble***, etc. ***It's not worth arguing** with him.*
- after ***spend***, ***waste***, or ***lose*** (*time, money, etc*).
  *He **spends** two hours **exercising** every day.*
- after the preposition ***to*** with verbs and expressions such as: ***look forward to***, ***be used to***, ***in addition to***, ***object to***, ***prefer*** (doing sth to doing sth else).
  *He**'s looking forward to starting** his new job.*
- after other **prepositions**. *He was nervous **about meeting** his future in-laws.*

Grammar Reference

Infinitive

The **to-infinitive** is used:

- to express **purpose**. *He's joined a gym **to get** into shape.*
- after certain verbs that refer to the future (***agree***, ***appear***, ***decide***, ***expect***, ***hope***, ***plan***, ***promise***, ***refuse***, etc.). *She **agreed to help** them.*
- after ***would like***, ***would prefer***, ***would love***, etc. to express a specific preference.
  *We **would like to visit** the most popular sights.*
- after adjectives which describe feelings/emotions (***happy***, ***glad***, ***sad***, etc), express willingness/unwillingness (***eager***, ***reluctant***, ***willing***, etc.) or refer to a person's character (***clever***, ***kind***, etc.); and the adjectives **lucky** and **fortunate**.
  *It was **kind** of you **to lend** us your car.*
- after **too/enough**. *Are you old **enough to drive**?*
- in the expressions ***to tell you the truth***, ***to be honest***, ***to sum up***, ***to begin with***, etc.
  ***To be honest**, I forgot it was your birthday today.*

TENSES OF INFINITIVE		
	ACTIVE VOICE	**PASSIVE VOICE**
PRESENT	(to) write	(to) be written
PRESENT CONTINUOUS	(to) be writing	—
PERFECT	(to) have written	(to) have been written
PERFECT CONTINUOUS	(to) have been writing	—

Forms of the infinitive corresponding to verb tenses
Present simple/will → **present infinitive**
Present continuous/future continuous → **present continuous infinitive**
past simple/present perfect/past perfect → **perfect infinitive**
past continuous / present perfect continuous / past perfect continuous → **perfect continuous infinitive**

The **infinitive without *to*** (bare infinitive) is used:

- after **modal verbs**. *They **might go** to Rome.*
- after the verbs ***let***, ***make***, ***see***, ***hear*** and ***feel***.
  *They **made** him **leave** the room.*
  BUT we use the ***to*-infinitive** after ***be made***, ***be heard***, ***be seen***, etc (passive form). *He **was made to leave** the room.*
- after ***had better*** and ***would rather***.
  *I **would rather have** a sandwich for lunch.*
- ***help*** can be followed by the ***to*-infinitive**, but in American English it is normally followed by the **infinitive without *to***. *She **helped** me **(to) put** away the dishes.*

Difference in meaning between the *to*-infinitive and *-ing* form
Some verbs can take either the ***to*-infinitive** or the ***-ing* form** with a change in meaning.
• forget + *to*-infinitive = not remember (to do sth) *She **forgot to pick** up the dry cleaning.* • forget + *-ing* form = not recall (sth) *I'll never **forget travelling** abroad for the first time.*
• remember + *to*-infinitive = not forget (to do sth) *Did you **remember to bring** me my CD?* • remember + *-ing* form = recall (sth) *I **remember telling** you about the party yesterday.*
• mean + *to*-infinitive = intend to *He didn't **mean to insult** you.* • mean + *-ing* form = involve *Getting a second job **means having** less free time.*
• regret + *to*-infinitive = be sorry to (normally used in the present simple with verbs such as ***say***, ***tell***, ***inform***) *I **regret to inform** you that your application was rejected.* • regret + *-ing* form = feel sorry about *He **regrets dropping** out of college.*
• try + *to*-infinitive = attempt, do one's best *I **tried to tell** him the truth, but he wouldn't listen.* • try + *-ing* form = do something as an experiment *If you can't sleep, **try drinking** some warm milk.*
• stop + *to*-infinitive = stop temporarily in order to do something else *While he was jogging, he **stopped to tie** his shoelaces.* • stop + *-ing* form = finish doing something *Mr Jones **stopped working** at the age of 65.*
• would prefer + *to*-infinitive (specific preference) *I'**d prefer to eat** out tonight. It's such a lovely evening.* • prefer + *-ing* form (general preference) *I **prefer eating** home-made food to eating junk food.*

Module 3

will

Form: subject + ***will*** + main verb

AFFIRMATIVE	NEGATIVE
I/You/He/She/It/We/They **will/'ll stay**.	I/You/He/She/It/We/They **will not/won't stay**.
INTERROGATIVE	**SHORT ANSWERS**
Will I/you/he/she/it/we/they **stay**?	**Yes**, I/you/he/she/it/we/they **will**. **No**, I/you/he/she/it/we/they **won't**.

Use

We use the **future simple**:

- for **on-the-spot decisions**. *I like these shoes. **I'll buy** them.*
- for **future predictions based on what we believe or imagine will happen**. (usually with the **verbs**: *hope, think, believe, expect, imagine,* etc; with the **expressions**: *I'm sure, I'm afraid,* etc; with the **adverbs**: *probably, perhaps,* etc.) *I **think** they **will be** able to solve the problem. **Perhaps** Frank **will change** his mind about it.*
- for **promises** (usually with the verbs *promise, swear,* etc.) *I promise **I'll take** you to the museum tomorrow.*, **threats** *Lie to me again and it **will be** the end of our friendship.*, **warnings** *Drive more carefully or you'**ll have** an accident.*, **hopes** *He hopes they **will choose** him for the job.*, **offers** *I'**ll make** you some coffee.*
- for actions/events/situations which will **definitely happen** in the future and which **we cannot control**. *It **will be** spring soon.*

	ACTIVE	PASSIVE
FUTURE SIMPLE	Joanna **will water** the plants.	The plants **will be watered** by Joanna.

Time expressions used with the *future simple*: tomorrow, the day after tomorrow, next week/month/ year, tonight, soon, in a week/month/year, etc.

be going to

Form: subject + verb ***to be (am/is/are)*** + ***going to*** + bare infinitive of the main verb

AFFIRMATIVE	I **am** He/She/It **is** We/You/They **are**	**going to swim.**
NEGATIVE	I **am not** He/She/It **is not** We/You/they **are not**	**going to swim.**
INTERROGATIVE	**Am** I **Is** he/she/it **Are** we/you/they	**going to swim?**
SHORT ANSWERS	**Yes**, I **am**./**No**, I**'m not**. **Yes**, he/she/it **is**./No, he/she/it **isn't**. **Yes**, we/you/they **are**./ **No**, we/you/they **aren't**.	

Use

We use ***be going to***:

- to talk about our **future plans** and **intentions**. *Paul **is going to travel** abroad next month.* (He's planning to ...)
- to make **predictions based on what we see or know**. *Look out! You**'re going to fall** into the pool.*
- to talk about **things we are sure about** or **we have already decided to do** in the near future. *Sally **is going to look for** a new job.* (She has already decided to do this.)

Present simple/Present continuous (future meaning)

- We can use the **present simple** to talk about **schedules** or **timetables**. *His plane **lands** at 7:00 am.*
- We use the **present continuous** for **fixed arrangements** in the near future. *The Millers **are coming** to dinner tonight. I invited them last week.*
- We use the **present continuous** for changing or gradually developing situations. *More and more students **are applying** to colleges abroad.*

Future continuous

Form: subject + ***will*** + ***be*** + verb ***-ing***

AFFIRMATIVE	NEGATIVE
I/You/He/She/It/We/They **will/'ll be sleeping**.	I/You/He/She/It/We/They **will not/won't be sleeping**.
INTERROGATIVE	**SHORT ANSWERS**
Will I/you/he/she/it/we/they **be sleeping**?	**Yes**, I/you/he/she/it/we/they **will**. **No**, I/you/he/she/it/we/they **won't**.

We use the **future continuous** for actions which will be in **progress** at a **stated future time**. *This time on Friday I**'ll be driving** my new car.*

Determiners of nouns

Determiners are words that come at the beginning of a noun phrase to tell us if the noun phrase is specific or not. These can be articles *(the house, a beautiful painting)*, possessives *(my book's cover)* or demonstratives *(that)*. Some other determiners are:

- We use ***none*** without a noun or ***none of* + noun/pronoun** as a subject or object to replace countable or uncountable nouns. It means "not one" or "not any". It has a negative meaning and takes a plural or singular verb. *"Are there any students in the room?" "No, there are **none**."* (= There are no students.) ***None** of it was your fault.*
- We use ***all*** or ***all of* + noun/pronoun** to refer to more than two people, animals or things. It has a positive meaning and takes a plural verb. ***All** (the) students went to the arts show. **All of** them had a good time.*
- *We use **another*** before singular countable nouns to refer to something extra or different to something mentioned before. *Asem plays football but he'd like to take up **another** sport.*
- We use ***(the) other*** with countable nouns to refer to something different from what we have already mentioned. *It doesn't matter if you aren't good at football. There are **other** sports you can try.*
- We use ***(the) others*** without a noun. *Two of my friends wanted to go to the theatre but **the others** wanted to go to the cinema. Some of her songs are good but **others** aren't.*
- We use ***each*** with singular countable nouns to refer to individual people, animals or things in a group of more than two. It takes a singular verb. ***Each** student in the class has to write a different article for the school magazine.*
- We use ***every*** with singular countable nouns to refer to all people, animals or things in a group of more than two. It takes a singular verb. ***Every** book in this section is about the history of sports.*
- We use ***one(s)*** to replace countable nouns mentioned earlier in order to avoid repetition. *"Which of these two hats do you like?" "This **one**."*
- We use ***both*** or ***both of* + noun/pronoun** to refer to two people, animals or things. It has a **positive meaning** and takes a plural verb. ***Both** Assel and Dana like pasta./**Both of them** like pasta.*

Pre-determiners

Pre-determiners are words that come before a noun. They can be **numbers** (*two*), **multipliers** (*half*, *twice*), **fractions** (*one-third*) and **intensifiers** (*quite*, *what*, *such*, *rather*).

*He takes his dog for a walk **three** times a day. Their competitor sells this same shirt at **twice** the price! **One-third** of my friends already have their driving licence. It was **such** a good performance that I want to see it again.*

Grammar Reference

Quantifiers

	COUNTABLE	UNCOUNTABLE
AFFIRMATIVE	a lot (of)/lots (of)/ (a) few/some	a lot (of)/lots (of)/ (a) little/some
NEGATIVE	not many	not much
INTERROGATIVE	(how) many/any	(how) much/any

- ***A lot/lots of*** are used with both plural countable and uncountable nouns. They are normally used in affirmative sentences. The word ***of*** is omitted when ***a lot/lots*** are not followed by a noun.
  *Are there **lots of** books in the library? Yes, there are **lots**.*
- ***Much*** is used with uncountable nouns and ***many*** is used with countable nouns. They are usually used in negative or interrogative sentences. *I haven't got **much** time.*
  *Are there **many** paintings in the exhibition?*
- ***How much/many*** are used in interrogative sentences. ***Much*** is used with uncountable nouns and ***many*** is used with countable nouns. ***How much** milk do you need?*
  ***How many** visitors does she expect?*
- ***A few*** means **not many**, but enough. It is used with plural countable nouns. *There are **a few** apples in the fridge. I can make an apple pie.*
- ***A little*** means **not much**, but enough. It is used with uncountable nouns. *He put **a little** money aside so as to go on holiday this summer.*

Note: ***few/little*** means **hardly any**, **not enough** and can be used with ***very*** for emphasis. *(**Very**) **few** people go to work by bike. We've got (very) **little** time left. Hurry up!*

- ***A couple of***, ***several***, ***a few***, ***many***, ***both***, ***a (large/great/good) number of*** are followed by a **countable noun**. *There were **several** people at the meeting.*
- ***(Too) much***, ***a little***, ***a great/good deal of***, ***a large/small amount/quantity of*** are followed by an **uncountable noun**. *She has made **a good deal of** progress in her studies.*
- ***A lot of***, ***lots of***, ***hardly any***, ***some***, ***no***, ***plenty of*** are followed by a **countable** or **uncountable noun**.
  *She has bought **a lot of** dresses.*
  *We've had **plenty of** rain this year.*

Both – Either/Neither – All – None – Every – Each – Whole

- ***Both*** refers to **two** people or things. It has a **positive meaning** and takes a verb in the **plural**. It is the opposite of **neither/not either**.
  *Mark and Bob are businessmen. **Both** Mark and Bob are businessmen. They are **both** businessmen. **Both of them** are businessmen. **Both** men are businessmen.*
- ***Either*** (= any one of two) / ***Neither*** (= not the one and not the other) refers to **two** people or things and are used before **singular countable** nouns.
  ***Neither** car is cheap enough for me to buy.*
  Neither of/Either of take a verb either in the singular or plural. ***Neither of** the boys like/likes football.*
- ***All*** refers to **more than two** people or things. It has a **positive meaning** and takes a verb in the **plural**. It is the opposite of **none**. ***All** the students passed the exam. **All of them** passed the exam. **They all** passed the exam.*
  ***All + that*-clause** (=the only thing) takes a **singular** verb. ***All that** she did **was** complain about everything.*
- ***None*** refers to **more than two** people or things. It has a **negative** meaning and isn't followed by a noun.
  *"Is there any juice left?" "No, **none**."*
  None of is used before nouns or object pronouns followed by a verb **either in the singular** or **plural**. It is the opposite of all. ***None of** the students/them **has/have** finished the project.*

Note: ***no* + noun.** *There's **no time** to study.*

- ***Every*** is used with **singular countable** nouns. It refers to a **group** of people or things and means **all**, or **each**.
  *She has to pay a rent **every** month.*
- ***Each*** is used with **singular countable** nouns. It means **one by one**, considered individually (it usually means **only two**).
  ***Each** member of the winning team was awarded a medal.*

Note: ***Every one*** and ***each (one)*** have ***of*** constructions.
***Every one of/Each (one) of** the students was invited to the graduation ceremony.*

- ***Whole*** (= complete) is used with **countable** nouns. We always use ***a***, ***the***, ***this***, ***my***, etc + **whole** + **countable** noun. *the **whole** day* = all day
- ***Both ... and ...* + plural verb** ***Both** Julie **and** Debbie **are** nurses.*
- ***Either ... or ... / Neither ... nor / Not only ... but also ...* + singular** or **plural** verb depending on the subject which follows ***nor***, ***or***, ***but also***. ***Neither** Mary **nor** Jessica **is** computer literate. **Either** Tom **or** his parents **are** going to meet you at the airport.*

Module 4

Pronouns

Pronouns take the place of nouns or phrases to avoid repetition of the same words.

Relative pronouns

- We use **relative pronouns** *(who/whose/which/that)* to introduce **relative clauses**. We use relative clauses to identify/describe the person/place/thing in the main clause.

Relative Clause

*The man **who won the award** is our neighbour.*

- We use ***who/that*** to refer to people. *The students **who/that** were late for class had to stay behind an extra hour.*
- We use ***which/that*** to refer to objects or animals. *The package **which/that** is on my desk arrived for you this morning.*
- We use ***whose*** with people, animals and things to show possession. *She's the woman **whose** sons are in a rock band.*

Demonstrative pronouns *(this – that/these – those)*

We use the ***this/these***:

- for people or things which are near us.
- for present or future situations.
  *I'll go bungee jumping **this** Sunday.*

- to refer to an idea we are about to mention.
  *I'm sorry to say **this**, but your holiday has been cancelled.*
- to introduce people, or to introduce oneself on the phone.
  *"Joan, **this** is Tom and these are his beautiful nieces."*
  *"Hello. **This** is Trev Billson speaking, can you put me through to James?"*
- when the speaker is in or near the place he/she is referring to.
  ***This** room is very spacious.*

We use the ***that/those***:

- for people or things which are not near us.
- for past situations.
  *We didn't enjoy ourselves **that** evening.*
- to refer back to something mentioned before.
  *"She graduated last week." "**That**'s fantastic!"*
- when speaking on the phone to ask who the other person is.
  *Who's **that** speaking?/Who's **that**, please?*

Note: ***This***, ***these***, ***that*** and ***those*** are not always followed by a noun. ***This** is really tasty. **That** was all I could do.*

Indefinite pronouns

We use **indefinite pronouns** (*some/any/no/every*) when we don't want to talk about a person, object or place in particular. ***Some***, ***any*** and ***no*** are used with **uncountable nouns** and plural **countable nouns**. We use a singular verb with the compounds of ***some***, ***any*** and ***no***.

	COUNTABLE	UNCOUNTABLE
AFFIRMATIVE	some	some
INTERROGATIVE	any	any
NEGATIVE	not any/no	not any/no

some/any/no/every + Compounds

	PEOPLE	THINGS	PLACES
AFFIRMATIVE	someone/ somebody	something	somewhere
INTERROGATIVE	anyone/ anybody	anything	anywhere
NEGATIVE	no one/ not anyone nobody/ not anybody	nothing/ not anything	nowhere

- ***Some*** and its compounds (someone/somebody, something, somewhere) are normally used in **affirmative sentences**.
  *I'd like **some** information about this new tablet, please.*
  *Your MP3 player must be **somewhere** in the drawer.*
- ***Some*** and its compounds are also used in interrogative sentences, when we make an **offer** or a **request**.
  *Would you fancy **some** coffee?* (offer) *Could you tell me **something** about your technology project?* (request)
- ***Any*** and its compounds are used in interrogative and negative sentences.
  *Are there **any** job positions in the new hi-tech store?*
  *There isn't **anybody** in the computer room.*
- When ***any*** and its compounds are used in affirmative sentences, there is a difference in meaning. Study the following examples:
  a) *"You can study **any** planet in our solar system," the teacher said.* (It doesn't matter which one.)
  b) ***Anybody** can tell you this smartphone is just the best on the market.* (It doesn't matter who.)
  c) *Jonathan can tell you **anything** you want about gadgets – he's an expert.* (It doesn't matter what.)
  d) *You can have Wi-Fi access **anywhere** in this building.* (It doesn't matter where.)
- ***No*** (= ***not any***) and its compounds are used in negative sentences.
  *There are **no** vegetables in the fridge.* (= There are not any vegetables in the fridge.)
- ***Every*** is used with **singular** countable nouns.
  ***Every** member of staff in this hotel makes sure you enjoy your stay.*
- The pronouns ***everyone/everybody***, ***everything*** and the adverb ***everywhere*** are used in affirmative, interrogative and negative sentences, and are followed by a **singular** verb.
  ***Everybody/Everyone** is familiar with YouTube's logo.*
  (NOT: ~~*Everybody/Everyone are familiar.*~~)
  ***Everything** is going fine with Ted's Science presentation.*

Reflexive pronouns

I – myself, you – yourself, he – himself, she – herself,
it – itself, we – ourselves, you – yourselves,
they – themselves

We use **reflexive pronouns**:

- with verbs such as ***behave***, ***burn***, ***cut***, ***enjoy***, ***hurt***, ***introduce***, ***kill***, ***look at***, ***teach***, etc., or with prepositions when the subject and the object of the verb are the same person. *She (subject) **hurt herself** (object) when she fell down.*
- with the preposition ***by*** when we mean alone/without company or without help (= on one's own). *He **lives** in that big house **by himself/on his own**.*
- in the following expressions: ***enjoy yourself*** (have a good time), ***behave yourself*** (be good), ***help yourself*** (you are welcome to take something if you want).
  *They **enjoyed themselves** at the party.*
- to emphasise the subject or the object of a sentence. *I wrote this poem **myself**.* (I wrote this essay. Nobody else wrote it.) *Chris met Ronaldinho **himself**.* (Chris met Ronaldinho, not somebody else.)

Note:

- We do not normally use reflexive pronouns with the verbs ***concentrate***, ***feel***, ***meet*** and ***relax***. *You should concentrate on your work.* (NOT: *You should ~~concentrate yourself~~ on your work.*)
- Reflexive pronouns are used with the verbs ***dress***, ***wash*** and ***shave*** when we want to show that someone did something with a lot of effort. *Mary's daughter is three years old but managed to **dress herself**.*

Grammar Reference

Quantifiers

	COUNTABLE	UNCOUNTABLE
AFFIRMATIVE	a lot (of)/lots (of)/ (a) few/some	a lot (of)/lots (of)/ (a) little/some
NEGATIVE	not many	not much
INTERROGATIVE	(how) many/any	(how) much/any

- ***A lot/lots of +*** uncountable/countable nouns, usually in affirmative sentences. *There is **a lot of** cheese in the fridge.*
- ***(How) much +*** uncountable nouns
- ***(How) many +*** plural countable nouns
  They are usually used in negative and interrogative sentences.
  ***How much** cheese have we got? I haven't got **much** butter.*
  ***How many** eggs are there in the fridge?*
  *There aren't **many** apples left.*
- ***A few*** + plural countable nouns (meaning ***not many***, but ***enough***) *I have **a few** lemons; I can make a lemon pie.*
- ***A little*** + uncountable nouns (meaning ***not much***, but ***enough***) *Can I have **a little** milk in my coffee?*
- ***Few/Little*** means ***hardly any***, not ***enough*** and can be used for emphasis. *There is **little** salt in the soup.*

Future perfect

Form: *will* + *have* + past participle of the main verb

AFFIRMATIVE	NEGATIVE
I/You/He/She/It/We /They **will have left**.	I/You/He/She/It/We/They **will not/won't have left**.
INTERROGATIVE	**SHORT ANSWERS**
Will I/you/he/she/it/ we/they **have left**?	**Yes**, I/you/he/she/it/we/they **will**. **No**, I/you/he/she/it/we/they **won't**.

We use the **future perfect** for actions that **will have finished** before a stated time in the future. *Jenny **will have moved** house by the end of the week.*

Future perfect continuous

Form: *will* + *have been* + main verb + ***-ing***

AFFIRMATIVE	NEGATIVE
I/You/He/She/It/We/ They **will have been studying**.	I/You/He/She/It/We/They **will not/won't have been studying**.
INTERROGATIVE	**SHORT ANSWERS**
Will I/you/he/she/it/ we/they **have been studying**?	**Yes**, I/you/he/she/it/we/they **will**. **No**, I/you/he/she/it/we/they **won't**.

We use the **future perfect continuous** to emphasise the duration of an action up to a certain time in the future. The **future perfect continuous** is often used with: ***by ... for***.
***By** the time he retires, he **will have been teaching for** twenty years.*

- We form the **passive** with the verb ***to be*** in the appropriate tense and the **past participle** of the main verb.

	ACTIVE	PASSIVE
FUTURE SIMPLE	*They **will clean** the rooms.*	*The rooms **will be cleaned**.*
FUTURE PERFECT	*He **will have painted** the walls by the end of the week.*	*The walls **will have been painted** by the end of the week.*

Note: We do not usually use the passive form of the future perfect continuous.

Time expressions used with the *future perfect* and *the future perfect continuous*: before, by, by then, by the time, until/till (only in negative sentences), etc.

Module 5

Questions with *Yes/No* answers

Questions with ***Yes/No*** answers begin with an auxiliary or modal verb (*is, are, do, does, can*, etc.), which is followed by the subject. We usually answer these questions with ***Yes*** or ***No***.
Are you** happy? **Yes, I am.
Can I** go to the party? **No, you can't.
When the main verb of the sentence is in the **present simple**, we form the question with ***do*** or ***does***.
When the main verb is in the **past simple**, we form the question with ***did***.
Does Peter** go out often? **No, he doesn't.
Did you talk** to Mark? **Yes, I did.
We use short answers to avoid repetition of the question asked before.
Positive form answers are formed with ***Yes*** **+ personal pronoun + auxiliary/modal verb**.
Negative short answers are formed with ***No*** **+ personal pronoun + negative auxiliary/modal verb**.
Have you** finished? **Yes, I have.
Did you** see that film? **No, I didn't.

Wh- questions

Wh*-questions** begin with a question word such as ***who, ***what***, ***where***, ***when***, etc. We put the auxiliary or modal verb before the subject.

question word + auxiliary/modal + subject

We use:

- ***Who*** for people.
  *A: **Who** did you call?*
  B: My sister.
- ***Which*** for things.
  *A: **Which** hotel did you stay at?*
  B: The Hampton Hotel.
- ***What*** for information.
  *A: **What** did you do last night?*
  B: I went out with a friend.
- ***Where*** for places.
  *A: **Where** did she go last night?*
  B: She went to the theatre.
- ***When*** for time/dates.
  *A: **When** did they leave?*
  B: Yesterday morning.

- ***Why*** for reason.
  *A: **Why** did they leave so early?*
  B: They were really tired.
- ***How*** for manner.
  *A: **How** was the party?*
  B: It was great.
- ***How long*** for duration.
  *A: **How long** did he stay?*
  B: 2 weeks.

Subject/Object questions

- **Subject questions** are questions we ask when we want to know the subject of the sentence. These questions usually begin with the words: ***who***, ***whose***, ***what***, ***which***. The verb is in the **affirmative form**. ***Who told** you the news?*
- **Object questions** are questions we ask when we want to know the object of the sentence. These questions usually begin with the words ***who/whom***, ***whose***, ***what***, ***which***. The verb is in the **interrogative form**. ***What did you have** for dinner last night?*

Note:
In object questions, if a verb is followed by a preposition, the preposition comes at the end of the questions. *What are you looking **at**? Who did you write an email **to**?*

Negative questions

- **Negative questions** are formed with ***not***, but there is a difference in the word order between the full form and the short form.
  Full form: auxiliary + subject + *not* + verb
  ***Did I not tell** you not to talk to strangers?*
  Short form: auxiliary + *n't* + subject + verb
  ***Didn't I tell** you not to talk to strangers?*
- We use negative questions in speech
  a) to ask for confirmation
  ***Isn't Tom going** on holiday this week?*
  b) to express:
  - **surprise.** ***Don't you know** where Jim is?*
  - **admiration.** ***Isn't she** a great hostess!*
  - **annoyance.** ***Can't you be** on time just for once!*

Indirect questions

We use **indirect questions** when we ask for information politely. The word order in indirect questions is the same as in statements (subject + verb). Indirect questions are introduced with question words (*who*, *what*, *where*, etc.) or with ***if/whether***.

a) Direct question: *Where is the post office?*
Indirect question: *Could you tell me **where the post office is**?*

b) Direct question: *Has John been invited?*
Indirect question: *Do you know **if/whether John has been invited**?*

Indirect questions are usually used after the following expressions: ***I don't know .../I'd like to know .../I wonder .../We need to find out .../I'd like to find out ...*** as well as: ***Do you know ...?/Can you tell me ...?/Could you tell me ...?/Could you explain ...?/Have you any idea...?***

If the indirect question is part of a question, we put a question mark at the end of the sentence. If it is part of a statement, we put a full stop.

a) Direct question: *How does this machine work?*
Indirect question: *Could you explain how this machine works?*

b) Direct question: *Should I call a lawyer?*
Indirect question: *I wonder if/whether I should call a lawyer.*

Conjunctions

Conjunctions show the logical relationship between sentences or parts of a sentence.

Positive Addition
and, both ... and, too, besides (this/that), moreover, what is more, in addition (to), also, as well (as this/ that), furthermore, etc. *She is **both** creative **and** imaginative.*

Negative Addition
neither ... nor, nor, neither, either ***Neither** Mum **nor** Dad can use a computer.*

Contrast
but, although, in spite of, despite, while, whereas, even though, on the other hand, however, yet, still, etc. *Ann is hardworking, **but** not very quick.*

Giving Examples
such as, like, for example, for instance, especially, in particular, etc. *I like all James Bond films, **especially** 'Never Say Never Again'.*

Cause/Reason
as, because, because of, since, for this reason, due to, so, as a result (of), etc. *They were late **because** their car broke down.*

Condition
if, whether, only if, in case (of), provided (that), providing (that), unless, as/so long as, otherwise, or (else), on condition (that), etc. *I'll lend you my car **provided** you drive carefully.*

Purpose
to, so (that), so as (not) to, in order (not) to, in order that, etc. *Jane went to bed early **so that** she wouldn't be tired during the exam.*

Effect/Result
such/so ... that, so, consequently, as a result, therefore, for this reason, etc. *It snowed all day. **Therefore** we didn't go out of the house.*

Time
when, whenever, as, as soon as, while, before, until/till, after, since, etc. *I'll leave **when** I'm ready.*

Place
where, wherever *I'd like to live in a place **where** it's quiet.*

Exception
except (for), apart from *Everyone attended the meeting, **apart from** Nathan.*

Relatives
who, whom, whose, which, what, that *The woman over there is the one **who** lives across the street.*

Grammar Reference

Listing Points/Events
To begin: **initially**, **first**, **at first**, **firstly**, **to start/begin with**, **first of all**, etc. ***First***, *heat the oil.*
To continue: **secondly**, **after this/that**, **second**, **afterwards**, **then**, **next**, etc. ***Then***, *pour the ingredients into the hot oil.*
To conclude: **finally**, **lastly**, **in the end**, **at last**, **eventually**, etc. ***Finally***, *serve the food.*

Summarising
in conclusion, in summary, to sum up, on the whole, all in all, altogether, in short, etc. ***All in all***, *he enjoyed the film, although he found the plot hard to follow at times.*

Module 6

Questions with *Yes/No* answers

Questions with ***Yes/No*** answers begin with an auxiliary or modal verb (*is*, *are*, *do*, *does*, *can*, etc.) which is followed by the subject.
We usually answer these questions with ***Yes*** or ***No***.
Are you *happy?* ***Yes, I am.***
Can I *go to the party?* ***No, you can't.***
When the main verb of the sentence is in the **present simple**, we form the question with ***do*** or ***does***.
When the main verb is in the **past simple**, we form the question with ***did***.
Does Peter *go out often?* ***No, he doesn't.***
Did you talk *to Mark?* ***Yes, I did.***
We use short answers to avoid repetition of the question asked before.
Positive form answers are formed with ***Yes*** **+ personal pronoun + auxiliary/modal verb**.
Negative short answers are formed with ***No*** **+ personal pronoun + negative auxiliary/modal verb**.
Have you *finished?* ***Yes, I have.***
Did you *see that film?* ***No, I didn't.***

Wh- questions

The ***wh*-questions** begin with a question word such as ***who***, ***what***, ***where***, ***when***, etc. We put the auxiliary (*is*, *are*, *do*, *does*) or modal verb (*can*, *must*, etc) before the subject.

- ***who*** (people)
  Who *is that girl over there? My cousin.*
- ***whose*** (possession)
  Whose *car is this? or* ***Whose*** *is this car? It's my brother's.*
- ***which/what*** (things)
  Which is used alone or **before nouns**, **one/ones** or **of** to ask about a **limited choice** of things.
  Which *dress do you like the most - the red or the black one?*
  (You have to choose between the two, so the choice is limited.)
  Which is also used with **comparative** and **superlative** forms.
  Which *is faster, a plane or a train?*
  What is more general and is used **alone** or **before a noun** to ask about an **unlimited choice** of things.
  What *kind of music do you like?* (There are many kinds of music, such as rock, hip-hop, jazz, pop, etc., so the choice is unlimited.)
- ***when/how long (ago)/how often/what time*** (time)
  When *is the dance competition? On Friday.*
  How long *is the film? Three hours.*
  How long ago *did you see Brenda? Two weeks ago.*
  How often *do you go the gym? Twice a week.*
  What time *do you go to work? At 9 o'clock.*
- ***where*** (place)
  Where *are you going on holiday this summer? To Spain.*
- ***why*** (reason)
  Why *are you late?*
  (Because) I missed the bus.
- ***how much*** (quantity)
  How much *does it cost? Twenty pounds.*
- ***how many*** (number)
  How many *people came to the meeting on Saturday? Lots of people.*
- ***how*** (manner)
  How *do you cook lasagna?*
- ***how long/wide/deep/tall*** (size)
  How deep *is the water? Five metres.*
  How tall *is the Eiffel Tower? It's 324 m tall.*
- ***how old*** (age)
  How old *is your daughter? She's six.*
- ***how far*** (distance)
  How far *is the chemist's? Half a kilometre.*

Notes:

- We use **What + be ... like?** to ask for a description of someone's character.
  What's *Fiona* ***like****? She is friendly and generous. Everybody likes her.*
- We use **What + do ... look like?** to ask for a description of someone's physical appearance.
  What does *your best friend* ***look like****? She's tall, with blonde hair and green eyes.*

Rhetorical questions

A **rhetorical question** is a question that expects no answer. Using such questions, the writer aims to attract the reader's interest and make him/her want to read further. They can also summarize the content of a paragraph.
'I love ice cream. Don't we all?'

Question tags

- **Question tags** are short questions at the end of statements. They are mainly used in speech when we want to confirm something (falling intonation) or when we want to find out if something is true or not (rising intonation).
- **Question tags** are formed with an auxiliary verb and the appropriate subject pronoun. They take the same auxiliary as in the statement, or, if there isn't an auxiliary in the statement, they take ***do/does*** (present simple) or ***did*** (past simple).
  Tom plays hockey, ***doesn't he****?*
- After affirmative statements, we use a negative question tag and after negative statements, we use a positive question tag.
  Andrew is allergic to seafood, ***isn't he****?*
  They haven't given you an answer, ***have they****?*

- When the sentence contains a word with a negative meaning such as ***never***, ***hardly***, ***seldom*** or ***rarely***, the question tag is positive.
  *Pam **never** goes to the opera, does she?*

Note:
- ***Let's*** has the tag ***shall we?***
  Let's** have some coffee, **shall we?
- ***Let me/him*** has the tag ***will you/won't you?***
  Let me** explain, **will you/won't you?
- ***I have got*** has the tag ***haven't I?***
  BUT *I have* has the tag ***don't I?***
  They've got** a boat, **haven't they?
  They have** a boat, **don't they?
- ***This/That is*** has the tag ***isn't it?***
  That's** Sam's bike, **isn't it?
- ***I am*** has the tag ***aren't I? I am*** late, ***aren't I?***
  BUT *I'm not late, **am I?***
- A positive imperative has the question tag ***will/won't? Stop** complaining, **will/won't you?***
- A negative imperative has the question tag ***will you?***
  Don't** drive so fast, **will you?

Relative clauses

Use

- We use **relative pronouns** *(who/whose/which/that)* and **relative adverbs** *(where/when/why)* to introduce **relative clauses**. We use relative clauses to identify/ describe the person/place/thing in the main clause.

Relative Clause

*The woman **who won the contest** is our neighbour.*

- We use ***who/that*** to refer to **people**.
  *The students **who/that** were late for class had to stay behind an extra hour.*
- We use ***which/that*** to refer to **objects** or **animals**.
  *The package **which/that** is on your desk arrived for you this morning.*
- We use ***where*** to refer to **places**.
  *That's the restaurant **where** they serve scorpion soup.*
- We use **whose** with people, animals and things to show **possession**.
  *She's the woman **whose** son is my teacher.*
- We use ***why*** to give a **reason**.
  *Bob won't tell anyone **why** he's sad.*

Defining & Non-defining relative clauses

- A **defining relative** clause gives necessary information essential to the meaning of the main sentence. It is not put in commas and is introduced with ***who***, ***which***, ***that***, ***whose***, ***where***, ***when*** or ***why***.
  *The girl **who** sits next to me in class is from Russia.*
- A **non-defining relative clause** gives extra information and is not essential to the meaning of the main sentence. It is put in commas and is introduced with ***who***, ***whom***, ***which***, ***whose***, ***where*** or ***when***. The relative pronoun cannot be omitted. *My brother, **who** is 18, is taking driving lessons.*

Notes:
- ***who***, ***which*** and ***that*** can be omitted when they are the object of a relative clause; that is, when there is a noun or subject pronoun between the relative pronoun and the verb. *She bought me a CD (which/that) I already had.*
- ***that*** cannot replace ***who*** or ***which*** in non-defining relative clauses. *George, who is a footballer, is very fit.* (***that*** is not possible)
- ***whose*** is never omitted. *The artist **whose** work I find most impressive is Picasso.*
- ***when*** can be omitted in defining relative clauses.
- ***whom***, ***which*** and ***whose*** can be used in expressions of quantity after ***of***. *There were 15 people in the room, four **of whom** were women.*

The passive

Form: We form the **passive** with the verb ***to be*** in the appropriate tense and the **past participle** of the main verb.

	ACTIVE	PASSIVE
PRESENT SIMPLE	*Ben **plants** a tree.*	*A tree **is planted** by Ben.*
PRESENT CONTINUOUS	*Ben **is planting** a tree.*	*A tree **is being planted** by Ben.*
PAST SIMPLE	*Ben **planted** a tree.*	*A tree **was planted** by Ben.*
PAST CONTINUOUS	*Ben **was planting** a tree.*	*A tree **was being planted** by Ben.*
PRESENT PERFECT SIMPLE	*Ben **has planted** a tree.*	*A tree **has been planted** by Ben.*
PAST PERFECT SIMPLE	*Ben **had planted** a tree.*	*A tree **had been planted** by Ben.*
FUTURE SIMPLE	*Ben **will plant** a tree.*	*A tree **will be planted** by Ben.*
FUTURE PERFECT	*Ben **will have planted** a tree.*	*A tree **will have been planted** by Ben.*
INFINITIVE	*Ben **has to plant** a tree.*	*A tree **has to be planted** by Ben.*
MODAL VERBS	*Ben **might plant** a tree.*	*A tree **might be planted** by Ben.*

Impersonal/Personal Passive Constructions

- The verbs ***believe***, ***consider***, ***expect***, ***know***, ***report***, ***say***, ***think***, etc have both personal and impersonal constructions in the passive.

active: *People **expect** that he **will win** the contest.*
passive: ***It is expected** that he **will win** the contest.* (impersonal construction)
***He is expected to win** the contest.* (personal construction)
active: *They **say** that he **lost** all his money.*
passive: ***It is said** that he **lost** all his money.* (impersonal construction)
***He is said to have lost** all his money.* (personal construction)

Grammar Reference

Conditionals: type 3

Conditional clauses consist of two parts: the ***if*-clause** (hypothesis) and the **main clause** (result).
When the ***if*-clause** comes before the **main clause**, the two clauses are separated with a comma.
If *I hadn't visited Paris,* ***I'd*** *never* ***have met*** *Jo. –* ***I'd*** *never* ***have met*** *Jo* ***if*** *I hadn't visited Paris.*

Use
We use the conditional type 3 to talk about an imaginary situation in the past. It is also used to express regret or criticism.

Module 7

Reported speech

Direct speech is the exact words someone said. We use quotation marks in direct speech.
Reported speech is the exact meaning of what someone said, but not the exact words. We do not use quotation marks in reported speech. The word **that** can either be used or omitted after the introductory verb (say, tell, etc).

Say – Tell

- ***say*** **+ no personal object**
  Alex ***said (that)*** *he was tired.*
- ***say*** **+** ***to*** **+ personal object**
  Alex ***said to me (that)*** *he was tired.*
- ***tell*** **+ personal object**
  Alex ***told me (that)*** *he was tired.*
- we use ***say*** **+** ***to*****-infinitive** but never **say about**. We use ***tell sb/speak/talk about***.
  Adam ***said to meet*** *him outside the cinema.*
  She ***told*** *us/****spoke/talked about*** *her future plans.*

SAY	hello, good morning/afternoon/evening, etc something/nothing, so, a few words, no more, for certain/sure, sorry, etc.
TELL	the truth, a lie, a story, a secret, a joke, the time, the difference, one from another, somebody one's name, somebody the way, somebody so, someone's fortune, etc.
ASK	a question, a favour, the price, about somebody, the time, around, for something/somebody, etc.

- the sentence expresses **something which is believed to be true**. In this case the verb tense can either change or remain unchanged. *"Dogs have a keen sense of smell," she said. → She said (that) dogs* ***have/had*** *a keen sense of smell.*
- However, if the sentence expresses something which is not true, then the verb changes. *"Paris is the biggest capital in Europe," he said. → He said (that) Paris* ***was*** *the biggest capital in Europe.*
- Certain words and time expressions change according to the meaning as follows: now → then, immediately; today → that day; yesterday → the day before, the previous day; tomorrow → the next/following day; this week → that week; last week → the week before, the previous week; next week → the week after, the following week; ago → before; here → there

Reported statements

- In reported speech, personal/possessive pronouns and possessive adjectives change according to the meaning of the sentence.
  *Sarah said, "****I****'ve lost* ***my*** *keys."* (direct statement)
  Sarah said (that) ***she*** *had lost* ***her*** *keys.* (reported statement)
- We can report someone's words either a long time after they were said (out-of-date reporting) or a short time after they were said (up-to-date reporting).

Up-to-date reporting
The tenses can either change or remain the same in reported speech.
Direct speech: *Tony said, "I* ***went*** *to the theatre."*
Reported speech: *Tony said (that) he* ***went/had gone*** *to the theatre.*

Out-of-date reporting
The introductory verb is in the past simple and the tenses change as follows:

DIRECT SPEECH	REPORTED SPEECH
Present simple → Past simple	
"I ***like*** *cooking."*	*She said (that) she* ***liked*** *cooking.*
Present continuous → Past continuous	
"I am ***reading*** *a book."*	*He said (that) he* ***was reading*** *a book.*
Present perfect → Past perfect	
"I ***have changed*** *schools."*	*She said (that) she* ***had changed*** *schools.*
Past simple → Past simple or Past perfect	
"We ***won*** *the game."*	*They said (that) they* ***won/had won*** *the game.*
Past continuous → Past continuous or Past Perfect continuous	
"I ***was surfing*** *the Net."*	*She said (that) she* ***was surfing/had been surfing*** *the Net.*
Will → Would	
"I ***will close*** *the door."*	*He said (that) he* ***would close*** *the door.*

Tenses do not change in reported speech when:

- the reporting verb (said, told, etc) is in the **Present**, **Future** or **Present Perfect**. *"I* ***need*** *to take some aspirin," Claire* ***says****. → Claire* ***says*** *(that) she* ***needs*** *to take some aspirin.*
- the speaker expresses **general truths**, **permanent states** or **conditions**. *"The sun* ***sets*** *in the west," the teacher said. → The teacher said (that) the sun* ***sets*** *in the west.*
- the verb of the sentence is in the **unreal past** (e.g. conditionals type 2 and 3, wishes, it's time, would rather, suppose, as if). *"I wish you* ***weren't*** *so stubborn," Sarah told Michael. → Sarah told Michael (that) she wished he* ***weren't*** *so stubborn.*
- there is a **past continuous** in a **clause of time**. *"****As I was walking in the street****, I saw an old friend," he said. → He said (that)* ***as he was walking*** *in the street, he saw an old friend..*

Grammar Reference

Reported questions

- Reported questions are usually introduced with the verbs ***ask***, ***inquire***, ***wonder***, or the expression ***want to know***.
- When the direct question begins with a question word (***who***, ***where***, ***how***, ***when***, ***what***, etc.), the reported question is introduced with the same question word.
  "What did you put in the salad?" he asked. (direct question)
  *He asked **what** I had put in the salad.* (reported question)
- When the direct question begins with an auxiliary (***be***, ***do***, ***have***) or a modal verb (***can***, ***may***, etc.), then the reported question is introduced with ***if*** or ***whether***.
  "Do you like jazz?" he asked her. (direct question)
  *He asked her **if/whether** she liked jazz.* (reported question)
- In reported questions, the verb is in the affirmative. The question mark and words/expressions such as ***please***, ***well***, ***oh***, etc. are omitted. The verb tenses, pronouns and time expressions change as in statements.
  "Can you do the dishes, please?" he asked her. (direct question)
  *He asked her if she **could** do the dishes.* (reported question)

Indirect questions

- **Indirect questions** are used to ask for advice or information. They are introduced with: *Could you tell me ...?, Do you know ...?, I wonder ..., I want to know ..., I doubt ...*, etc and the verb is in the affirmative. If the indirect question starts with *I want to know ..., I wonder ...* or *I doubt ...*, the question mark is omitted.
  Direct question *How far is it to the beach?*
  Indirect question *Do you know how far it is to the beach?*

Reported commands/requests/ suggestions/orders

- **Reported commands/requests/suggestions** are introduced with a special introductory verb (***advise***, ***ask***, ***beg***, ***suggest***, etc) followed by a ***to*-infinitive**, an ***-ing* form**, or a ***that*-clause**, depending on the introductory verb.
  "Put your things over there," he told us. → He told us to put our things over there. (command), *"Return to your seat, please," she said. → She asked me to return to my seat.* (request), *"Let's go to the cinema," he said. → He suggested going to the cinema.* (suggestion), *"You'd better wear something warmer," she said. → She **suggested that I (should) wear** something warmer.* (suggestion)
- To report **orders** or **instructions**, we use the verbs ***order*** or ***tell*** + **sb** + **(not) *to*-infinitive**.
  "Stop talking," she told them. (direct order)
  *She **told them to stop talking**.* (reported order)
  "Don't move," the policeman told the thief. (direct order)
  *The policeman **ordered the thief not to move**.* (reported order)

SPECIAL INTRODUCTORY VERBS

Introductory Verb	Direct Speech		Reported Speech
+ *to*-inf			
agree	*"Yes, I'll give you a lift," he said.*	→	*He **agreed to give** me a lift.*
demand	*"Show me some proof!" he said.*	→	*He **demanded to be shown** some proof.*
offer	*"Would you like me to make you some coffee?" he asked.*	→	*He **offered to** make me some coffee.*
promise	*"I'll come on time," he said.*	→	*He **promised to come** on time.*
refuse	*"No, I won't play with you," he said.*	→	*He **refused to play** with me.*
threaten	*"Leave or I'll call the police," he said.*	→	*He **threatened to call** the police if I didn't leave.*
claim	*"I saw her break into the house," he said.*	→	*He **claimed to have seen** her break into the house.*
+ sb + *to*-inf			
advise	*"You should get more sleep," he said.*	→	*He **advised me to get** more sleep.*
allow	*"You can stay at your friend's," he said.*	→	*He **allowed me to stay** at my friend's.*
ask	*"Please, turn off the TV," he said.*	→	*He **asked me to turn off** the TV.*
beg	*"Please, please stop making fun of me," he said.*	→	*He **begged me to stop** making fun of him.*
command	*"Get out of my office!" he said.*	→	*He **commanded me to get out** of his office.*
encourage	*"Go ahead, try it," he said.*	→	*He **encouraged me to try** it.*
forbid	*"You mustn't stay out late," he said.*	→	*He **forbade me to stay out** late.*
instruct	*"Type in your password," he said.*	→	*He **instructed me to type** in my password.*
invite sb	*"Would you like to go to the beach with us?" he asked.*	→	*He **invited me to go** to the beach with them.*
order	*"Go to your room!" he said.*	→	*He **ordered me to go** to my room.*
permit/allow	*"You may sit here," he said.*	→	*He **permitted/allowed me to sit** there.*
remind	*"Don't forget to lock the door," he said.*	→	*He **reminded me to lock** the door.*
urge	*"Be careful," he said.*	→	*He **urged me to be** careful.*
warn	*"Don't run around the pool," he said.*	→	*He **warned me not to run** around the pool.*
want	*"I'd like you to take extra lessons," he said.*	→	*He **wanted me to take** extra lessons.*

Grammar Reference

SPECIAL INTRODUCTORY VERBS			
Introductory Verb	**Direct Speech**		**Reported Speech**
+ *-ing* form			
accuse sb of	*"You ruined my jacket!" he said.*	→	*He **accused me of ruining/having ruined** his jacket.*
apologise for	*"I'm sorry I was rude," he said.*	→	*He **apologised for being/having been** rude.*
admit (to)	*"Yes, I broke the vase," he said.*	→	*He **admitted (to) breaking/having broken** the vase.*
boast about	*"I cook better than all of you," he said.*	→	*He **boasted about cooking** better than all of us.*
complain to sb about	*"You never take my side," he said.*	→	*He **complained to me about my never taking** his side.*
deny	*"No, I didn't lie," he said.*	→	*He **denied lying/having lied**.*
insist on	*"You must leave now," he said.*	→	*He **insisted on me/my leaving** immediately.*
suggest + *-ing* form	*"Let's have some juice," he said.*	→	*He **suggested having** some juice.*
+ *that*-clause			
agree	*"Yes, it is a good solution," he said.*	→	*He **agreed that** it was a good solution.*
boast	*"I'm an excellent driver," he said.*	→	*He **boasted that** he was an excellent driver.*
claim	*"I came first in the race," he said.*	→	*He **claimed that** he had come first in the race.*
complain	*"You never do any chores," he said.*	→	*He **complained that** I never did any chores.*
deny	*"I never said that," he said.*	→	*He **denied that** he had ever said that.*
exclaim	*"It's fantastic!" he said.*	→	*He **exclaimed that** it was fantastic.*
explain	*"It is a very easy recipe," he said.*	→	*He **explained that** it was a very easy recipe.*
inform sb	*"Your request was rejected," he said.*	→	*He **informed me that** my request had been rejected.*
promise	*"I'll do the shopping," he said.*	→	*He **promised that** he would do the shopping.*
suggest	*"You should leave early," he said.*	→	*He **suggested that** I leave early.*
explain to sb + how	*"This is how you make an espresso," he said.*	→	*He **explained to me** how to make an espresso.*
wonder *where/what/why/how* + clause (when the subject of the introductory verb is not the same as the subject in the reported question)	*He asked himself, "Where is Tom?"* *He asked himself, "What is she doing?"* *He asked himself, "Why are they here?"* *He asked himself, "How did she do that?"*	→ → → →	*He **wondered where** Tom was.* *He **wondered what** she was doing.* *He **wondered why** they were there.* *He **wondered how** she had done that.*
wonder + whether + *to*-inf or clause	*He asked himself, "Should I hire her?"*	→	*He **wondered whether** to hire her.*
wonder *where/what/how* + *to*-inf (when the subject of the infinitive is the **same** as the subject of the verb)	*He asked himself, "Where should I go?"* *He asked himself, "What can I eat?"* *He asked himself, "How can I fix this?"*	→ → →	*He **wondered where** to go.* *He **wondered what** to eat.* *He **wondered how** to fix that.*

Quantifiers

	COUNTABLE	UNCOUNTABLE
AFFIRMATIVE	a lot (of)/lots (of)/ (a) few/some	a lot (of)/lots (of)/ (a) little/some
NEGATIVE	(not) many/any	not much/any
INTERROGATIVE	how many	how much

- ***A lot/lots of*** are used with both plural countable and uncountable nouns. They are normally used in affirmative sentences. The ***of*** is omitted when ***a lot/lots*** are not followed by a noun. *I've got **a lot/lots of** CDs.*
  *Are there **many** books in the library? Yes, there are **lots**.*
- ***Much*** is used with uncountable nouns and ***many*** is used with countable nouns. They are usually used in negative or interrogative sentences. *I haven't got **much** time.*
  *Are there **many** paintings in the exhibition?*
- ***How much/many*** are used in interrogative sentences. ***Much*** is used with uncountable nouns and ***many*** is used with countable nouns. ***How much** milk do you need?*
  ***How many** visitors does she expect?*
- ***A few*** means **not many**, but enough. It is used with plural countable nouns. *There **a few** apples in the fridge. I can make an apple pie.*
- ***A little*** means **not much**, but enough. It is used with uncountable nouns. *He put **a little** money aside so as to go on holiday this summer.*
  Note: ***few/little*** means **hardly any**, **not enough** and can be used with ***very*** for emphasis. *(Very) **few** people go to work by bike. We've got (very) **little** time left. Hurry up!*
- ***A couple of**, **several**, **a few**, **many**, **both**, **a (large/great/good) number of*** are followed by a **countable noun**. *There were **several** people at the meeting.*
- ***(Too) much**, **a little**, **a great/good deal of**, **a large/small amount/quantity of*** are followed by an **uncountable noun**. *She has made **a good deal of** progress in her studies.*
- ***A lot of**, **lots of**, **hardly any**, **some**, **no**, **plenty of*** are followed by a **countable** or **uncountable noun**. *She has bought **a lot of** dresses. We've had **plenty of** rain this year.*

Countable/Uncountable nouns

Countable nouns are nouns which we **can count**. They have a **singular** and **plural** form. *one chair, two chair**s**, three chair**s***

- We put ***a/an*** before countable nouns in the singular.
  ***a* + consonant sound** ***a** hat, **a** dog*
  ***an* + vowel sound** ***an** hour, **an** umbrella*
- We put ***some*** before countable nouns in the plural.
  *There are **some** people in the living room.*

Uncountable nouns are nouns which we **cannot count**. They **only** have a **singular form**. These include:

food	*cheese, meat, salt, pepper, butter, bread, etc.*
liquids	*coffee, milk, tea, water, lemonade, etc.*
materials	*gold, iron, glass, silver, paper, wood, etc.*
subjects	*History, Chemistry, etc.*
sports	*tennis, football, etc.*
languages	*English, Spanish, etc.*
abstract nouns	*information, knowledge, love, happiness, beauty, advice, etc.*
other	*hair, money, accommodation, luggage, news, furniture, weather, snow, etc.*

- **Uncountable nouns** are followed by a verb in the singular. We do not use ***a/an*** with uncountable nouns. We can use ***some***.
- We can use uncountable nouns with the following phrases of quantity when we want to say how much of something there is: *a **piece** of paper/advice/information*, etc., *a **glass/bottle** of water*, *a **jar** of jam/honey*, *a **packet** of rice/tea*, *a **pot/cup** of tea*, *a **kilo** of meat*, *a **tube** of toothpaste*, *a **bar** of chocolate/soap*, *a **can** of soda*, *a **carton** of milk*, *a **bowl** of soup/sugar*, etc.
- **Plural nouns** are nouns which represent a group of people or things and are followed by a plural verb. These include:
  - **a)** objects which consist of two parts such as ***trousers***, ***shorts***, ***pyjamas***, ***tights***, ***glasses***, ***scissors*** etc. *The **scissors are** very sharp.* We can use a **singular verb** and the phrase **a pair of** before objects which consist of two parts. *There is **a pair of** scissors on the table.*
  - **b)** nouns such as ***people***, ***police***, ***clothes***, etc. *The **clothes are** nice.*

Certain nouns can be used in the singular and plural with a different meaning.

- *Anna has long **hair**.* (all the hair on her head)
  *The dog left **hairs** all over the sofa.* (single hairs)
- *I need a **glass** of water.* (container)
  *This statue is made of **glass**.* (the material)
  *I've lost my reading **glasses**.* (spectacles)
- *He reads the **paper** every day.* (newspaper)
  *I've made a **paper** plane.* (material)
  *You need to sign these **papers**.* (documents)
- *The post requires previous **experience**.* (knowledge of and practice in sth) *He wrote a book about the **experiences** he had while travelling.* (encounters)
- *We gathered **wood** for the fire.* (the material)
  *Let's take a walk in the **wood(s)**.* (forest)
- *I don't like milk **chocolate**.*
  *He ate a whole box of **chocolates**!*
- *He's looking for **work**.* (employment)
  *These are **works** of local artists.* (creations)
- *Learning a new language takes **time**.*
  *I've met Joshua several **times**.* (occasions)
- *Is there **room** for one more in the car?* (space)
  *The hotel had no free **rooms**.* (parts of a building)
- *There were few **people** at the lecture.*
  *The exchange of gifts is a custom shared by many **peoples** of the world.* (nations)

Plurals/Irregular plurals

Nouns are made **plural** by adding:

-s	to the noun *books – book**s**, pencil – pencil**s*** etc.
-es	to nouns ending in ***-s***, ***-ss***, ***-sh***, ***-ch***, ***-x***, ***-o*** *bus – bus**es**, class – class**es**, brush – brush**es**,* *beach – beach**es**, box – box**es**, tomato – tomato**es***
-ies	to nouns ending in a **consonant + *y*** *story – stor**ies**, lady – lad**ies***
-ves	to nouns ending in a ***-f/-fe*** *leaf – lea**ves**, thief – thie**ves*** **BUT** *chief – chief**s***

Notes:

- Nouns ending in a **vowel + *o*** *(video)* or **double *o*** *(zoo)* take ***-s***
  *video → video**s**, zoo → zoo**s***
- Some nouns ending in ***-o*** can take either ***-es*** or ***-s***.
  *mosquito → mosquito**es**/mosquito**s**,*
  *volcano → volcano**es**/volcano**s***
- Nouns ending in a **vowel + *y*** take ***-s*** in the plural.
  *monkey → monkey**s**, boy → boy**s***

Irregular plurals: man – **men**, woman – **women**, foot – **feet**, tooth – **teeth**, goose – **geese**, louse – **lice**, mouse – **mice**, child – **children**, person – **people**, sheep – **sheep**, deer – **deer**, fish – **fish**, salmon – **salmon**, ox – **oxen**, aircraft – **aircraft**

Module 8

The passive

Form: We form the **passive** with the verb ***to be*** in the appropriate tense and the **past participle** of the main verb.

	ACTIVE	PASSIVE
PRESENT SIMPLE	*Ben **plants** a tree.*	*A tree **is planted** by Ben.*
PRESENT CONTINUOUS	*Ben **is planting** a tree.*	*A tree **is being planted** by Ben.*
PAST SIMPLE	*Ben **planted** a tree.*	*A tree **was planted** by Ben.*
PAST CONTINUOUS	*Ben **was planting** a tree.*	*A tree **was being planted** by Ben.*
PRESENT PERFECT SIMPLE	*Ben **has planted** a tree.*	*A tree **has been planted** by Ben.*
PAST PERFECT SIMPLE	*Ben **had planted** a tree.*	*A tree **had been planted** by Ben.*
FUTURE SIMPLE	*Ben **will plant** a tree.*	*A tree **will be planted** by Ben.*
INFINITIVE	*Ben **needs to plant** a tree.*	*A tree **needs to be planted** by Ben.*
MODAL VERBS	*Ben **might plant** a tree.*	*A tree **might be planted** by Ben.*

Grammar Reference

Impersonal/Personal passive constructions

- The verbs ***believe***, ***consider***, ***expect***, ***know***, ***report***, ***say***, ***think***, etc have both personal and impersonal constructions in the passive.
  active: *People **expect** that he **will win** the contest.*
  passive: ***It is expected** that he **will win** the contest.* (impersonal construction)
  ***He is expected to win** the contest.* (personal construction)
  active: *They **say** that he **lost** all his money.*
  passive: ***It is said** that he lost all his money.* (impersonal construction)
  ***He is said to have lost** all his money.* (personal construction)
- In passive questions with ***who***, ***whom***, or ***which*** we do not omit ***by***. *Who **painted** this portrait? Who **was** this portrait **painted by**?*

Conditionals: types 2 & 3

Conditional clauses consist of two parts: the ***if*-clause** (hypothesis) and the **main clause** (result). When the ***if*-clause** comes before the main clause, the two clauses are separated with a comma. When the main clause comes before the ***if*-clause**, then no comma is necessary.
***If** I had a few days off, I'd go to the seaside.*
*I'd go to the seaside **if** I had a few days off.*

	IF-CLAUSE (hypothesis)	MAIN CLAUSE (result)
2nd conditional • **unreal/ imaginary situation in the present/ future** • **advice**	***if*** + past simple	***would/could/ might*** + bare infinitive
	***If** I **lived** by the beach, I **would go** swimming every day.* **BUT** I don't live by the beach. (untrue in the present). ***If** I **were** you, I **wouldn't believe** those lies.*	
3rd conditional • **imaginary situation in the past** • **regrets** • **criticism**	***if*** + past perfect	***would/could/ might have*** + past participle
	***If** you **had booked** tickets, we **wouldn't have stayed** home.* (but you didn't) ***If** you **had been** honest from the start, none of this **would have happened**.*	

We can use ***were*** instead of ***was*** for all persons in the ***if*-clause** of Type 2 conditionals.
*If he **weren't/wasn't** so stressed all the time, he **would enjoy** life more.*

Mixed conditionals

We can form **mixed conditionals**, if the context permits it, by combining an ***if*-clause** of one type with a main clause of another.

IF-CLAUSE	MAIN CLAUSE
Type 2	Type 3
***If** he **were** a fast runner, he **would have won** the race.*	
***IF*-CLAUSE**	**MAIN CLAUSE**
Type 3	Type 2
***If** she **had invited** me, I **would go** to her party tonight.*	

Reported speech

Direct speech is the actual words someone said.
Reported speech is the exact meaning of what someone said, but not the exact words.

DIRECT SPEECH	REPORTED SPEECH
STATEMENTS	
*"**I'm** fifteen," said Ulan.*	*Ulan said (that) he **was** fifteen.*
*"**I'm working** hard," Kim said to Pete.*	*Kim told Pete (that) she **was working** hard.*
*"I **got** the promotion," said Ned.*	*Ned said (that) he **had got** the promotion.*
*"I **was doing** my work," Dilnaz said to Inzhu.*	*Dilnaz told Inzhu (that) she **had been doing** her work.*
*"**I'll lend** you a tie," said Jim.*	*Jim said (that) he **would lend** me a tie.*
*"**I've done** the job interview," said Aliya.*	*Aliya said (that) she **had done** the job interview.*
QUESTIONS	
*"**Is** Aibek here?" he asked.*	*He asked if/whether Aibek **was** there.*
*"Where **is** Dina?" he asked.*	*He asked where Dina **was**.*
COMMANDS	
*"**Go outside,**" he said to us.*	*He told us **to go outside**.*
*"**Don't be** late," he said to us.*	*He told us **not to be** late.*

Some words and time expressions change according to the meaning of the sentence as follows:

now → then, immediately
today → that day
yesterday → the day before, the previous day
tomorrow → the next/following day
this week → that week
last week → the week before, the previous week
next week → the week after, the following week
two days ago → two days before
here → there

Module 9

Compound nouns/adjectives

Compound nouns consist of two parts:

- **noun + noun** → fish tank
- ***-ing* + noun** → dining room, washing machine
- **adjective + noun** → full moon, blackboard

Compound adjectives consist of two or more words, usually joined together with a hyphen:

- **adjective/noun/number + noun** → full-length film, part-time work, 10-week holiday
- **adjective/adverb/noun + past participle** → middle-aged man, well-known song, sun-dried raisins

-ing/*-ed* adjectives

- ***-ing*** adjectives describe what something/someone is like. *The film was **exciting**.* (How was it? Exciting.)
- ***-ed*** adjectives describe a person's feelings. *They were **excited** by the performance.* (How did they feel? Excited.)

Comparatives/Superlatives

- We use the **comparative** to compare one person or thing with another. We use the **superlative** to compare one person or thing with the others of the same group. *This box is **heavier than** that one. It's the **heaviest of all**.*
- We often use ***than*** after a comparative.
  *Ben is **younger than** Jim.*
- We normally use ***the*** before a superlative. We can use ***in*** or ***of*** after superlatives. We often use ***in*** with places.
  *I think Ben Stiller is **the funniest of** all actors.*
  *This is **the biggest** park **in** our city.*

Formation of comparatives and superlatives

Adjectives

- With **one-syllable adjectives**, we add ***-(e)r*** to form the comparative and ***-(e)st*** to form the superlative.
  *old – old**er** – **the** old**est***

Note: For one-syllable adjectives ending in **vowel + consonant**, we double the consonant.
*sad – sad**der** – **the** sad**dest***

- With **two-syllable adjectives**, we form the comparative with ***more*** + **adjective** and the superlative with ***most*** + **adjective**. *famous – **more** famous – **the most** famous*

Note: For two-syllable adjectives ending in **consonant + *y***, we replace ***-y*** with ***-i*** and add ***-er/-est***.
*happy – happ**ier** – the happ**iest***

- With **adjectives having more than two syllables**, comparatives and superlatives are formed with ***more/the most***. *interesting – **more** interesting – **the most** interesting*

Note: *clever, common, cruel, friendly, gentle, narrow, pleasant, polite, quiet, shallow, simple, stupid* form their comparatives and superlatives either with ***-er/-est*** or with ***more/the most***. *simple – simp**ler**/**more** simple – **the** simp**lest**/**the most** simple*

Adverbs

- With adverbs that have **the same form** as their adjectives (*hard, fast, free,* late, *high, low, deep, long, near, straight*), we add ***-er/-est***. *fast – fast**er** – **the** fast**est***
- Adverbs formed by adding ***-ly*** to the adjective take ***more*** in the comparative and ***most*** in the superlative form. *slow**ly** – **more** slow**ly** – **the most** slow**ly***

Study the examples:

- ***very*** + **adjective/adverb**: *Jason is a **very kind** man.*
- ***much*** + **comparative form of adjective/adverb**: *Liz is **much taller** than her sister.*
- ***(not) as*** + **adjective/adverb** + ***as***: *Their house is **as big as** ours. Lions **don't run as fast as** cheetahs.*
- ***a bit/a little/far/slightly*** + **comparative form of adjective/adverb**: *I feel **a bit better** now that I've had some rest.*
- ***by far*** + **superlative form of adjective/adverb**: *Steven is **by far the kindest** person I've ever met.*

Conditionals: type 3

IF-CLAUSE	MAIN CLAUSE
If + past perfect	→ **would have** + past participle
***If** he **had left** earlier, he **would have caught** his flight.* (But he didn't.) ***If** you **had studied** harder, you **wouldn't have failed** the exam.* (criticism)	

Use

We use Type 3 conditional to talk about an imaginary situation in the past. It is also used to express regret or criticism.

Wishes

We can use ***wish/if only*** to express a wish.

FORM		
+ past simple	*I wish I **was/were** at home now.* (But I'm not.) *I wish my tooth **didn't hurt**.* (But it does.)	to say that we would like something to be different about a present situation
+ past perfect	*I wish I **had called** him earlier.* (But I didn't.) *If only they **hadn't broken up**.* (But they did.)	to express regret about something which happened or didn't happen in the past

If only is used in exactly the same way as ***wish*** but it is more emphatic or more dramatic. We can use ***were*** instead of ***was*** after ***wish*** and ***if only***. *I wish I **were/was** on holiday now.*

Rules for Punctuation

Capital Letters

A capital letter is used:

- to begin a sentence.
  Here *we are.*
- for days of the week, months and public holidays.
  F*riday,* ***A****ugust,* ***N****ew Year*
- for names of people and places.
  My teacher's name is ***S****ally and she's from* ***C****hester,* ***V****ermont.*
- for people's titles.
  M*r and* ***M****rs Parker;* ***D****r Mortimer;* ***P****rofessor Riggs; etc.*
- for nationalities and languages.
  They are ***C****hilean.*
  He's fluent in ***G****erman and* ***R****ussian.*
  Note: The personal pronoun **I** is always a capital letter. *Gus and* ***I*** *are going on holiday together.*

Full stop (.)

A full stop is used:

- to end a sentence that is not a question or an exclamation.
  We're having a great time. You can never get bored here in Rio.
- after abbreviations. *Mr Jones is a great teacher.*

Comma (,)

A comma is used:

- to separate words in a list.
  We need sugar, milk, tomatoes and apple juice.
- to separate a non-essential relative clause (i.e. a clause giving extra information which is not essential to the meaning of the main clause) from the main clause.
  Tony, who is a doctor, lives in Africa.
- after certain joining words/transitional phrases (e.g. in addition to this, moreover, for example, however, in conclusion, etc).
  Moreover, Jenny is very patient with children.
- when if-clauses or other dependent clauses begin with compound or complex sentences.
  If you have any questions, don't hesitate to ask.
  Note: No comma is used, however, when they follow the main clause.
- to separate tag questions from the rest of the sentence.
  Mr Stevens is your maths teacher, isn't he?
- before the words asked, said, etc when followed by direct speech.
  "Turn down the music," said Sarah.

Question Mark (?)

A question mark is used: to end a direct question.
Where are the children?

Exclamation Mark (!)

An exclamation point is used: to end an exclamatory sentence (i.e. a sentence showing admiration, surprise, joy, anger, etc).
That's a lie!
What awful weather!

Quotation Marks (' ' " ")

- Single quotes are used: when you are quoting someone in direct speech (nested quotes).
  "Then Helen said, 'Are you sure this is the right address?'"
- Double quotes are used: in direct speech to report the exact words someone said.
  "What's your name?" she asked him.

Colon (:)

A colon is used: to introduce a list. *There were three of us on the boat: my brother, my cousin Lyn and me.*

Brackets ( )

Brackets are used: to separate extra information from the rest of the sentence.
The most popular newspapers (i.e. The New York Times, The Observer, *etc) can be found almost anywhere in the world.*

Apostrophe (')

An apostrophe is used:

- in short forms to show that one or more letters or numbers have been left out.
  I'm (= I am) writing to complain about ...
  She left for Italy in the winter of '98. (=1998)
- before or after the possessive *-s* to show ownership or the relationship between people.
  Tom's car, my friend's husband (singular noun + 's)
  my parents' friends (plural noun + ')
  women's dresses (irregular plural + 's)

American English – British English Guide

American English	British English
A	
account	bill/account
airplane	aeroplane
anyplace/anywhere	anywhere
apartment	flat
B	
bathrobe	dressing gown
bathtub	bath
bill	banknote
busy (phone)	engaged (phone)
C	
call/phone	ring up/phone
can	tin
candy	sweets
check	bill (restaurant)
closet	wardrobe
connect (telephone)	put through
cookie	biscuit
corn	sweetcorn, maize
crazy	mad
D	
desk clerk	receptionist
dessert	pudding/dessert/sweet
downtown	(city) centre
drapes	curtains
drugstore/pharmacy	chemist's (shop)
duplex	semi-detached
E	
eggplant	aubergine
elevator	lift
F	
fall	autumn
faucet	tap
first floor, second floor, etc	ground floor, first floor, etc
flashlight	torch
French fries	chips
front desk (hotel)	reception
G	
garbage/trash	rubbish
garbage can	dustbin/bin
gas	petrol
gas station	petrol station/garage
grade	class/year
I	
intermission	interval
intersection	crossroads
J	
janitor	caretaker/porter
K	
kerosene	paraffin
L	
lawyer/attorney	solicitor
line	queue
lost and found	lost property
M	
mail	post
make a reservation	book
motorcycle	motorbike/motorcycle
movie	film
movie house/theater	cinema
N	
newsstand	newsagent
O	
office (doctor's/dentist's)	surgery
one-way (ticket)	single (ticket)
overalls	dungarees

American English	British English
P	
pants/trousers	trousers
pantyhose/nylons	tights
parking lot	car park
pavement	road surface
pedestrian crossing	zebra crossing
(potato) chips	crisps
public school	state school
purse	handbag
R	
railroad	railway
rest room	toilet/cloakroom
S	
sales clerk/sales girl	shop assistant
schedule	timetable
shorts (underwear)	pants
sidewalk	pavement
stand in line	queue
store, shop	shop
subway	underground
T	
truck	lorry, van
two weeks	fortnight/two weeks
V	
vacation	holiday(s)
vacuum (v.)	hoover
vacuum cleaner	hoover
vest	waistcoat
W	
with or without (milk/cream in coffee)	black or white
Y	
yard	garden
Z	
(pronounced, "zee")	(pronounced, "zed")
zero	nought
zip code	postcode

Grammar

He just went out./ He has just gone out.	He has just gone out.
Hello, is this Steve?	Hello, is that Steve?
Do you have a car?/ Have you got a car?	Have you got a car?

Spelling

aluminum	aluminium
analyze	analyse
center	centre
check	cheque
color	colour
honor	honour
jewelry	jewellery
practice(n,v)	practice(n) practise(v)
program	programme
realize	realise
tire	tyre
trave(l)ler	traveller

Expressions with prepositions and particles

different from/than	different from/to
live on X street	live in X street
on a team	in a team
on the weekend	at the weekend
Monday through Friday	Monday to Friday

Pronunciation

Vowels

a	/eə/	care, rare, scare, dare, fare, share
	/eɪ/	name, face, table, lake, take, day, age, ache, late, snake, make
	/æ/	apple, bag, hat, man, flat, lamp, fat, hand, black, cap, fan, cat, actor, factor, manner
	/ɔː/	ball, wall, call, tall, small, hall, warn, walk, also, chalk
	/ɒ/	want, wash, watch, what, wasp
	/ə/	alarm, away, America
	/aː/	arms, dark, bar, star, car, ask, last, fast, glass, far, mask
e	/e/	egg, end, hen, men, ten, bed, leg, tell, penny, pet, bell, pen, tent
i	/ɪ/	in, ill, ink, it, is, hill, city, sixty, fifty, lip, lift, silly, chilly
	/ɜː/	girl, sir, skirt, shirt, bird
	/aɪ/	ice, kite, white, shine, bite, high, kind
o	/əʊ/	home, hope, bone, joke, note, rope, nose, tone, blow, know, no, cold
	/ɒ/	on, ox, hot, top, chop, clock, soft, often, box, sock, wrong, fox
	/aʊ/	owl, town, clown, how, brown, now, cow
oo	/ʊ/	book, look, foot
	/uː/	room, spoon, too, tooth, food, moon, boot
	/ʌ/	blood, flood
	/ɔː/	floor, door
u	/ɜː/	turn, fur, urge, hurl, burn, burst
	/ʌ/	up, uncle, ugly, much, such, run, jump, duck, jungle, hut, mud, luck
	/ʊ/	pull, push, full, cushion
	/j/	unique, union
y	/aɪ/	sky, fly, fry, try, shy, cry, by

Consonants

b	/b/	box, butter, baby, bell, bank, black
c	/k/	cat, coal, call, calm, cold
	/s/	cell, city, pencil, circle
d	/d/	down, duck, dim, double, dream, drive, drink
f	/f/	fat, fan, first, food, lift, fifth
g	/g/	grass, goat, go, gold, big, dog, glue, get, give
	/dʒ/	gem, gin, giant
h	/h/	heat, hit, hen, hand, perhaps **BUT** hour, honest, dishonest, heir
j	/dʒ/	jam, just, job, joke, jump
k	/k/	keep, king, kick
l	/l/	lift, let, look, lid, clever, please, plot, black, blue, slim, silly
m	/m/	map, man, meat, move, mouse, market, some, small, smell, smile
n	/n/	next, not, tenth, month, kind, snake, snip, noon, run
p	/p/	pay, pea, pen, poor, pink, pencil, plane, please
q	/kw/	quack, quarter, queen, question, quiet
r	/r/	rat, rich, roof, road, ready, cry, grass, bring, fry, carry, red, read
s	/s/	sit, set, seat, soup, snow, smell, glass, dress, goose
	/z/	houses, cousin, husband
t	/t/	two, ten, tooth, team, turn, tent, tool, trip, train, tree
v	/v/	veal, vet, vacuum, vote, arrive, live, leave, view
w	/w/	water, war, wish, word, world
y	/j/	youth, young, yes, yacht, year
z	/z/	zoo, zebra, buzz, crazy

Diphthongs

ea,ee	/ɪə/	ear, near, fear, hear, clear, year, dear, beer, cheer, deer
	/iː/	eat, each, heat, leave, clean, seat, neat, tea, keep, feed, free, tree, three, bee
ei	/eɪ/	eight, freight, weight, vein
	/aɪ/	height
ai	/eɪ/	pain, sail, tail, main, bait, fail, mail
ea	/eə/	pear, wear, bear
	/ɜː/	earth, pearl, learn, search
ie	/aɪ/	die, tie, lie
ou	/ʌ/	tough, touch, enough, couple, cousin, trouble
	/aʊ/	mouse, house, round, trout, shout, doubt
oi	/ɔɪ/	oil, boil, toil, soil, coin, choice, voice, join
oy	/ɔɪ/	boy, joy, toy, annoy, employ
ou	/ɔː/	court, bought, brought
au	/ɔː/	naughty, caught, taught

Double letters

sh	/ʃ/	shell, ship, shark, sheep, shrimp, shower
ch	/tʃ/	cheese, chicken, cherry, chips, chocolate
ph	/f/	photo, dolphin, phone, elephant
th	/θ/	thief, throne, three, bath, cloth, earth, tooth
	/ð/	the, this, father, mother, brother, feather
ng	/ŋ/	thing, king, song, sing
nk	/ŋk/	think, tank, bank

Word List

Abbreviations												
	(adj)	*adjective*	(n)	*noun*	(phr v)	*phrasal verb*	(prep phr)	*prepositional phrase*	(sth)	*something*
	(adv)	*adverb*	(num)	*number*	(pl n)	*plural noun*			(v)	*verb*
	(idm)	*idiom*	(phr)	*phrase*	(pp)	*past participle*	(sb)	*somebody*		

English	Kazakh	Russian
Module 1 – Science & scientific phenomena		
argue /ˈɑːgjuː/ (v)	дауласу	спорить
develop /dɪˈveləp/ (v)	дамыту	развивать
discover /dɪsˈkʌvə/ (v)	ашу; табу	делать открытие
found /faʊnd/ (v)	Негізін қалау	Основывать
invent /ɪnˈvent/ (v)	Ашу, ойлап табу	придумать, изобретать
radioactivity /ˌreɪdɪəʊækˈtɪvəti/ (n)	радиобелсенділік	радиоактивность
relativity /ˌrelətɪvəti/ (n)	қатыстылық, салыстырмалылық	относительность
World Wide Web /wɜːld waɪd web/ (n)	ғаламтор	всемирная паутина
1a		
be made up of (phr)	бірдеңеден құралу	состоять из чего-либо
bring up /ˌbrɪŋ ˈʌp/ (phr v)	тәрбиелеу	воспитывать
cell /sel/ (n)	жасуша	клетка
characteristic /ˌkærəktəˈrɪstɪk/ (n)	сипаттама	характеристика
chromosome /ˈkrəʊməsəʊm/ (n)	хромосома	хромосома
debate /dɪˈbeɪt/ (n)	пікірталас	дебаты
develop /dɪˈveləp/ (v)	Даму, дамыту	Развивать (-ся)
function /ˈfʌŋkʃən/ (v)	Қызмет	функция
gene /dʒiːn/ (n)	ген	ген
gene editing /ˈdʒiːn ˌedɪtɪŋ/ (n)	гендік өңдеу; гендік инженерия	генная инженерия
inherit /ɪnˈherɪt/ (v)	мұрагер болу	унаследовать
be passed on /biː ˌpɑːst ˈɒn/ (phr v)	берілу	передаваться
prevent /prɪˈvent/ (v)	алдын алу	предотвращать
remove /rɪˈmuːv/ (v)	жою	удалить
rights and wrongs (phr)	дұрысы және бұрысы	правота и заблуждение
trillion /ˈtrɪljən/ (num)	триллион	триллион
unborn child /ˌʌnˈbɔːn ˌtʃaɪld/ (n)	Туылмаған сәби	Нерожденный ребенок
1b		
alteration /ˌɔːltəˈreɪʃən/ (n)	өзгеріс	изменение
ancestor /ˈænsəstə, -ses-/ (n)	баба	предок
blood vessel /ˈblʌd ˌvesəl/ (n)	қантамыры	Кровеносный сосуд
clone /kləʊn/ (n)	клон	клон
conduct experiments (phr)	тәжірибелер жүргізу	Проводить эксперименты
distant relative (phr)	Алыс туыс	Дальный родственник
domestic /dəˈmestɪk/ (adj)	ішкі	внутренний
dormant /dɔːmənt/ (adj)	Тыныш, әрекетсіз	бездействующий, спящий
embryo /ˈembriəʊ/ (n)	эмбрион	эмбрион
evolution /ˌiːvəˈluːʃən, ˌevə-/ (n)	эволюция	эволюция
excavate /ekskəveɪt/ (v)	қазу	рыть, копать
genetic map /dʒəˌnetɪk ˈmæp/ (n)	генетикалық карта	генетическая карта
hatch /hætʃ/ (v)	жұмыртқаны жарып шығу	вылупиться
impressive /ɪmˈpresɪv/ (adj)	әсерлі	впечатляющий
make a breakthrough (phr)	Серпіліс жасау	Сделать прорыв
organic material /ɔːˌgænɪk məˈtɪəriəl/ (n)	Органикалық материал	Органический материал
palaeontologist /ˌpælɪɒnˈtɒlədʒɪst, peɪ-/ (n)	палеонтолог	палеонтолог
reactivate /riːˈæktɪveɪt/ (v)	Қайтадан қосу	возобновлять
remote /rɪˈməʊt/ (adj)	дистанциялық	дистанционный
reverse /rɪˈvɜːs/ (v)	(қарама-қайшысына) өзгерту, болдырмау	изменять (на противоположное), отменять
revive /rɪˈvaɪv/ (v)	жандандыру	возрождать
roam /rəʊm/ (v)	бір жерді аралау	Бродить
thigh bone /θaɪ bəʊn/ (n)	жамбас сүйегі	бедренная кость

English	Kazakh	Russian
1c		
anecdote /ˈænɪkdəʊt/ (n)	анекдот	Анекдот
billion /ˈbɪljən/ (num)	миллиард	Миллиард
brain scan /breɪn skæn/ (n)	миды сканерлеу	сканирование мозга
breathe /briːð/ (v)	Дем алу	Дышать
come from /kʌm frɒm/ (phr v)	туындау; шығу	происходить
come up with /kʌm ˈʌp wɪð/ (phr v)	ойлап табу	придумать, разработать
genius /dʒiːniəs/ (n)	Данышпан	Гений
image /ɪmɪdʒ/ (n)	түсінік; ұғым	представление
mental /mentl/ (adj)	ақыл-ой (сын. е.)	умственный
misinformation /ˌmɪsɪnfəˈmeɪʃən/ (n)	жалған ақпарат	ложная информация
misunderstand /ˌmɪsʌndəˈstænd/ (v)	қате түсіну	понимать неправильно
myth /mɪθ/ (n)	миф	миф
myth-buster /mɪθ ˌbʌstə/ (n)	мифтерді жоққа шығарушылар	разрушители мифов
neuron /njʊərɒn/ (n)	нейрон	нейрон
observe /əbˈzɜːv/ (v)	бақылау	наблюдать
out of the blue (phr)	кенеттен	неожиданно
physical /fɪzɪkəl/ (adj)	физикалық	физический
repeat /rɪˈpiːt/ (v)	қайталау	повторять
resources /rɪˈzɔːsɪz, -ˈsɔːsɪz/ (pl n)	ресурстар	ресурсы
separate /ˈsepərət/ (v)	бөлу	разделять
struggle /strʌgəl/ (v)	қиналу	затрудняться
theory /θɪəri/ (n)	теория	теория
vote /vəʊt/ (v)	Дауыс беру	голосовать
widely /ˈwaɪdli/ (adv)	кең	широко
1d		
award /əˈwɔːd/ (v)	марапаттау	награждать
citizen /ˈsɪtɪzən/ (n)	азамат	гражданин
demonstrate /ˈdemənstreɪt/ (v)	көрсету	показывать
eventually /ɪˈventʃuəli/ (adv)	Ақыр соңында	в конце концов
invent /ɪnˈvent/ (v)	ойлап табу	изобретать
inventor /ɪnˈventə/ (n)	ойлап тапқан адам	изобретатель
lecture /lektʃə/ (n)	дәріс	лекция
modest /mɒdɪst/ (adj)	қарапайым	скромный
office clerk /ɒfɪs klɑːk/ (n)	Кеңсе қызметкері	Оффисный клерк
physicist /fɪzɪsɪst/ (n)	физик	физик
recognise /rekəgnaɪz/ (v)	тану	узнавать
1e		
(be) known as (phr)	... ретінде танылу	быть известным как
add /æd/ (v)	қосу	добавлять
browser /braʊzə/ (n)	Шолғыш	браузер
calculate /kælkjuleɪt/ (v)	Есептеу	считать
come up with sth /kʌm ˈʌp wɪð sʌmθɪŋ/ (phr v)	Ойлап табу	придумывать, разрабатывать
commonly /kɒmənli/ (adv)	әдетте	обычно
creation /kriˈeɪʃən/ (n)	жаратылыс	создание
generation /ˌdʒenəˈreɪʃən/ (n)	ұрпақ	потомство
go-to /gəʊ tuː/ (adj)	бару	идти к...
initial /ɪˈnɪʃəl/ (n)	бастапқы	первоначальный
knight /naɪt/ (v)	сері	рыцарь
massive /mæsɪv/ (adj)	ірі, көлемді	массивный
picture /pɪktʃə/ (v)	елестету	представлять, рисунок, изображение
service /sɜːvɪs/ (n)	қызмет	сервис
take sth for granted (phr)	қалыпты нәрсе ретінде қабылдау	Иметь тенденцию, склонность делать что-либо
tend to /tend tʊ/ (v)	бірдеңеге бейім болу	иметь тенденцию, склонность делать что-либо

English	Kazakh	Russian
1f		
calorie intake /ˈkælərɪ ˌɪnteɪk/ (n)	калориялы тұтыну	Потребление колорий
distinguish /dɪˈstɪŋgwɪʃ/ (v)	ажырату	различать, распознавать
exposure /ɪkˈspəʊʒə/ (n)	әсеріне ұшырау	подвергание воздействию
factor /ˈfæktə/ (n)	фактор	фактор
gender /ˈdʒendə/ (n)	жыныс	пол
genetically /dʒəˈnetɪkli/ (adv)	генетикалық	генетически
inherited /ɪnˈherɪtɪd/ (adj)	мұрагерлік	наследственный
native language (phr)	Ана тілі	Родной язык
offspring /ˈɒfsprɪŋ/ (n)	ұрпақ	потомство
pass down /ˌpɑːs ˈdaʊn/ (phr v)	берілу	передаваться
partly /ˈpɑːtli/ (adv)	ішінара	частично
tell apart /ˌtel əˈpɑːt/ (phr v)	ажырату	различать
trait /treɪt/ (n)	белгі, ерекшелік	черта, особенность
Language in Use 1		
bring about /ˌbrɪŋ əˈbaʊt/ (phr v)	Шақыру	Вызывать
bring back to life (phr)	өмірге қайтару	Вернуть к жизни
bring out /ˌbrɪŋ ˈaʊt/ (phr v)	айрықша баса айту	выявить
bring up /ˌbrɪŋ ˈʌp/ (phr v)	Тәрбиелеу	Воспитывать
come across /ˌkʌm əkrɒs/ (phr v)	соқтығысу	сталкиваься
come down with /ˌkʌm ˈdaʊn wɪð/ (phr v)	науқастанып қалу, ауырып қалу	заболеть чем-либо
come up with /ˌkʌm ˈʌp wɪð/ (phr v)	Ойлап шығару	Придумать, изобрести
go down in history (phr)	тарихта қалу	оставить след в истории
Module 2 – Natural disasters		
cause /kɔːz/ (v)	себепші болу	быть причиной чего-либо
collapsed mine (phr)	құлаған шақта	рухнувшая шахта
earthquake /ˈɜːθkweɪk/ (n)	жер сілкінісі	землетрясение
erupt /ɪˈrʌpt/ (v)	атқылау	извергать
evacuate /ɪˈvækjueɪt/ (v)	эвакуациялау, көшіру	Эвакуировать
flooding /ˈflʌdɪŋ/ (n)	Су тасқыны	Наводнение
forest fire /ˈfɒrɪst ˌfaɪə/ (n)	Орман өрті	Лесной пожар
hit /hɪt/ (v)	зиянға ұшырату	ударить по, наносить ущерб
huge tropical storm (phr)	Үлкен тропикалық дауыл	Огромный тропический шторм
loss of life (phr)	өмірден айырылу	Потеря жизни
massive /ˈmæsɪv/ (adj)	Көлемді, ірі	Крупный, массивный
mine collapse (phr)	Шахтаның құлауы	Развал шахты
rescue /ˈreskjuː/ (v)	құтқару	спасать
volcanic eruption /vɒlˌkænɪk ɪˈrʌpʃən/ (n)	Вулкан атқылау	Извержение вулкана
2a		
aftershock /ˈɑːftəʃɒk/ (n)	Жер сілкісінен кейінгі соққы	толчок после землетрясения
authorities /ɔːˈθɒrətiz/ (pl n)	Билік органдары	власть
axis /ˈæksɪs/ (n)	білік	ось
blaze /bleɪz/ (v)	Өртену	полыхать
collapse /kəˈlæps/ (v)	құлау	рухнуть
courageous /kəˈreɪdʒəs/ (adj)	батыл	отважный
crash into /kræʃ ˈɪntə/ (v)	соқтығысу	врезаться
debris /ˈdebriː, ˈdeɪ-/ (n)	қалдықтар, сынықтар	обломки, осколки
desperate /ˈdespərət/ (adj)	үмітсіз	отчаянный
devastating /ˈdevəsteɪtɪŋ/ (adj)	талқандайтын	разрушительный
epicentre /ˈepɪˌsentə/ (n)	орталығы	эпицентр
evacuation /ɪˌvækjʊˈeɪʃən/ (n)	эвакуация	эвакуация
exceed /ɪkˈsiːd/ (v)	шамадан тыс болу	превышать
explosion /ɪkˈspləʊʒən/ (n)	жарылыс	взрыв
force /fɔːs/ (n)	күш	сила

English	Kazakh	Russian
foreshock /ˈfɔːʃɒk/ (n)	жердің алғашқы сілкіністері	предварительный толчок землетрясения
head for /ˈhed fə, fɔː/ (v)	бір жерге бағыт алу	идти к...
inland /ɪnˈlænd/ (adv)	теңізден шалғай орналасқан, елдің ішкі жағындағы	удаленный от моря, расположенный в глубине страны
landslide /ˈlændslaɪd/ (n)	көшкін	оползень
loaded (with) /ləʊdəd/ (adj)	жүктелген	загружен
mud /mʌd/ (n)	лай	грязь
nuclear meltdown /ˌnjuːkliə ˈmeltdaʊn/ (n)	Ядролық кризис	Ядерный кризис
pylon /ˈpaɪlən/ (n)	бағана	столб
relief worker /rɪˈliːf ˌwɜːkə/ (n)	құтқарушы	спасатель
rip apart /ˌrɪp əˈpɑːt/ (v)	Бұзу	разорвать
roll across /ˌrəʊl əˈkrɒs/ (v)	басып өту	перевалить через...
shake /ʃeɪk/ (v)	Сілку	Трясти
slam into /ˌslæm ˈɪntə/ (v)	құлау	обрушиваться на...
strike /straɪk/ (v)	Құлау,ұру	обрушиваться на, ударять
struggle /ˈstrʌgəl/ (v)	Күресу	бороться
sweep away /ˌswiːp əˈweɪ/ (phr v)	сыпырып алып кету	сметать
technician /tekˈnɪʃən/ (n)	техник механик	техник, механик
warning /ˈwɔːnɪŋ/ (n)	Ескерту	предупреждение
2b		
avalanche /ævəlɑːntʃ/ (n)	Қар көшкіні	Лавина
dam /dæm/ (n)	Бөгет, дамба	дамба
emergency team /ɪˈmɜːdʒənsi ˌtiːm/ (n)	Құтқару тобы	спасательная команда
environmental disaster (phr)	Экологиялық апат	экологическое бедствие
evacuate /ɪˈvækjueɪt/ (v)	Эвакуациялау	эвакуировать
factory explosion /ˈfæktəri ɪkˈspləʊʒən/ (n)	зауыт жарылысы	взрыв завода
flood /flʌd/ (n)	Су тасқыны	наводнение
freak storm /friːk ˈstɔːm/ (n)	Қатты дауыл	сильный шторм
landslide /ˈlændslaɪd/ (n)	жер көшкіні	оползень
mudslide /ˈmʌdslaɪd/ (n)	Көшкін	сель
plane crash /pleɪn kræʃ/ (n)	Ұшақ апаты	крушение самолёта
rail accident /reɪl ˌæksədənt/ (n)	Теміржол апаты	железнодорожное проишествие
(river) burst its banks (phr)	(өзеннің) суының көтерілуі	(река) разлилась
road accident /rəʊd ˌæksədənt/ (n)	жол апаты	дорожное происшествие
severe storm /səˌvɪə ˈstɔːm/ (n)	Қатты дауыл	сильный шторм
tsunami /tsuːˈnɑːmi/ (n)	Цунами	цунами
war /wɔː/ (n)	Соғыс	война
2c		
emergency kit /ɪˈmɜːdʒənsi kɪt/ (n)	Дәрі қобдишасы	аптечка
flash flood /flæs ˌflʌd/ (n)	Кенет су тасқыны	внезапное наводнение
flood barrier /flʌd ˌbæriə/ (n)	Су тасқынынан бөгет	барьер от наводнения
flood defence /flʌd dɪˈfens/ (n)	Су тасқынынан қорғаныс	защита от наводнения
shallow /ˈʃæləʊ/ (adj)	Майда	мелкий
2d		
climax /ˈklaɪmæks/ (n)	Шарықтау шегі	кульминация
dangerously /ˈdeɪndʒərəsli/ (adv)	Қауіпті түрде	опасно
deafening /ˈdefənɪŋ/ (adj)	құлақ тұндыратын	оглушительный
main character /ˌmeɪn ˈkærəktə/ (n)	Бас кейіпкер	главный герой
pull into /ˌpʊl ˈɪntə/ (phr v)	Тарту, жетелеу	втягивать в...
relieved /rɪˈliːvd/ (adj)	Жеңілдік сезінген	чувствующий облегчение
rock /rɒk/ (v)	тербету, тербелу	Качать(ся)
save the day (idm)	Тығырақтан шығу	спасать положение
screech /skriːtʃ/ (n)	Шыңғырған дауыс	визг
screeching /skriːtʃɪŋ/ (adj)	Шыңғырған	визжащий

English	Kazakh	Russian
speed up /ˌspiːd ˈʌp/ (phr v)	Жылдамдату	ускорить
steam train /ˈstiːm treɪn/ (n)	Паровоз	паровоз
terrified /ˈterəfaɪd/ (adj)	үрейлі	устрашённый
thunder /ˈθʌndə/ (n)	Күн күркіреуі	Гром
violently /ˈvaɪələntli/ (adv)	қатты	жестоко
2e		
army engineer /ˌɑːmi endʒəˈnɪə/ (n)	Әскери инженер	военный инженер
below sea level (phr)	Теңіз деңгейінен төмен	ниже уровня моря
(be) under threat (phr)	қауіп төну, қауіпте болу	быть в опасности
come ashore (phr)	Жағаға шығу	выходить на берег
declare /dɪˈkleə/ (v)	Хабарлау, жариялау	объявлять
desperate /ˈdespərət/ (adj)	Үмітсіз	отчаянный
emergency services /ɪˈmɜːdʒənsi ˌsɜːvɪsɪz/ (pl n)	Авариялық қызмет	аварийные службы
evacuate /ɪˈvækjueɪt/ (v)	Эвакуациялау	эвакуировать
eye of the storm (phr)	Дауылдың көзі	центр урагана
levee /ˈlevi/ (n)	жағадағы су бөгеті	ограждающая дамба
looting /ˈluːtɪŋ/ (n)	Тонау	грабёж, мародёрство
pump /pʌmp/ (v)	Тартып шығару	перекачивать
rebuild /riːˈbɪld/ (v)	Қайта құру	перестраивать
resident /ˈrezədənt/ (n)	Тұрғын	Местный житель, резидент
slow recovery (phr)	Баяу қалпына келу	Медленное восстановление
smash /smæʃ/ (v)	Күл-талқан ету	перестраивать
state of emergency (phr)	Төтенше жағдай	местный житель, резидент
storm surge /stɔːm sɜːdʒ/ (n)	желкөтерме; желқума (желдің әсерінен су деңгейінің көтерілуі)	перестраивать
strengthen /streŋθən, ˈstrenθən/ (v)	Нығайту	Укреплять
struggle to cope (phr)	жеңіп шығу үшін күресу	бороться чтобы победить
the military /ðə ˈmɪlətəri/ (n)	әскери адамдар	Военные
violence /ˈvaɪələns/ (n)	қатігездік	Насилие, жестокость
2f		
come inland (phr)	елдің ішкі жағына кіру	достигать глубь страны
ecosystem /iːkəʊˌsɪstəm/ (n)	Экожүйе	экосистема
fast tide /fɑːst ˈtaɪd/ (n)	Жылдам толқу	быстрый прилив
fault line /fɔːlt laɪn/ (n)	Ақаулық сызығы	линия разломов
flatten /flætn/ (v)	Тегістеу	расплющить
force /fɔːs/ (v)	күш көрсету	применять силу, взламывать
impact /ɪmpækt/ (n)	Әсер	влияние
initial /ɪˈnɪʃəl/ (adj)	Бастапқы	начальный
in its path (phr)	Өз жолында	на своем пути
loss of life (phr)	өмірден айырылу	потеря жизни
on a larger scale (phr)	үлкенірек көлемде	в большем масштабе
outwards /ˈaʊtwədz/ (adv)	Сыртқа	Наружу
pebble /ˈpebəl/ (n)	Жұмыр тас	Галька
ripple /ˈrɪpl/ (v)	Шыңырау	галька
shore /ʃɔː/ (n)	Жаға	пульсация
slide /slaɪd/ (v)	Сырғанау	скользить
speed /spiːd/ (n)	Жылдамдық	Скорость
tectonic plate /tekˌtɒnɪk ˈpleɪt/ (n)	Тектоникалық плита	тектоническая плита
tremendous damage (phr)	Үлкен зақым	огромный урон
undersea landslide /ˌʌndəsiː ˈlændslaɪd/ (n)	Теңіз түбіндегі көшкін	подводный оползень
volcanic eruption /vɒlˌkænɪk ɪˈrʌpʃən/ (n)	Жанартау атқылауы	извержение вулкана

English	Kazakh	Russian
Language in Use 2		
back away /ˌbæk əˈweɪ/ (phr v)	Артқа шегіну	Отступать
back down /ˌbæk ˈdaʊn/ (phr v)	берілу, жеңілісті мойындау	сдаваться, признать поражение
back out /ˌbæk ˈaʊt/ (phr v)	айнып қалу	передумать
back up /ˌbæk sʌmbɒdi ˈʌp/ (phr v)	резервтік көшірме жасау	сделать резервное копирование
back sb up /ˌbæk sʌmbɒdi ˈʌp/ (phr v)	демеу, қолдау	поддерживать
call sb back /ˌkɔːl ˈbæk/ (phr v)	Қайта хабарласу	Перезвонить
call off /ˌkɔːl ˈɒf/ (phr v)	Болдырмау, қайтару	отозвать, отменить
carry on /ˌkæri ˈɒn/ (phr v)	Жалғастыру	продолжать
carry out /ˌkæri ˈaʊt/ (phr v)	Орындау	выполнять
conduct /kənˈdʌkt/ (v)	Жүргізу	проводить, вести
safety drill /ˈseɪfti drɪl/ (n)	Қауіпсіздік шаралары бойынша жаттығу	тренировка по самозащите
stay alive (phr)	Тірі қалу	остаться в живых
thought-provoking /ˈθɔːt prəˌvəʊkɪŋ/ (adj)	Ойландыратын	заставляющий задуматься
Module 3 – Virtual reality		
built-in /ˌbɪlt ˈɪn/ (adj)	Кіріктірілген	встроенный
interact /ˌɪntərˈækt/ (v)	Өзара әрекеттесу	взаимодействовать
patient /ˈpeɪʃənt/ (n)	Емделуші, пациент	пациент
simulate /ˈsɪmjəleɪt/ (v)	Бола қалу, мүләйімсу	притворяться
virtual reality /ˌvɜːtʃuəl riˈæləti/ (n)	виртуалды шындық	виртуальная реальность
3a		
audience /ˈɔːdiəns/ (n)	Аудитория	аудитория
bandage /ˈbændɪdʒ/ (n)	Таңғыш	повязка
booth /buːð/ (n)	кабина	кабина
cartridge /ˈkɑːtrɪdʒ/ (n)	Картридж	картридж
develop textiles (phr)	Тоқыма өнеркәсібін дамыту	развивать текстильную промышленность
dissolve /dɪˈzɒlv/ (v)	Еру	Растворяться
drop in /ˌdrɒp ˈɪn/ (phr v)	кіру	заходить
dry instantly (phr)	Бірден кептіру	высушить мгновенно
endless possibilities /ˌendləs pɒsəˈbɪlətiz/ (pl n)	Шексіз мүмкіндіктер	безграничные возможности
fully-functional /ˌfʊli ˈfʌŋkʃənəl/ (adj)	Толық функционалды	полнофункциональный
garment /ˈgɑːmənt/ (n)	киім-кешек	предмет одежды
generate electricity (phr)	Электр қуатын өндіру	Генерировать электричество
go on sale (phr)	Сатылымға түсу	Поступить в продажу
immersive gameplay /ɪˈmɜːsɪv ˌgeɪmpleɪ/ (n)	Қызықты ойын процесі	Захватывающий игровой процесс
lighter /ˈlaɪtə/ (adj)	Жеңілірек	Легче
lightweight /ˈlaɪtweɪt/ (adj)	жеңіл	лёгкий
look into /ˌlʊk ˈɪntə/ (phr v)	Зерттеу	Изучать
minute fibre /maɪˌnjuːt ˈfaɪbə/ (n)	Минуттық талшық	мельчайшее волокно
monitor fitness (phr)	Фитнес процесін бақылау	контроль фитнеса
no assembly required (phr)	Монтаждауды қажет етпейді	не требует монтажа
skin graft /skɪn grɑːft/ (n)	Тері трансплантациялау	кожный трансплантант
spray-on fabric /ˌspreɪ ɒn ˈfæbrɪk/ (n)	шашыратуға арналған мата	ткань для распыления
surgeon /ˈsɜːdʒən/ (n)	Хирург	хирург
take sth to the next level (phr)	Келесі деңгейге өткізу, өте қатты дамыту	провести что-либо на следующий уровень, развить
trendsetter /ˈtrendˌsetə/ (n)	Сән қалыптастырушы	законодатель моды
turn into /ˌtɜːn ˈɪntə/ (phr v)	бірдеңеге айналу	превратиться в...

English	Kazakh	Russian
3b		
algebra /ˈældʒəbrə/ (n)	Алгебра	Алгебра
basic skills /ˌbeɪsɪk ˈskɪlz/ (pl n)	Негізгі дағдылар	Базовые навыки
breaking news /ˈbreɪkɪŋ njuːz/ (n)	Соңғы жаңалықтар	Последние новости
browse /braʊz/ (v)	Шолу	Просматривать
developer /dɪˈveləpə/ (n)	Әзірлеуші	Разработчик
flora and fauna /ˌflɔːrə ən ˈfɔːnə/ (n)	Өсімдіктер және жануарлар әлемі	Флора и фауна
grab sb's attention (phr)	Біреудің назарын аудару	Привлечь ч-л внимание
guide /gaɪd/ (v)	Басқару, бағыттау	Руководить, направлять
independent /ˌɪndɪˈpendənt/ (adj)	Тәуелсіз	Независимый
interactive /ˌɪntərˈæktɪv/ (adj)	Интерактивті	Интерактивный
keep sb updated (phr)	біреуді хабардар етіп отыру	Держать кого-то в курсе
live feed /laɪv fiːd/ (n)	Тікелей эфир	Прямой эфир
monitor /ˈmɒnɪtə/ (v)	Бақылау	Наблюдать
mount /maʊnt/ (v)	орнату	Устанавливать, монтировать
on the go (phr)	жүріп келе жатқан кезде	На ходу
perform /pəˈfɔːm/ (v)	Орындау	Выполнять
revise /rɪˈvaɪz/ (v)	Қайталау, қайта қарау	повторить, пересматривать
stream /striːm/ (v)	онлайн трансляция жасау	транслировать онлайн
tap /tæp/ (v)	Басу	Нажимать
the living world /ðə ˈlɪvɪŋ wɜːld/ (n)	Тірі әлем	Живой мир
touchscreen /ˈtʌtʃskriːn/ (n)	Сенсорды экран	Сенсорный экран
track /træk/ (v)	бақылау; қадағалау	прослеживать
universe /ˈjuːnɪvɜːs/ (n)	Әлем, ғалам	Вселенная
3c		
arcade machine /ɑːˈkeɪd məˈʃiːn/ (n)	Ойын автоматы	Игровой автомат
arcade /ɑːˈkeɪd/ (n)	Ойын автоматтары галереясы	Галерея игровых автоматов
capture the imagination (phr)	Қиялды жаулап алу	Захватить воображение
code /kəʊd/ (v)	код қою / еңгізу	Кодировать
collector's item /kəˈlektəz ˌaɪtəm/ (n)	Коллекциялық зат	Коллекционный предмет
combine /kəmˈbaɪn/ (v)	Қамту	Совмещать
comfort /ˈkʌmfət/ (n)	Жайлылық	Удобство
complex /ˈkɒmpleks/ (adj)	қиындатылған	сложный
computer memory /kəmˈpjuːtə ˈmeməri/ (n)	Компьютер жады	Память компьютера
download /ˌdaʊnˈləʊd/ (n,v)	Жүктеу	Загрузка, загружать
downloadable content /ˌdaʊnˈləʊdəbəl ˈkɒntent/ (n)	жүктеуге болатын контент	Загружаемый контент
freedom /ˈfriːdəm/ (n)	Бостандық	Свобода
graphics /ˈgræfɪks/ (pl n)	графика	графика
increasingly /ɪnˈkriːsɪŋli/ (adv)	барған сайын көбірек	все более
interact /ˌɪntərˈækt/ (v)	Өзара әрекеттесу	Взаимодействовать
kidnap /ˈkɪdnæp/ (v)	Ұрлау	Красть
make a comeback (phr)	Қайта оралу	Возвращаться
millennium /mɪˈleniəm/ (n)	Мыңжылдық	Тысячелетие
must-have gadget /ˈmʌst hæv ˈgædʒɪt/ (n)	Керекті құрылғы	Необходимый гаджет
must /mʌst/ (n)	Қажеттілік	Необходимость
open world adventures /əʊpən wɜːld ədˈventʃəz/ (n)	Ашық әлемге саяхат	Приключения в открытом мире
pixel /ˈpɪksəl/ (n)	Пиксель	Пиксель
pixelated /ˈpɪksɪleɪtɪd/ (adj)	Сапасыз	Некачественно
realistic /ˌrɪəˈlɪstɪk/ (adj)	Шынайы	Реалистичный
serious /ˈsɪəriəs/ (adj)	Байыпты	Серьезный
simplistic /sɪmˈplɪstɪk/ (adj)	Қарапайым	простой
suitable /ˈsuːtəbəl/ (adj)	Ыңғайлы	Удобный
tutorial /tjuːˈtɔːriəl/ (n)	өздігінен үйренуге арналған видео	видео для обучения

English	Kazakh	Russian
3d		
consequently /kɒnsɪkwəntli/ (adv)	Тиісінше	Вследствие этого
freedom /friːdəm/ (n)	Бостандық	Свобода
incredibly /ɪnˈkredəbli/ (adv)	Керемет	Невероятно
lifelike /laɪflaɪk/ (adj)	тірі сияқты, шынайы сияқты	Как живой, как настоящий
second hand /sekənd hænd/ (n)	Ұсталған	Подержанный
3e		
aim /eɪm/ (n)	Мақсат	Цель
brushstroke /brʌʃstrəʊk/ (n)	бояудың жағылған жолы	Мазок
canvas /ˈkænvəs/ (n)	Кенеп	Холст
confine /kənfaɪn/ (v)	Шектеу	Ограничивать
database /deɪtəbeɪs/ (n)	Деректер базасы	База данных
entrant /entrənt/ (n)	Талапкер	Абитуриент
humankind /ˌhjuːmənˈkaɪnd/ (n)	Адамзат	Человечество
identify /aɪˈdentɪfaɪ/ (v)	Анықтау	Выявить
judge /dʒʌdʒ/ (v)	мінеу, пікір айту	судить
process /prəʊses/ (n)	Процесс, үрдіс	Процесс
professional/ /prəˈfeʃənəl/ (n)	Шебер	Профессионал
region /riːdʒən/ (n)	Аймақ	Регион
scene /siːn/ (n)	Көрініс	Сцена, место действия
sketch /sketʃ/ (n)	Эскиз	Эскиз
solid /sɒlɪd/ (adj)	Қатты	Твердый
studio /ˈstjuːdiəʊ/ (n)	Студия	Студия
tutorial /tjuːˈtɔːriəl/ (n)	өздігінен үйренуге арналған видео	видео для обучения
3f		
audience /ɔːdiəns/ (n)	Аудитория	Аудитория
block out /blɒk aʊt/ (phr v)	Бұғаттау	Блокировать, отражать
built-in /ˌbɪlt ˈɪn/ (adj)	Кіріктірілген	Встроенный
copy /kɒpi/ (v)	Көшіру	Копировать
focus on /ˈfəʊkəs ɒn/ (v)	зейінді бір нәрсеге жұмылдыру	Сконцентрироваться на
HDMI cable /ˌeɪtʃ diː em ˈaɪ ˌkeɪbəl/ (n)	HDMI Кабелі	кабель hdmi
immersive /ɪmˈɜːsɪv/ (adj)	басымен кіріп кеткен	Погруженный
intrude /ɪnˈtruːd/ (v)	Басып кіру	Вторгаться
pass on /ˌpɑːs ˈɒn/ (phr v)	беру	Передать
similarly /sɪmələli/ (adv)	Ұқсас түрде	Похоже
surface /sɜːfɪs/ (n)	Бет	Поверхность
track /træk/ (v)	бірдеңенің барысын қадағалау	Следить
trick /trɪk/ (v)	Алдау	Обманывать
wirelessly /ˈwaɪələsli/ (adv)	Сымсыз	Без проводов
Language in Use 3		
look after /ˈlʊk ɑːftə/ (phr v)	Қарау, қамқор болу	Присматривать
look into /ˈlʊk ɪntə/ (phr v)	бір затты зерттеу	исследовать что-либо
look over /ˌlʊk ˈəʊvə/ (phr v)	Қарап шығу	просмотреть быстро
look up to /ˌlʊk ˈʌp tə/ (phr v)	сүйсіну	восхищаться
try on /ˌtraɪ ˈɒn/ (phr v)	Киіп көру	Пробовать, примерять
try out /ˌtraɪ ˈaʊt/ (phr v)	сайысу (топтың ішінде)	состязаться (внутри команды)
try sth out /ˌtraɪ sʌmθɪŋ ˈaʊt/ (phr v)	Сына көру	Пробовать

English	Kazakh	Russian
Module 4 – Organic and non-organic worlds		
compost /ˈkɒmpɒst/ (n)	Компост	Компост, составное удобрение
fertiliser /ˈfɜːtəlaɪzə/ (n)	Тыңайтқыш	Удобрение
GMO /ˌdʒiː em ˈəʊ/ (n)	Гендік модифицирленген ағза	Генно-модифицированный организм
growth /grəʊθ/ (n)	Өсім	Рост
ingredient /ɪnˈgriːdiənt/ (n)	Ингредиент	Ингредиент
livestock /ˈlaɪvstɒk/ (n)	Мал шаруашылығы	Домашний скот
pest /pest/ (n)	Зиянкестер	Вредитель
pesticide /ˈpestɪsaɪd/ (n)	Пестицидтер	Пестициды
4a		
animal welfare /ˈænɪməl ˈwelfeə/ (n)	Жануарларға қамқорлық	Забота о животных
artificially /ˌɑːtɪˈfɪʃəli/ (adv)	Жасанды	Искуственно
feed /fiːd/ (n)	Азық	Корм
nutrient /ˈnjuːtriənt/ (n)	Қоректік заттар	питательные вещества
organic label /ɔːˌgænɪk ˈleɪbəl/ (n)	Органикалық белгі	Органическая этикетка
4b		
consume /kənˈsjuːm/ (v)	Тұтыну	Потреблять
convert /kənˈvɜːt/ (v)	Конвертациялау	Конвертировать
drain /dreɪn/ (v)	құрғату, суын төгу	осушать, сливать воду
environmentally friendly /ɪnˌvaɪrənˈmentli ˈfrendli/ (adj)	Экологиялық қауіпсіз	Экологически безопасный
equivalent /rˈkwɪvələnt/ (n)	Балама	Эквивалент
food shortage (phr)	Азық тапшылығы	Недостаток еды
horizontally /ˌhɒrəˈzɒntli/ (adv)	Көлденең	Горизонтально
industrial greenhouse (phr)	өнеркәсіптік жылыжай	Промышленная теплица
local produce (phr)	Жергілікті өндіріс	Местное производство
long gone (phr)	баяғыда құрыған	давно ушедший, умерший, закончившийся итд.
lush /lʌʃ/ (adj)	қаптаған, қаулаған	буйный, пышный (о растительности)
mankind /mænˈkaɪnd/ (n)	Адамзат	Человеество
nutrient /ˈnjuːtriənt/ (n)	Қоректік заттар	питательные вещества
permanent light source (phr)	Тұрақты жарық көзі	Постоянный источник света
powered /paʊəd/ (pp)	электроэнергиямен қамтамасыз етілетін	обеспеченный электроэнергией
rise /raɪz/ (v)	көбею	увеличиваться
soar /sɔː/ (v)	көтерілу,ұшу	взлетать, взмывать
solution /səˈluːʃən/ (n)	Шешім	Решение
spring up /ˌsprɪŋ ˈʌp/ (phr v)	Пайда болу	Возникать
structure /ˈstrʌktʃə/ (n)	Құрылым	Структура
transport costs (phr)	Транспорт бағасы	Стоимость транспорта
vertical farming /ˌvɜːtɪkəl ˈfɑːmɪŋ/ (n)	Ауыл шаруашылығындағы өндіріс сатылары	Ступени производства в сельском хозяйстве
wasteland /ˈweɪstlænd, -lənd/ (n)	бос қалған жер, қаңырап қалған жер	пустырь, пустошь
wonder /ˈwʌndə/ (n)	керемет	чудо
4c		
acid rain /ˌæsɪd ˈreɪn/ (n)	Қышқыл жауын	Кислотный дождь
bio-degradable /ˌbaɪəʊdɪˈgreɪdəbəl/ (adj)	Биологиялық шіритін	биоразлагаемый
fossil fuel /ˈfɒsəl ˌfjuəl/ (n)	Табиғи отын	Природное топливо
natural resources /ˌnætʃərəl rɪˈzɔːsɪz, -ˈsɔːsɪz/ (pl n)	Табиғи ресурстар	природные ресурсы
non-flammable /ˌnætʃərəl rɪˈzɔːsɪz/ (adj)	Тұтанбайтын	Невоспламеняющийся

English	Kazakh	Russian
4d		
beneficial /ˌbenɪˈfɪʃəl/ (adj)	Пайдалы	Полезный
biofuel /ˈbaɪəʊˌfjuːəl/ (n)	Биологиялық отын	Биотопливо
carbon dioxide /ˌkɑːbən daɪˈɒksaɪd/ (n)	Көмірқышқыл газы	Углекислый газ
crop /krɒp/ (n)	ауылшаруашылық мәдениет	сельскохозяйственная культура
drawback /ˈdrɔːbæk/ (n)	Кемшілік	Недостаток
go off /gəʊ ˈɒf/ (phr v)	Кету	Уходить
go to waste (phr)	Босқа кету	быть потраченным впустую
habitat loss /ˈhæbɪtæt lɒs/ (n)	Мекендейтін ортаның жоғалуы	Потеря среды обитания
nutrient /ˈnjuːtrɪənt/ (n)	Қоректік заттар	Питательное вещество
nutritious /njuːˈtrɪʃəs/ (adj)	Қоректік	Питательный
omega-3 fatty acid /ˌəʊməgə θriː ˌfæti ˈæsɪd/ (n)	Омега 3 май қашқылы	жирная кислота омега 3
preservative /prɪˈzɜːvətɪv/ (n)	Сақтық	Предохраняющее средство
renewable rɪˌnjuːəbəl/ (adj)	Жаңаратын	Неисчерпаемый, возобновляемый
the pros and cons (idm)	Артықшылықтар мен кемшіліктер	Плюсы и минусы
wildlife /ˈwaɪldlaɪf/ (n)	Жабайы өмір	Дикая жизнь
4e		
alternative /ɔːlˈtɜːnətɪv/ (n)	балама	альтернатива
certified /ˈsɜːtɪfaɪd/ (adj)	Тексерілген	Проверенный
official /əˈfɪʃəl/ (adj)	Ресми	официальный
organic industry /ɔːˌgænɪk ˈɪndəstri/ (n)	Органикалық өндіріс	Органическая промышленность
wellbeing /ˌwelˈbiːɪŋ/ (n)	Өркендеу	Благополучие
4f		
awareness /əˈweənəs/ (n)	Хабардар болу	осведомлённость, информированность
balance /ˈbæləns/ (n)	Тепе-теңдік	Баланс
bargain-hunting /ˈbɑːgən ˌhʌntɪŋ/ (n)	Пайдалы сатылым	распродажа
child labour /ˌtʃaɪld ˈleɪbə/ (n)	Бала еңбегі	Детский труд
ethical /ˈeθɪkəl/ (adj)	Этикалық	Этический
guarantee /ˌgærənˈtiː/ (n)	Кепіл	Гарантия
hard-earned cash (phr)	Еңбекпен келген ақша	С трудом заработанные деньги
human rights /ˌhjuːmən ˈraɪts/ (pl n)	Азамат құқықтары	Права человека
manufacture goods /ˌmænjəˈfæktʃə ˌgʊdz/ (v)	Тауар өндіру	Производить товары
mine of information (phr)	Білім кеніші	Кладезь знаний
money sense /ˈmʌni ˌsens/ (n)	ақшаны сезіну	чувство денег
natural resources /ˌnætʃərəl rɪˈzɔːsɪz, -ˈsɔːs-/ (pl n)	Табиғи ресурстар	Природные ресурсы
operate /ˈɒpəreɪt/ (v)	Басқару, жұмыс істеу	Работать, управлять
policy /ˈpɒləsi/ (n)	полис	Полис
purchase /ˈpɜːtʃəs/ (n)	Сатып алу	Покупка
quest /kwest/ (n)	мақсатқа қарай жылжу, іздеу	продвижение к цели, поиски
reduced prices (phr)	Төмендетілген баға	Сниженные цены
seasonal retail shift (phr)	Мерзімді бөлшек сауда жылжуы	Сезонная розничная смена
sell off /ˌsel ˈɒf/ (phr v)	Сатып тастау	Распродовать
sweatshop /ˈswetʃɒp/ (n)	Жұмысы ауыр және аз жалақылы шеберхана	мастерская, где рабочие получают низкую зарплату и работают в тяжёлых условиях
treasure trove /ˈtreʒə ˌtrəʊv/ (n)	Қазына	Драгоценный клад
treat /triːt/ (v)	жүгіну	обращаться, обходиться (с кем-либо)

English	Kazakh	Russian
Language in Use 4		
do sth over /ˌduː sʌmθɪŋ ˈəʊvə/ (phr v)	қайтадан жасау	переделывать
do up /ˌduː ˈʌp/ (phr v)	1.киімді түймелеу, жабу; 2. (бөлмені, ғимаратты) әшекейлеу	1. застегнуть (одежду); 2. украшать (комнату, здание)
drop by/in /ˌdrɒp ˈbaɪ, ˈɪn/ (phr v)	қонаққа кіріп шығу	навестить
drop out /ˌdrɒp ˈaʊt/ (phr v)	Шығып кету	Выбывать
get across /ˌget əˈkrɒs/ (phr v)	ойын толыққанды жеткізе алу	доносить (до слушателя), четко излагать
get ahead /ˌget əˈhed/ (phr v)	Озу	опережать
get along (with sb) /ˌget əˈlɒŋ/ (phr v)	Биреумен жақсы қатынаста болу	ладить с кем-либо
Module 5 – Reading for pleasure		
(p.63)		
(be) a waste of time (phr)	уақыттың бос өтуі	трата времени впустую
boring /ˈbɔːrɪŋ/ (adj)	Қызықсыз	Скучный
business report /ˌbɪznəs rɪˈpɔːt/ (n)	Бизнес есебі	бизнес отчёт
dull /dʌl/ (adj)	Қызықсыз	Скучный
fantasy story /ˈfæntəsi stɔːri/ (n)	Қиял оқиға	фантастика
fascinating /ˈfæsɪneɪtɪŋ/ (adj)	еліктіргіш	увлекательный, захватывающий
health & fitness magazine /ˌhelθ ən ˈfɪtnəs ˌmægəˈziːn/ (n)	Денсаулық және фитнес дүкені	журнал здоровья и фитнеса
imaginative /ɪˈmædʒɪnətɪv/ (adj)	шығармашыл	творческий
informative /ɪnˈfɔːmətɪv/ (adj)	Ақпараттық	Информативный
mystery novel /ˌmɪstəri ˈnɒvəl/ (n)	детективті роман	детективный роман
predictable /prɪˈdɪktəbəl/ (adj)	Болжауға болатын	Предсказуемый
relaxing /rɪˈlæksɪŋ/ (adj)	рахаттандырғыш	Расслабляющий
romance nover /rəʊˈmæns ˌnɒvəl/ (n)	махаббат туралы роман	романс
science-fiction novel /ˌsaɪəns ˈfɪkʃən ˌnɒvəl/ (n)	Ғылыми-фантастикалық роман	Научно-фантастический роман
science textbook /ˌsaɪəns ˈtekstbʊk/ (n)	Ғылыми оқулық	Научный учебник
thrilling /θrɪlɪŋ/ (adj)	қатты еліктіргіш	захватывающий
travel guide /ˈtrævəl gaɪd/ (n)	Саяхат нұсқаулығы	Путеводитель
unrealistic /ˌʌnrɪəˈlɪstɪk/ (adj)	Шынайы емес	Нереалистичный
(p.64)		
absorbed /əbˈsɔːbd/ (adj)	(сюжетке) кіріп кеткен	поглощённый (сюжетом)
alien invasion /ˈeɪliən ɪnˈveɪʒən/ (n)	Жат планеталықтар шабуылы	Вторжение инопланетян
conquer /ˈkɒŋkə/ (v)	Жаулап алу	Завоевать
defeat /dɪˈfiːt/ (v)	Жеңіліс	Поражение
emerge /ɪˈmɜːdʒ/ (v)	Пайда болу	возникнуть
equal /ˈiːkwəl/ (adj)	Тең	Равный
equipped /ɪˈkwɪpt/ (adj)	Жабдықталған	Оборудованный
gripping /ˈgrɪpɪŋ/ (adj)	өте қызықты	Захватывающий
portrayal /pɔːˈtreɪəl/ (n)	сипаттама, суреттеме	описание, изображение
prediction /prɪˈdɪkʃən/ (n)	Жорамалдау	Прогнозирование
rain death upon (idm)	Жауыннан келген өлім	Смерть от дождя
scholarship /ˈskɒləʃɪp/ (n)	Стипендия	стипендия
struggle /ˈstrʌgəl/ (v)	Күресу	Бороться
surrounding /səˈraʊndɪŋ/ (adj)	Қоршаған аймақ	Окружающая местность
unscrew /ʌnˈskruː/ (v)	Бұрап шығару	Отвернуть
(p.65)		
curate /ˈkjʊərət/ (n)	Викарий	викарий, священник
descriptive /dɪˈskrɪptɪv/ (adj)	Сипаттауыш	Описательный
genre /ˈʒɒnrə/ (n)	Жанр	Жанр
imaginary /ɪˈmædʒənəri/ (adj)	Ойдан шығарылған	Воображаемый

English	Kazakh	Russian
lack /læk/ (v)	Жетпеу	Не хватать
made-up /ˌmeɪd ʌp/ (adj)	Ойдан шығарылған	Выдуманный
plot /plɒt/ (n)	Сюжет	Сюжет
stylistic /staɪˈlɪstɪk/ (adj)	Стилистикалық	Стилистический
unrestrained /ˌʌnrɪˈstreɪnd/ (adj)	Шектеусіз	Неограниченный
(p.66)		
courageous /kəˈreɪdʒəs/ (adj)	Батыл	Храбрый
determined /dɪˈtɜːmɪnd/ (adj)	табанды	полный решимости
disturbed /dɪˈstɜːbd/ (adj)	психикалық ақауға шалдыққан	страдающий психическим расстройством
educated /ˈedjukeɪtɪd/ (adj)	Білімді	Образованный
selfish /ˈselfɪʃ/ (adj)	өзімшіл	Эгоистичный
(p.67)		
artilleryman /ɑːˈtɪlərimən/ (n)	Артиллерияшы	Артеллириец
bomb site /bɒm saɪt/ (n)	Бомбалау орны	Место, где все здания и постройки были разрушены бомбами
gentle breeze /dʒentl briːz/ (n)	самал жел	Нежный бриз
heart of stone (phr)	Тасжүрек	каменное сердце
howl /haʊl/ (v)	Ұлу	Выть
sly /slaɪ/ (adj)	Арамы, қу	Лукавый, хитрый
(p.68)		
broadcast /brɔːdkɑːst/ (n)	Трансляция	Трансляция
coast-to-coast /ˌkəʊst tə ˈkəʊst/ (adj)	Жағадан жағаға	От побережья к побережью
competitor /kəmˈpetətə/ (n)	Қатысушы	Участник
dimension /daɪˈmenʃən, də-/ (n)	Өлшем	Измерение
dramatisation /ˌdræmətaɪˈzeɪʃən/ (n)	Драматизация	Драматизация
flee /fliː/ (v)	Қашу	Бежать
nationwide /ˌneɪʃənˈwaɪd, ˈneɪʃənwaɪd/ (adj)	Жалпы халықтық	Общенациональный
pretend /prɪˈtend/ (adj)	Тұр жасау	Делать вид
Module 6 – Capabilities of the human brain		
beat /biːt/ (v)	соғу	Биться
capability /ˌkeɪpəˈbɪlətɪ/ (n)	Мүмкіндік	Возможность
convert /kənˈvɜːt/ (v)	аудару, конверциялау	переводить, конвертировать
identify /aɪˈdentɪfaɪ/ (v)	Анықтау	Выявить
invent /ɪnˈvent/ (v)	Ойлап табу	Придумать
react /rɪˈækt/ (v)	әрекет ету, жауап қайтару	Реагировать
sculpt /skʌlpt/ (v)	(бірдеңенің) мүсінін жасау	Лепить
6a		
be related to (phr)	(бірдеңеге) қатысы болу	быть связанным с...
be responsible for (phr)	(бірдеңеге) Жауапты болу	Быть ответсвенным за что-либо
determine /dɪˈtɜːmɪn/ (v)	Анықтау	определять
deal with /ˌdiːl ˈwɪð/ (phr v)	(бірдеңені) орындау	иметь дело, справляться с ...
hemisphere /ˈhemɪsfɪə/ (n)	Жартышар	Полушарие
hunger /ˈhʌŋgə/ (n)	Ашаршылық	Голод
identity /aɪˈdentətɪ/ (n)	өзіндік қасиеттер, даралық	личность, отличительные черты, индивидуальность
logic /ˈlɒdʒɪk/ (n)	Логика	Логика
organ /ˈɔːgən/ (n)	Мүше	Орган
pathway /pɑːθweɪ/ (n)	биологиядағы байланысты химиялық реакциялар жиынтығы	набор связанных химических реакций в биологии
play a part (phr)	Рөл атқару	Играть роль
require /rɪˈkwaɪə/ (v)	қажет ету	нуждаться

English	Kazakh	Russian
skull /skʌl/ (n)	Бас сүйегі	Череп
syntax /ˈsɪntæks/ (n)	Синтаксис	Синтаксис
take over /ˌteɪk ˈəʊvə/ (phr v)	Алу	Перенимать
tendency /ˈtendənsi/ (n)	Үрдіс	Тенденция
thirst /θɜːst/ (n)	Шөл	Жажда
6b		
activate /ˈæktɪveɪt/ (v)	белсенді қылу	Активировать
adapt /əˈdæpt/ (v)	Бейімделу	Адаптировать
be the case (phr)	дұрыс я шынайы болу	быть правдой
calculate /ˈkælkjʊleɪt/ (v)	Есептеу	Считать
combination /ˌkɒmbɪˈneɪʃən/ (n)	Комбинация	Комбинация
employ /ɪmˈplɔɪ/ (v)	Жұмысқа алу	Нанимать
excel /ɪkˈsel/ (v)	өзгеше болу, бір нәрсені керемет деңгейде атқару	отличаться, превосходно делать что-либо
far-reaching /ˌfɑːˈriːtʃɪŋ/ (adj)	Алысқа баратын	Далеко идущий
implication /ˌɪmplɪˈkeɪʃən/ (n)	жасырын мән, тұспал	скрытый смысл, намек
memorise /ˈmeməraɪz/ (v)	есте сақтау	запоминать
movement /ˈmuːvmənt/ (n)	Қозғалыс	Движение
multiple /ˈmʌltəpəl/ (adj)	бірнеше	несколько
propose /prəˈpəʊz/ (v)	Ұсыну	предложить
quantify /ˈkwɒntɪfaɪ/ (v)	Санау	Считать
quotient /ˈkwəʊʃənt/ (n)	деңгей	уровень
rate /reɪt/ (v)	бағалау	оценивать
realistically /rəˈlɪstɪkli/ (adv)	іс жүзінде, шынында	практически, реалистически
rephrase /ˌriːˈfreɪz/ (v)	Басқа сөзбен айту	перефразировать
respond /rɪˈspɒnd/ (v)	Жауап беру	Отвечать
rise to a challenge (phr)	Қарсы шығуға дайын болу	Встать на вызов
smart /smɑːt/ (adj)	Ақылды	Умный
take sth in /ˌteɪk sʌmθɪŋ ˈɪn/ (phr v)	(бірдеңеде) қатысу	принять участие в чём-либо
to an extent (phr)	белгілі бір дәрежеде	в определённой степени
undoubtedly /ʌnˈdaʊtɪdli/ (adv)	Сөзсіз	Несомненно
6c		
accomplishment /əˈkʌmplɪʃmənt/ (n)	жетістік	Достижение
beneficial /ˌbenəˈfɪʃəl/ (adj)	Пайдалы	Полезный, выгодный
by far (phr)	әлдеқайда	намного
chronic /ˈkrɒnɪk/ (adj)	Созылмалы	Хронический
circumstance /ˈsɜːkəmstæns, -stəns/ (n)	Жағдай	Обстоятельства
counsellor /ˈkaʊnsələ/ (n)	Кеңесші, консультант	Советник, консультант
cure /kjʊə/ (n)	Ем	Лечение
disease /dɪˈziːz/ (n)	Ауру	Болезнь
disheartened /dɪsˈhɑːtnd/ (adj)	мазасыз, жабыраңқы	унылый
ensure /ɪnˈʃʊə/ (v)	илану	обеспечивать, убеждаться
evolve /ɪˈvɒlv/ (v)	даму	развиваться, эволюционировать
flow /fləʊ/ (v)	Ағу	Течь
functional /ˈfʌŋkʃənəl/ (adj)	атқарымдық, функционалдық	Функциональный
hormone /ˈhɔːməʊn/ (n)	Гормон	Гормон
identify /aɪˈdentɪfaɪ/ (v)	Анықтау	Идентифицировать
immune system /ɪˈmjuːn ˌsɪstɪm/ (n)	Иммунды жүйе	Иммунная система
in effect (phr)	1.жұмыс атқаруда, 2. шынында	1.в действий, функционирует 2. фактически, в действительности
industry /ˈɪndəstri/ (n)	Өндіріс	Промышленность
loud and clear (phr)	Айдан анық	Ясно как день
mild /maɪld/ (adj)	жеңіл, болмашы	лёгкий, слабый
minimise /ˈmɪnɪmaɪz/ (v)	Азайту	Минимизировать
neurological disease (phr)	Неврологиялық ауру	Неврологическое заболевание
practitioner /prækˈtɪʃənə/ (n)	Практикант дәрігер	Практикующий врач
professional assistance (phr)	Кәсіби көмек	Профессиональная помощь

English	Kazakh	Russian
push to the limit (idm)	шегіне жеткізу, жүз пайызға берілу	доводить до предела, выложиться на максимум
serve a function (phr)	белгілі функцияны атқару	выполнять определенную функцию
take a heavy toll (idm)	жаман әсер ету	иметь плохой эффект на
risk /rɪsk/ (n)	Тәуекел	Риск
vast majority (phr)	Көп бөлігі	Большая часть
workout /wɜːkaʊt/ (n)	жаттығу, дене шынықтыру	зарядка, тренировка
6d		
colloquial /kəˈləʊkwiəl/ (adj)	Ауызекі	Разговорный
drop sb a line (phr)	Біреуге жазу	Написать кому-либо...
focus on /ˈfəʊkəs ɒn/ (v)	бірдеңеге зейін бөлу	Сосредоточиться на...
go online (phr)	онлайн режиміне өту	войти в режим онлайн
keep sb posted (phr)	Жаңалықты айтып отыру	Держать в курсе
make time (phr)	Уақыт бөлу	Уделить время
online /ˌɒnlaɪn/ (adj)	Желіде	В сети
put off /ˌpʊt ˈɒf/ (phr v)	кейінге қалдыру	Откладывать
share /ʃeə/ (v)	Бөлу, бөлісу	Делить, поделиться
sort out /ˌsɔːt ˈaʊt/ (phr v)	сұрыптап бөлу	Сортировать
take up /ˌteɪk ˈʌp/ (phr v)	алу	Занимать
time limit /ˈtaɪm ˈlɪmɪt/ (n)	Уақыт шектеуі	Лимит времени
turn out /ˌtɜːn ˈaʊt/ (phr v)	болып шығу	Оказаться
under the weather (idm)	Қиын жағдайда	в беде
6e		
aim /eɪm/ (v)	бір нәрсеге бағытталу	быть нацеленным
animal rescue centre /ˌænəməl ˈreskjuː ˌsentə/ (n)	Жануарларды құтқару орталығы	Центр спасения животных
challenging /ˈtʃæləndʒɪŋ/ (adj)	қиын, күш салуды қажет ететін	трудный, требующий напряжения
charity shop /ˈtʃærəti ʃɒp/ (n)	Қайырымдылық дүкені	Благотворительный магазин
disciplined /ˈdɪsəplɪnd/ (adj)	Тәртіпті	Дисциплинированный
expedition /ˌekspəˈdɪʃən/ (n)	Экспедиция	Экспедиция
extracurricular activity (phr)	мектептен тыс белсенділік	внеклассная деятельность
first aid /ˌfɜːst ˈeɪd/ (n)	Алғашқы көмек	Первая помощь
focused /ˈfəʊkəst/ (adj)	зейінін бір жерге бөлген	Сфокусированный
full potential (phr)	бар әлеует	Весь потенциал
parachuting /ˈpærəʃuːtɪŋ/ (n)	Парашютпен секіру	Прыжок с парашютом
pick /pɪk/ (v)	Таңдау	Выбирать
progress /prəʊgres/ (v)	Жақсару	Прогрессировать
royal palace /ˌrɔɪəl ˈpælɪs/ (n)	король сарайы	Королевский дворец
rowing trip /ˈrəʊɪŋ ˌtrɪp/ (n)	қайық саяхаты	путешествие на лодке
ultimately /ˈʌltɪmətli/ (adv)	сайып келгенде	в конечном счете
6f		
barking /bɑːkɪŋ/ (adj)	үріп жатқан	лающая
boost /buːst/ (n)	Көтерілу	Повышение
break down /breɪk ˈdaʊn/ (phr v)	бөлшектеу	поделить
burn into your memory (phr)	миыңа құйып алу	оставить отпечаток в памяти
chunk /tʃʌŋk/ (n)	үлкен бөлшек	большой кусок
cram for /kræm fɔː/ (v)	(тестке)қатаң түрде дайындалу	усиленно готовиться к...
effectively /ɪfektɪvli/ (adv)	нәтижелі	Эффективно
erupt /ɪrʌpt/ (v)	Атқылау	Извергать
keep in top form (phr)	ең жақсы формада ұстау	держать в наилучшей форме
let sb down /ˌlet sʌmbədi ˈdaʊn/ (phr v)	үмітті ақтамау	Подводить
long-term memory /ˌlɒŋ tɜːm ˈmeməri/ (n)	ұзақ мерзімді жад	долговременная память
mentally /mentl-i/ (adv)	Ойша, ой (сын. е)	Мысленно, умственно
mnemonic /nɪˈmɒnɪk/ (n)	Мнемоникалық	Мнемонический
personal connection (phr)	жеке байланыс	Личная связь

English	Kazakh	Russian
recall /rɪ'kɔːl/ (v)	Еске түсіру	Вспоминать
retain /rɪ'teɪn/ (v)	Сақтау	Сохранить
rhyme /raɪm/ (n)	Ұйқас	Рифма
snarling /snɑːlɪŋ/ (adj)	Ырыл	Рычание
space out /ˌspeɪs 'aʊt/ (phr v)	шындық сезімінен абстракциялану;	абстрагироваться от реальности
string of information (phr)	ақпарат жолы	ряд информации
take a break (phr)	үзіліс жасау	сделать перерыв
tricky /'trɪki/ (adj)	Күрделі	Запутанный, сложный
visualisation /ˌvɪʒuələɪ'zeɪʃən/ (n)	Елестету	Визуализация
weird /wɪəd/ (adj)	біртүрлі, түсініксіз	странный, непонятный
Language in Use 6		
applaud /ə'plɔːd/ (v)	қол соғу, шапалақтау	рукоплескать
dominant /'dɒmɪnənt/ (adj)	Басыңқы	Доминантный
drive sb crazy (phr)	Біреуді есінен адастыру	сводить с ума
eustress /juːstres/ (n)	пайдалы стресс	эустресса
set off /ˌset 'ɒf/ (phr v)	жолға шығу	выделять, отправляться, начинать
set sth aside /ˌset sʌmθɪŋ ə'saɪd/ (phr v)	сақтап қою	отложить
set up /ˌset 'ʌp/ (phr v)	негізін қалау	основывать
take in sth /ˌteɪk 'ɪn sʌmθɪŋ/ (phr v)	үйрену, түсіну	научиться, понимать
take over /ˌteɪk 'əʊvə/ (phr v)	басқаруды бастау	начать контролировать
take up /ˌteɪk 'ʌp/ (phr v)	Бастау	Начать
Module 7 – Breakthrough technologies		
launch /lɔːntʃ/ (v)	Жіберу	Запускать
orbit /ɔːbɪt/ (v)	Орбита бойымен қозғалу	двигаться по орбите
pioneer /ˌpaɪə'nɪə/ (v)	Алғашқы болу	прокладывать путь, быть инициатором
revolutionise /ˌrevə'luːʃənaɪz/ (v)	түбегейлі түрде жақсарту	преображать коренным образом
unmanned /ʌn'mænd/ (adj)	Пилотсыз	Беспилотный
7a		
administer /æd'mɪnɪstə/ (v)	Басқару	Управлять
attached to /ə'tætʃt tə/ (adj)	бекітілген	прикрепленный к...
carry out /'kæri 'aʊt/ (phr v)	Жүзеге асыру	Выполнять
detect /dɪˌtekt/ (v)	Табу	Обнаружить
dub /dʌb/ (v)	лақап ат қою, аудару	давать прозвище, дублировать
groundbreaking /'graʊndˌbreɪkɪŋ/ (adj)	Жаңашылдық	Новаторский
invasive surgery (phr)	Инвазивті хирургия	Инвазивная хирургия
medical applications (phr)	медициналық қосымшалар	медицинские применения
molecular level (phr)	молекулярлық деңгей	молекулярный уровень
molecule /'mɒlɪkjuːl/ (n)	Молекула	Молекула
patrol /pə'trəʊl/ (v)	Күзету	Патрулировать
precision /prɪ'sɪʒən/ (n)	Дәлдік	Точность
protein /'prəʊtiːn/ (n)	Ақуыз	Белок
steady hand (phr)	дірілдемей тұра алатын қол	твёрдая рука
strand /strænd/ (n)	тұтам	прядь
7b		
body language /'bɒdi ˌlæŋgwɪdʒ/ (n)	ымдау тілі	язык тела
connect /kə'nekt/ (v)	Байланыстыру	Связывть
emotion /ɪ'məʊʃən/ (n)	Эмоция	Эмоция
forehead /'fɒrəd, 'fɔːhed/ (n)	Маңдай	Лоб
humanoid /'hjuːmənɔɪd/ (adj)	Гуманоид	Гуманоид
upgraded /ʌp'greɪdɪd/ (adj)	Жаңартылған	обновлённый

English	Kazakh	Russian
7c		
alkaline battery (phr)	сілтілі батарея	щелочная батарея
anew /əˈnjuː/ (adv)	басынан	заново
burn up /ˌbɜːn ˈʌp/ (phr v)	жағу	сжечь
concentration /ˌkɒnsənˈtreɪʃən/ (n)	концентрация	концентрация
failure /ˈfeɪljə/ (n)	сәтсіздік	отказ
filament /ˈfɪləmənt/ (n)	жіп	нить, волокно
flow /ˈfləʊ/ (v)	ағу	течь
genius /ˈdʒiːniəs/ (n)	данышпан	гений
inner /ˈɪnə/ (adj)	ішкі	внутренний
nap /næp/ (n)	мызғу	дремота
patent /ˈpeɪtənt/ (n)	патент	патент
projector /prəˈdʒektə/ (n)	прожектор	прожектор
push oneself /pʊʃ wʌnˈself/ (v)	өзін өзі итермелеу	подталкивать себя
reach one's goals (phr)	мақсатқа жету	достичь своих целей
set oneself a target (phr)	Алдыңа мақсат қою	ставить перед собой цель
skill /skɪl/ (n)	қабілет	навык
trick /trɪk/ (n)	жол, тәсіл	приём, способ
under pressure /ʌndə ˈpreʃə/ (prep phr)	Қыспақта	под давлением
undoubtedly /ʌnˈdaʊtɪdli/ (adv)	Сөзсіз	несомненно
7d		
carry out /ˌkæri ˈaʊt/ (phr v)	жүзеге асыру	выполнять
display /dɪˈspleɪ/ (v)	көрсету	показывать
efficiency /ɪfɪʃənsi/ (n)	Тиімділігі	эффективность
financial /fəˈnænʃəl, faɪ-/ (adj)	Қаржылы	финансовый
investment /ɪnˈvestmənt/ (n)	инвестиция	инвестиция
lack of /ˈlæk əv/ (n)	жетіспеушілік	нехватка
outweigh /aʊtˈweɪ/ (v)	Басым болу	перевесить
purchase /pɜːtʃəs/ (v)	сатып алу	покупать, приобретать
repetitive /rɪˈpetətɪv/ (adj)	қайталанатын	повторяющийся
7e		
aerobatics /ˌeərəˈbætɪks, ˌeərəʊ-/ (pl n)	Аэробатика	высший пилотаж
android robot /ˈændrɔɪd ˈrəʊbɒt/ (n)	андроид робот	робот-андроид
exhibit /ɪgˈzɪbɪt/ (n)	жәдігер, экспонат	экспонат
simulator /ˈsɪmjəleɪtə/ (n)	Симулятор	симулятор
virtual reality headset /ˌvɜːtʃuəl rɪˈæləti ˌhedset/ (n)	виртуалды шындық гарнитурасы	гарнитура виртуальной реальности
7f		
abnormal result /ˌæbˈnɔːməl rɪˈzʌlt/ (n)	нормадан тыс нәтиже	ненормальный результат
command /kəˈmɑːnd/ (n)	бұйрық	команда
ethics /ˈeθɪks/ (pl n)	этика	этика
human thought process /ˌhjuːmən ˈθɔːt ˌprəʊses/ (n)	адамның ойлау процесі	процесс мышления человека
impact /ˈɪmpækt/ (n)	әсер	влияние
Language in Use 7		
back down /ˌbæk ˈdaʊn/ (phr v)	шегіну	отступать
break down /ˌbreɪk ˈdaʊn/ (phr v)	бұзылу	сломаться
breakthrough /ˈbreɪkθruː/ (n)	серпіліс	прорыв
close down /ˌkləʊz ˈdaʊn/ (phr v)	жұмыс істемей қалу	перестать работать
cut down /ˌkʌt ˈdaʊn/ (phr v)	қысқарту	сократить
live down /ˌlɪv ˈdaʊn/ (phr v)	кінәсін өтеу	загладить, искупить
pursue /pəˈsjuː/ (v)	жетуге тырысу	преследовать, продолжать
turn down /ˌtɜːn ˈdaʊn/ (phr v)	бас тарту	отказаться от...

English	Kazakh	Russian
Module 8 – Space		
dwarf planet /ˌdwɔːf ˈplænɪt/ (n)	кішкентай планета	карликовая планета
expand /ɪkˈspænd/ (v)	кеңейту	расширять
particle /ˈpɑːtɪkəl/ (n)	бөлшек	частица
swallow /ˈswɒləʊ/ (v)	жұту	поглощать
8a		
aircraft /eəkrɑːft/ (n)	ұшақ	самолет
army base /ˌɑːmi ˈbeɪs/ (n)	әскери база	военная база
assignment /əˈsaɪnmənt/ (n)	тағайындалу мақсаты	назначение
autopsy /ˈɔːtɒpsi/ (n)	өлікті ашу	вскрытие трупа
billboard /ˈbɪlbɔːd/ (n)	билборд	рекламная вывеска
burst /bɜːst/ (v)	лап ету, жарқ ету	вспыхивать
cattle farmer /kætl ˌfɑːmə/ (n)	мал шаруасы	скотовод
debris /ˈdebriː, ˈdeɪ-/ (n)	сынықтар	обломки
doubtful /daʊtfəl/ (adj)	күмәнді	сомнительный
eerie /ɪəri/ (adj)	түршігерлік	жуткий
eye-witness account (phr)	куәгердің есебі	свидетельский отчёт
formation /fɔːˈmeɪʃən/ (n)	қалыптасу	образование
freeway /friːweɪ/ (n)	автоданғыл; автожол	Автострада
hangar /hæŋə/ (n)	ангар, ұшақжай, ұшақтұрақ	ангар
hieroglyphics /ˌhaɪərəˈglɪfɪks/ (pl n)	иероглифтер	иероглифы
hotspot /hɒtspɒt/ (n)	қайнар көз	горячая точка
lined with (phr)	қапталған	имеющий подкладку из чего-либо
oval-shaped /əʊvəl ʃeɪpt/ (adj)	сопақ пішінді	овальной формы
rattlesnake /rætlsneɪk/ (n)	ысылдағыш улы жылан	гремучая змея
remains /rɪˈmeɪnz/ (pl n)	қалдықтар	остатки
report (on) /rɪˈpɔːt/ (v)	есеп беру	доклад о...
sceptic /skeptɪk/ (n)	скептик	скептик
spot /spɒt/ (v)	орын	место
unfold /ʌnˈfəʊld/ (v)	ашу	раскрывать
weather balloon /weðə bəˌluːn/ (n)	әуе шар	воздушный шар
weird /wɪəd/ (adj)	оғаш, әдеттен тыс	странный
8b		
afford /əˈfɔːd/ (v)	ақшасын (бірнәрсеге) жеткізе алу	позволить себе
atmosphere /ætməsfɪə/ (n)	атмосфера	атмосфера
carbon dioxide /ˌkɑːbən daɪˈɒksaɪd/ (n)	Көмір қышқыл газы	углекислый газ
catastrophe /kəˈtæstrəfi/ (n)	апат	катастрофа
century /ˈsentʃəri/ (n)	ғасыр	век
colonisation /ˌkɒlənaɪˈzeɪʃən/ (n)	колонизация	колонизация
colony /ˈkɒləni/ (n)	колония	колония
construct /kənˈstrʌkt/ (v)	соғу	конструировать
endless /ˈendləs/ (adj)	шексіз	бесконечный
exploration /ˌekspləˈreɪʃən/ (n)	зерттеу	исследование
extract /ɪkˈstrækt/ (v)	шығару	извлекать, вытаскивать
final frontier (phr)	шек	предел
generate /dʒenəreɪt/ (v)	жасау, шығару	создавать, генерировать
leap /liːp/ (n)	секіру	прыжок
mankind /mænˈkaɪnd/ (n)	адамзат	человечество
meteor /miːtiə/ (n)	метеорит	метеорит
millennia /mɪˈleniə/ (pl n)	мыңжылдықтар	тысячелетие
nuclear war /ˌnjuːkliə ˈwɔː/ (n)	ядролық соғыс	ядерная война
orbit /ɔːbət/ (v)	орбита бойымен қозғалу	двигаться по орбите
overcome /ˌəʊvəˈkʌm/ (v)	өту	преодолеть
resources /rɪˈzɔːsəz, -ˈsɔːs-/ (pl n)	ресурстар	ресурсы

English	Kazakh	Russian
self-sufficient /ˌself səˈfɪʃənt/ (adj)	өзіне-өзі жеткілікті	самодовлеющий
solar panel /ˌsəʊlə ˈpænl/ (n)	күн панелі	солнечная панель
supplies /səˈplaɪz/ (pl n)	азық-түлік	продовольствие
warm sth up /ˌwɔːm sʌmθɪŋ ˈʌp/ (phr v)	жылыту	разогревать
wipe out /ˌwaɪp ˈaʊt/ (phr v)	жер бетінен жою	уничтожать, стирать с лица земли
8c		
computer-generated imagery /kəmˈpjuːtə ˌdʒenəreɪtɪd ˈɪmɪdʒəri/ (n)	компьютерде жасалған кескін	компьютерные изображения
headgear /ˈhedgɪə/ (n)	қалпақ	шлем
integrate /ˈɪntɪgreɪt/ (v)	біріктіру	интегрировать
reflector /rɪˈflektə/ (n)	шағылыстырғыш	отражатель
simulation camera /ˌsɪmjəˈleɪʃən ˈkæmərə/ (n)	симуляциялық камера	имитационная камера
state-of-the-art technology /steɪt ɒf ðə ɑːt tekˈnɒlədʒi/ (n)	заманауи технологиялар	современная технология
three-dimensional /ˌθriː daɪˈmenʃənl/ (adj)	үш өлшемді	трёхмерный
virtual image /ˌvɜːtʃuəl ˈɪmɪdʒ/ (n)	виртуалды сурет	виртуальное изображение
visual effects /ˈvɪʒuəl ɪˈfekts/ (pl n)	визуалдық эффекттер	визуальные эффекты
8d		
action-packed /ˈækʃən ˈpækt/ (adj)	футуристикалық	футуристический
box office hit (phr)	кассалық хит	кассовый хит
fast-paced /ˌfɑːst ˈpeɪst/(adj)	жылдам қарқынмен	в быстром темпе
instalment /ɪnˈstɔːlmənt/ (n)	көрсетілім, бөлік	выпуск, отрывок
prequel /ˈpriːkwəl/ (n)	приквел	приквел
twist /twɪst/ (n)	кенет өзгеріс	неожиданный поворот (в сюжете)
8e		
asteroid /ˈæstərɔɪd/ (n)	астероид	астероид
equator /ɪˈkweɪtə/ (n)	экватор	экватор
hardware /ˈhɑːdweə/ (n)	жабдық	аппаратные средства
mission /ˈmɪʃən/ (n)	миссия	миссия
orbit /ˈɔːbɪt/ (n)	орбита	орбита
rotation /rəʊˈteɪʃən/ (n)	айналым	вращение
8f		
account (for) /əˈkaʊnt/ (v)	(бірдеңеден) арылу	избавляться от чего-либо
alertness /əˈlɜːtnəs/ (n)	ұқыптылық	настороженность
break in /ˌbreɪk ˈɪn/ (phr v)	басып кіру	вломиться
doubt /daʊt/ (v)	күмән	сомнение
enclosure /ɪnˈkləʊʒə/ (n)	қоршау	ограда
flame-thrower /ˈfleɪm ˌθrəʊə/ (n)	от атқыш	огнемёт
hack /hæk/ (v)	шабу	рубить
hedge /hedʒ/ (n)	шарбақ	живая изгородь
irritably /ˈɪrətəbli/ (adv)	тітіркене	раздражённо
lane /leɪn/ (n)	жолақ	полоса
mist /mɪst/ (v)	тұман	туман
outhouse /ˈaʊthaʊs/ (n)	дәретхана	туалет
settle down /ˈsetl ˈdaʊn/ (phr v)	тұрақтау	осесть
slashing sting (phr)	кесетін бізгек	режущее жало
smack /smæk/ (v)	шылп ету	шлепнуться
trap /træp/ (n)	тұзақ	ловушка
unharmed /ʌnˈhɑːmd/ (adj)	зақымдалмаған	невредимый
whip /ˌwɪp/ (v)	сабалау	хлестать
wipe /waɪp/ (v)	Сүрту	протирать
wire /waɪə/ (n)	Сым	провод

English	Kazakh	Russian
Language in Use 8		
accuracy /ˈækjərəsi/ (n)	дәлдік	точность
artifact /ˈɑːtɪfækt/ (n)	артефакт	артефакт
keep away /ˌkiːp əˈweɪ/ (phr v)	біреуді жақындатпау, өткізбеу	не подпускать кого-либо
keep off /ˌkiːp ˈɒf/ (phr v)	ары жүру	держаться подальше
keep on /ˌkiːp ˈɒn/ (phr v)	жалғастыру	продолжать
keep up with /ˌkiːp ˈʌp wɪð/ (phr v)	қалып кетпеу	не отставать от...
laziness /ˈleɪzinəs/ (n)	жалқаулық	лень
let down /ˌlet ˈdaʊn/ (phr v)	үмітін ақтамау	подводить
let out (of) /ˌlet ˈaʊt (əv)/ (phr v)	шығару	выпускать (из)
pick on /ˌpɪk ɒn/ (phr v)	(біреуге) тиісу	придираться к кому-либо
pick out /ˌpɪk ˈaʊt/ (phr v)	таңдау	выбирать
pick up /ˌpɪk ˈʌp/ (phr v)	жерден көтеру; көлікпен алып кету	поднять с земли; подбросить на машине
popularity /ˌpɒpjəˈlærəti/ (n)	танымалдылық	популярность
prediction /prɪˈdɪkʃən/ (n)	болжам	прогнозирование
Module 9 – Independent project		
double-helix /ˌdʌbəl ˈhiːlɪks/ (n)	екі еселі спираль	двойная спираль
element /ˈelɪmənt/ (n)	элемент	элемент
the periodic table /ðə ˌpɪəriˈɒdɪk ˈteɪbəl/ (n)	периодтық кесте	периодическая таблица
twist /twɪst/ (v)	бұралу	скручивать
9a		
collapse /kəˈlæps/ (v)	құлау	рухнуть
contraction /kənˈtrækʃən/ (n)	қысқарту	сокращение
countless /ˈkaʊntləs/ (adj)	сансыз	бесчисленный
endless /ˈendləs/ (adj)	шексіз	бесконечный
eternally /ɪˈtɜːnəl-i/ (adv)	мәңгі	вечно
expand /ɪkˈspænd/ (v)	кеңейту	расширять
expansion /ɪkˈspænʃən/ (n)	кеңейту	расширение
exist /ɪgˈzɪst/ (v)	өмір сүру	существовать
explode /ɪkˈsploʊd/ (v)	жарылу	взрываться
hypothesis /haɪˈpɒθəsɪs/ (n)	гипотеза	гипотеза
infinite /ˈɪnfənət/ (adj)	шексіз	бесконечный
logically /ˈlɒdʒɪkli/ (adv)	қисынды	логически
motivation /ˌməʊtəˈveɪʃən/ (n)	мотивация	мотивация
prior /ˈpraɪə/ (adj)	алдыңғы	предшествующий
startling discovery (phr)	таңғажайып ашу	ошеломляющее
trillion /ˈtrɪljən/ (num)	триллион	триллион
widely accepted (phr)	кеңінен қабылданған	общепринятый
9b		
ability /əˈbɪləti/ (n)	қабілеті	способность
aging process (phr)	қартаю процессі	процесс старения
artificially /ˌɑːtɪfɪʃəli/ (adv)	жасанды түрде	искусственно
breed /briːd/ (v)	көбейту	разводить
cell /sel/ (n)	жасуша	клетка
combat /ˈkɒmbæt/ (v)	күрес	бой
compare /kəmˈpeə/ (v)	салыстыру	сравнить
development /dɪˈveləpmənt/ (n)	даму	развитие
efficient /ɪfɪʃənt/ (adj)	нәтижелі	эффективное
enzyme /ˈenzaɪm/ (n)	ферменттер	фермент
fantasy /ˈfæntəsi/ (n)	қиял	фантазия
fertility /fəˈtɪləti/ (n)	құнарлылық	плодородие
prevent /prɪˈvent/ (v)	жол бермеу	не допустить
process /ˈprəʊses (n)	процесс	процесс
protein /ˈprəʊtiːn/ (n)	ақуыз	белок

English	Kazakh	Russian
repair /rɪˈpeə (v)	жөндеу	ремонтировать
restore /rɪˈstɔː/ (v)	қалпына келтіру	восстановить
reverse /rɪˈvɜːs/ (v)	қарама-қарсы бағытта өзгерту	изменять (на противоположное)
serving /ˈsɜːvɪŋ/ (n)	бір кісілік тамақ	порция
technique /tekˈniːk/ (n)	техника	техника
toxin /ˈtɒksɪn/ (n)	токсин	токсин
wrinkle /ˈrɪŋkəl/ (n)	әжім	морщина
youthful /ˈjuːθfəl/ (adj)	жастық	юношеский
9c		
abundant /əˈbʌndənt/ (adj)	мол	обильный
biosphere /ˈbaɪəsfɪə/ (n)	биосфера	биосфера
breed /briːd/ (v)	көбейту	разводить
by-product /ˈbaɪ ˌprɒdʌkt/ (n)	жанама өнім	побочный продукт
convert /kənˈvɜːt/ (v)	түрлендіру	конвертировать
cope /kəʊp/ (v)	шамасы келу	совладать
dependent /dɪˈpendənt/ (adj)	тәуелді	зависимый
dose /dəʊs/ (n)	доза	доза
establish oneself (phr)	өзін өзі құру	утвердиться
evolution /ˌiːvəˈluːʃən/ (n)	эволюция	эволюция
fossil evidence (phr)	қазба белгілері	ископаемые доказательства
free radical /friː ˈrædɪkəl/ (n)	бос радикал	свободные радикалы
give rise to (phr)	туғызу	привести к...
molecule /ˈmɒlɪkjuːl/ (n)	молекула	молекула
photosynthesis /ˌfəʊtəʊˈsɪnθɪsɪs/ (n)	фотосинтез	фотосинтез
power /paʊə/ (v)	күшпен қамту	снабжать силовым двигателем
process /ˈprəʊses/ (n)	құбылыс	процесс
rely on /rɪˈlaɪ ɒn/ (v)	сену	положиться на
sea algae /siː ˌældʒiː/ (n)	теңіз балдырлары	морские водоросли
steadily /ˈstedəli/ (adv)	тұрақты түрде	постоянно
toxic /ˈtɒksɪk/ (adj)	улы	токсичный
venture /ˈventʃə/ (v)	(бір жерге баруға) батылы жету	отважиться войти/выйти и т. д.
wing /wɪŋ/ (n)	қанат	крыло
9d		
desirable /dɪˈzaɪərəbəl/ (adj)	қалаған	желаемый
enhance /ɪnˈhɑːns/ (v)	күшейту	усилить
genetic engineering /dʒəˌnetɪk ˌendʒəˈnɪərɪŋ/ (n)	гендік инженерия	генетическая инженерия
genetically unmodified /dʒəˌnetɪkli ˌʌnˈmɒdɪfaɪd/ (adj)	генетикалық модификацияланбаған	генно немодифицированный
strain /streɪn/ (n)	кернеу	напряжение
uninhabitable /ˌʌnɪnˈhæbɪtəbəl/ (adj)	өмір сүруге жарамсыз	непригодный для жилья
9e		
hold /həʊld/ (v)	ұстау	держать
impact /ˈɪmpækt/ (n)	әсер	влияние
logo /ləʊgəʊ/ (n)	логотип	логотип
science-themed /saɪəns θiːmd/ (adj)	ғылыми-тақырыптық	научно-тематический

English	Kazakh	Russian
9f		
adrenalin /ədrenəl-ən/ (n)	адреналин	адреналин
airway /eəweɪ/ (n)	әуе жолы	воздушный путь
allergy /ælədʒi/ (n)	аллергия	аллергия
brain /breɪn/ (n)	ми	мозг
dust /dʌst/ (n)	шаң	пыль
flow /fləʊ/ (n)	ағыс	течение
increase /ɪn'kriːs/ (v)	көбею	увеличиваться
irritate /ɪrəteɪt/ (v)	тітіркендіру	раздражать
jerky /dʒɜːki/ (adj)	бұзақы	порывистый
lung /lʌŋ/ (n)	өкпе	лёгкое
muscle /mʌsəl/ (n)	бұлшықет	мускул
pollen /pɒlən/ (n)	тозаң	пыльца
release /rɪ'liːs/ (v)	босату	освобождать
stretch /stretʃ/ (v)	созу	растягивать
throat /θrəʊt/ (n)	тамақ	горло
vibrate /vaɪ'breɪt/ (v)	дірілдеу	вибрировать
virus /vaɪərəs/ (n)	вирус	вирус
vocal cords /vəʊkəl kɔːdz/ (pl n)	дауыс желбезектері	голосовые связки
voice box /'vɔɪs bɒks/ (n)	көмей	гортань
Language in Use 9		
chairman /'tʃeəmən/ (n)	төрағасы	председатель
grab sb's attention (phr)	назарын аудару	привлечь чьё-либо внимание
hand in /hænd 'ɪn/ (phr v)	табыстау	вручать
hand out /hænd 'aʊt/ (phr v)	тарату	раздавать
hand over /hænd 'əʊvə/ (phr v)	өткізу	сдавать
hang on /hæŋ 'ɒn/ (phr v)	күту	ждать
hang out /hæŋ 'aʊt/ (phr v)	қыдыру	проводить время в отдыхе (обычно с друзьями)
interchange /ɪntətʃeɪndʒ/ (n)	алмасу	обмен
join in /dʒɔɪn 'ɪn/(phr v)	қосылу	присоединиться к...
join up /dʒɔɪn 'ʌp/ (phr v)	ену	соединять

Irregular Verbs

Infinitive	Past	Past Participle
be /biː/	was /wɒz/	been /biːn/
bear /beə/	bore /bɔː/	born(e) /bɔːn/
beat /biːt/	beat /biːt/	beaten /biːtən/
become /bɪˈkʌm/	became /bɪˈkeɪm/	become /bɪˈkʌm/
begin /bɪˈgɪn/	began /bɪˈgæn/	begun /bɪˈgʌn/
bite /baɪt/	bit /bɪt/	bitten /bɪtən/
blow /bləʊ/	blew /bluː/	blown /bləʊn/
break /breɪk/	broke /brəʊk/	broken /brəʊkən/
bring /brɪŋ/	brought /brɔːt/	brought /brɔːt/
build /bɪld/	built /bɪlt/	built /bɪlt/
burn /bɜːn/	burnt (burned) /bɜːnt (bɜːnd)/	burnt (burned) /bɜːnt (bɜːnd)/
burst /bɜːst/	burst /bɜːst/	burst /bɜːst/
buy /baɪ/	bought /bɔːt/	bought /bɔːt/
can /kæn/	could /kʊd/	(been able to /bɪn ˈeɪbəl tə/)
catch /kætʃ/	caught /kɔːt/	caught /kɔːt/
choose /tʃuːz/	chose /tʃəʊz/	chosen /tʃəʊzən/
come /kʌm/	came /keɪm/	come /kʌm/
cost /kɒst/	cost /kɒst/	cost /kɒst/
cut /kʌt/	cut /kʌt/	cut /kʌt/
deal /diːl/	dealt /delt/	dealt /delt/
dig /dɪg/	dug /dʌg/	dug /dʌg/
do /duː/	did /dɪd/	done /dʌn/
draw /drɔː/	drew /druː/	drawn /drɔːn/
dream /driːm/	dreamt (dreamed) /dremt (driːmd)/	dreamt (dreamed) /dremt (driːmd)/
drink /drɪŋk/	drank /dræŋk/	drunk /drʌŋk/
drive /draɪv/	drove /drəʊv/	driven /drɪvən/
eat /iːt/	ate /eɪt/	eaten /iːtən/
fall /fɔːl/	fell /fel/	fallen /ˈfɔːlən/
feed /fiːd/	fed /fed/	fed /fed/
feel /fiːl/	felt /felt/	felt /felt/
fight /faɪt/	fought /fɔːt/	fought /fɔːt/
find /faɪnd/	found /faʊnd/	found /faʊnd/
fly /flaɪ/	flew /fluː/	flown /fləʊn/
forbid /fəˈbɪd/	forbade /fəˈbæd/	forbidden /fəˈbɪdən/
forget /fəˈget/	forgot /fəˈgɒt/	forgotten /fəˈgɒtən/
forgive /fəˈgɪv/	forgave /fəˈgeɪv/	forgiven /fəˈgɪvən/
freeze /friːz/	froze /frəʊz/	frozen /frəʊzən/
get /get/	got /gɒt/	got /gɒt/
give /gɪv/	gave /geɪv/	given /gɪvən/
go /gəʊ/	went /went/	gone /gɒn/
grow /grəʊ/	grew /gruː/	grown /grəʊn/
hang /hæŋ/	hung (hanged) /hʌŋ (hæŋd)/	hung (hanged) /hʌŋ (hæŋd)/
have /hæv/	had /hæd/	had /hæd/
hear /hɪə/	heard /hɜːd/	heard /hɜːd/
hide /haɪd/	hid /hɪd/	hidden /hɪdən/
hit /hɪt/	hit /hɪt/	hit /hɪt/
hold /həʊld/	held /held/	held /held/
hurt /hɜːt/	hurt /hɜːt/	hurt /hɜːt/
keep /kiːp/	kept /kept/	kept /kept/
know /nəʊ/	knew /njuː/	known /nəʊn/
lay /leɪ/	laid /leɪd/	laid /leɪd/
lead /liːd/	led /led/	led /led/
learn /lɜːn/	learnt (learned) /lɜːnt (lɜːnd)/	learnt (learned) /lɜːnt (lɜːnd)/
leave /liːv/	left /left/	left /left/
lend /lend/	lent /lent/	lent /lent/
let /let/	let /let/	let /let/
lie /laɪ/	lay /leɪ/	lain /leɪn/
light /laɪt/	lit /lɪt/	lit /lɪt/
lose /luːz/	lost /lɒst/	lost /lɒst/
make /meɪk/	made /meɪd/	made /meɪd/
mean /miːn/	meant /ment/	meant /ment/
meet /miːt/	met /met/	met /met/
pay /peɪ/	paid /peɪd/	paid /peɪd/
put /pʊt/	put /pʊt/	put /pʊt/
read /riːd/	read /red/	read /red/
ride /raɪd/	rode /rəʊd/	ridden /rɪdən/
ring /rɪŋ/	rang /ræŋ/	rung /rʌŋ/
rise /raɪz/	rose /rəʊz/	risen /rɪzən/
run /rʌn/	ran /ræn/	run /rʌn/
say /seɪ/	said /sed/	said /sed/
see /siː/	saw /sɔː/	seen /siːn/
sell /sel/	sold /səʊld/	sold /səʊld/
send /send/	sent /sent/	sent /sent/
set /set/	set /set/	set /set/
sew /səʊ/	sewed /səʊd/	sewn /səʊn/
shake /ʃeɪk/	shook /ʃʊk/	shaken /ʃeɪkən/
shine /ʃaɪn/	shone /ʃɒn/	shone /ʃɒn/
shoot /ʃuːt/	shot /ʃɒt/	shot /ʃɒt/
show /ʃəʊ/	showed /ʃəʊd/	shown /ʃəʊn/
shut /ʃʌt/	shut /ʃʌt/	shut /ʃʌt/
sing /sɪŋ/	sang /sæŋ/	sung /sʌŋ/
sit /sɪt/	sat /sæt/	sat /sæt/
sleep /sliːp/	slept /slept/	slept /slept/
smell /smel/	smelt (smelled) /smelt (smeld)/	smelt (smelled) /smelt (smeld)/
speak /spiːk/	spoke /spəʊk/	spoken /spəʊkən/
spell /spel/	spelt (spelled) /spelt (speld)/	spelt (spelled) /spelt (speld)/
spend /spend/	spent /spent/	spent /spent/
stand /stænd/	stood /stʊd/	stood /stʊd/
steal /stiːl/	stole /stəʊl/	stolen /stəʊlən/
stick /stɪk/	stuck /stʌk/	stuck /stʌk/
sting /stɪŋ/	stung /stʌŋ/	stung /stʌŋ/
swear /sweə/	swore /swɔː/	sworn /swɔːn/
sweep /swiːp/	swept /swept/	swept /swept/
swim /swɪm/	swam /swæm/	swum /swʌm/
take /teɪk/	took /tʊk/	taken /teɪkən/
teach /tiːtʃ/	taught /tɔːt/	taught /tɔːt/
tear /teə/	tore /tɔː/	torn /tɔːn/
tell /tel/	told /təʊld/	told /təʊld/
think /θɪŋk/	thought /θɔːt/	thought /θɔːt/
throw /θrəʊ/	threw /θruː/	thrown /θrəʊn/
understand /ˌʌndəˈstænd/	understood /ˌʌndəˈstʊd/	understood /ˌʌndəˈstʊd/
wake /weɪk/	woke /wəʊk/	woken /wəʊkən/
wear /weə/	wore /wɔː/	worn /wɔːn/
win /wɪn/	won /wʌn/	won /wʌn/
write /raɪt/	wrote /rəʊt/	written /rɪtən/