

Section 3

Science or fraud?



52 Read the quotation and choose the best explanation of it. Do you agree with it?

“To mistrust science and deny the validity of the scientific method is to resign your job as a human. You’d better go look for work as a plant or wild animal.”

P. J. O’Rourke, American political satirist,
journalist and writer

- a) If you are not a scientist, you are not a good person.
- b) If you don’t believe in science, you are not a good thinker.
- c) If you are bad at science, you should leave your job.

1) Do Ex.52

53 Listen to an interview with a scientist and decide whether these statements are true (T) or false (F) according to the speaker.

- 1 Science is extremely important for the lives of future generations.
- 2 Science is the way humans change the world.
- 3 Science combines many different processes.
- 4 Science is more important for society than for individuals.
- 5 Science has an extremely wide application.
- 6 Science helps us to become aware of environmental problems.

54 Listen to the interview again and fill in the gaps in the sentences with not more than three words. Use your Workbook.

- 1 Firstly, science is our way of observing the ...
- 2 I think personally that science combines the use of observation, intuition, theory, hypothesis, ...
- 3 I think that few other things in life have as wide of an application in a person's ... , or ... as does science.
- 4 ... our society is depending increasingly upon technology, and the result of this dependence is that our environment is ...
- 5 Knowing more about science will help us to become better informed about the kinds ...

55 Work in pairs. Discuss these questions.

- Do you think science is important for modern life? Why? / Why not?
- Would you like to take up science as a future profession?

56 Do you know of any new scientific discoveries made recently? Tell the rest of the class about them.

Use:

be extremely important / crucial for...
a way of observing the world around us
have a wide application in...
depend upon / on technology
become more informed about...

2) Listen to the interview

Do ex. 53/54

GRAMMAR FOCUS:
WORD CATEGORIES (REVISION)

57 Put the words from the list into these categories: articles, prepositions, relative pronouns / question words, linking words, auxiliary verbs, comparatives, expressions of quantity, indefinite pronouns, personal pronouns.

Use your Workbook. Add more words to the categories.

anyone than so who for many where everything have
the but a it from do whatever which and more was
on they few is as with little you



3) Do the ex.57

58 a) Fill in the gaps. Refer to the "How to deal with structural clozes" in "Learning strategies" to help you.

a solar eclipse

Secrets of an Ancient Computer



Computers go back farther in history than you might imagine. A mysterious mechanism found in a 2,000-year-old Greek shipwreck may have been used to calculate the positions of planets, predict when eclipses were to occur, and solve other astronomical problems.

Known as the Antikythera mechanism, the device is about (1) ... size of a shoebox. When (2) ... was found underwater about 100 years ago, the mechanism was (3) ... poor shape. (4) ... metal pieces had congealed into one mass, then broken into pieces.

People (5) ... studied what was left of the mechanism suspected that it (6) ...

something to do with astronomy. To find (7) ... more, researchers recently used advanced imaging methods, including X-ray computer tomography, to look inside the metal fragments and to check for ancient writing on the device.

The researchers discovered (8) ... the mechanism had at least 30 bronze gears with as many as 225 teeth, likely all cut (9) ... hand.

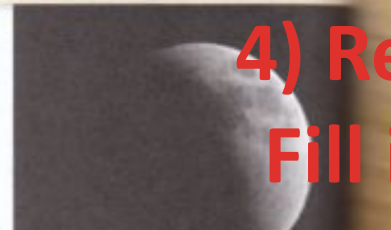
This fresh look provided clear evidence that the device could have (10) ... used to compute eclipses of the sun and moon. A lunar eclipse occurs (11) ... the moon passes into Earth's shadow, and a solar eclipse occurs (12) ... the moon passes between the sun and Earth.

Scientists suspect that the mechanism (13) ... also able to show the motions of the planets. A user could pick a day in the future and, using some sort of crank, work out a planet's position on (14) ... date.

With the added information, the researchers came up with a new model for how the mechanism operated. All (15) ... findings show that the Antikythera mechanism was perhaps 1,000 years ahead of anything else discovered from its time period.

b) Read the text again. Say what the ancient device is like:

- How old is it?
- Where was it found?
- How big is it?
- What could it do?



4) Read the text,
Fill in the gaps,
Answer the questions

- 61** Work in pairs. Check the meaning of the words using a dictionary. Complete the gaps with the words from the box. Change the form if necessary.

search for claim investigate challenge
 declare reject accept reveal confess

- 1 They ... to have made a new discovery.
- 2 Stephen was ... the winner.
- 3 He was frustrated because his colleagues ... his arguments.
- 4 Scientists are ... evidence.
- 5 The research aims to ... why the company is not doing better.
- 6 The survey ... that most residents are against the new project.
- 7 Sarah ... his explanation without question.
- 8 He later ... that he had been involved in the trick.
- 9 They are likely to ... the decision because it was made in a hurry.

5. Do ex.61/62

- 62** Work in pairs. Match the words to their explanations and find Russian equivalents for these words.

- | | |
|-----------|---|
| 1 fake | a) something that is not what people claim it is, and is designed to trick people |
| 2 hoax | b) a copy of something such as a painting or piece of jewellery that is intended to trick people |
| 3 scandal | c) someone who is very interested in and knows a lot about a particular subject |
| 4 fraud | d) a trick in which someone deliberately tells people that something bad is going to happen or something is true when it is not |
| 5 buff | e) talk or reports in the newspapers or on television about shocking events |

НОМЕТASK

60 Read the rules and decide whether they are serious or humorous. What made you think so? Give reasons for your answers.

Rules of the lab

If an experiment works, something has gone wrong.

When you don't know what you're doing, do it neatly.

Experience is directly proportional to equipment ruined.

Always keep a record of your data. It indicates that you have been working.

To do a lab really well, have your report done well in advance.

If in doubt, make it sound convincing.

Do not believe in miracles — rely on them.

Team work is essential; it allows you to blame someone else.

All unmarked beakers contain fast-acting, extremely toxic poisons.

No experiment is a complete failure. At least it can serve as a negative example.

Any delicate and expensive piece of glassware will break before any use can be made of it.

1. Распределите данные утверждения на серьёзные и юмористические (можно оформить в виде таблицы)

63 Work in groups. Follow the steps of the jigsaw reading.

- Read the article your teacher gives to your group. Help each other to understand it. Use a dictionary if necessary.
- Fill in your line in the table. Use your Workbook.
- Form new groups with at least one member from each of the other groups. Do not show your notes to the new group.
- Take it in turns to ask and answer questions about the different articles so that you can fill in the whole table.
- Go back to your first group. Compare your notes and reconstruct the rest of the articles. Read them aloud in your groups.
- If you have difficulties reconstructing the articles, ask questions to clear them up.

Are aliens coming?

People have been searching for extraterrestrials for years but there is no real proof that they exist. But people's interest in UFOs surfaces again and again when new "facts" — real or imaginary — appear. At the age of globalisation such waves of interest spread all over the world very quickly due to the development of the TV and the internet.

For example, some years ago the "Roswell case" launched a hot discussion in the USA.

**2. Read the stories,
Complete the table
(заполните
таблицу)**

A film showing the autopsy of an alien who died in a UFO crash in 1947 in Roswell, New Mexico, gave what UFO believers claimed to be real proof that extraterrestrials exist. The US Committee for the Scientific Investigation of Claims of the Paranormal examined the film carefully checking every detail, including the age and the quality of the film, the photographer, and the shots of the alien's organs. The investigation proved that the film was not real.

Great inventions

Inventors come up with all sorts of crazy ideas and create a lot of strange things. Cars that run on water, or machines that generate energy are just some examples of what have been invented.

One of the first world-known perpetual motion machines was invented by Charles Redheffer and exhibited in Philadelphia and New York in the beginning of the 19th century. Hundreds of people paid a dollar to see it and the invention became a profitable business.

The machine really looked as if it was turning by itself without any power. But it became obvious that there was actually a man off-site who was turning the crank.

For skeptics it was a convincing victory of how common sense prevails, but these types of failures couldn't stop creative inventors.

One hundred and fifty years later, another American, Joe Newman, presented his "energy machine". He persuaded people that if they bought one, they could forget about electrical bills after that. Some people believed him and now can't understand why they are still getting electricity bills.

IQ — a number that influences your life

IQ is a number that we think shows a person's intelligence. But what does it depend on?

For many years scientists believed that IQ was mostly inherited. One of the largest IQ studies was held by Sir Cyril Burt, professor of psychology at University College of London. He based his theory on the studies of twins and proved that IQ was really



mostly inherited. His study was the largest and the results looked truly representative. Even skeptics believed them.

As a highly respected scientist Burt supported the much-debated 11+ exam and thus influenced children's school life throughout Britain.

Burt died in 1971 and what a shock it was when scientists found out that many results left by the professor couldn't be called "scientific" as they were not supported by real figures. What is more, some of his IQ studies did not exist at all, even the names of his assistants were invented by the professor. So, the role of genes in IQ is still under discussion.

Crop circles

Some people think crop circles have been caused by aliens but there are really no reliable theories on how they appeared.

They were first noticed in fields in southern England in the 1970s, but then spread over the world. People reported that they had seen balls of light and heard high-pitched noises over the fields. Various "scientific" explanations appeared immediately. Some researchers blamed tornados, while others blamed "directed plasma" and geomagnetic currents running through the Earth. Alien-related theories appeared and military experiments started becoming connected with crop circles.

All sorts of interpretations were made. The circles were given sometimes mysterious or religious meanings, and even healing powers.

The discussion was hot and unresolved when a pair of frauds confessed showing a special press the used to make the circles.

But it was too late... Many people still want to know why there are crop circles all over the world.

No	Title	Topic / What happened	Where it happened / Who was involved	How the mystery was revealed	Outcomes
1	Are aliens coming?				
2	Great inventions				
3	IQ — a number that influences your life				
4	Crop circles				



64 Finish these sentences about yourself.

a) Compare your notes to your partner's.

- 1 I didn't know that...
- 2 It was interesting to learn that...
- 3 I was surprised to know that...
- 4 The conclusion I can make is that...

3. Finish the sentences (на основе прочитанных текстов)