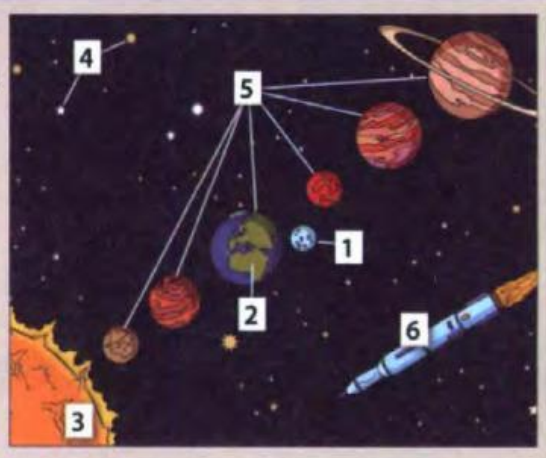
14 The universe and science

A The universe

- The **moon**[1] is a **satellite** of the **earth**[2]; **in other words**, it **circles** around the earth. This takes **approximately** 28 days.
- The earth **revolves** around the sun every 365 days.
- The **sun**[3] is a star, but seems much larger than other **stars**[4] because it is so close to the earth. Light from the sun takes approximately 8 minutes to **reach** the earth.
- 9 **planets**[5] revolve around the sun. We call the sun and all its planets the **solar system**.
- 100 years ago, sending **rockets**[6] into **space** seemed **incredible**, but now it is a fact of life and we have learned **a great deal** about the **universe** since then.



GLOSSARY

satellite	an object that moves round a bigger object in space	**reach**	arrive somewhere
in other words	used for saying sth in a different way	**space** [U]	the area beyond the earth round the planets and stars
circle	go round sth in a circle SYN **revolve (around sth)**	**incredible**	difficult to believe
approximately	about, more or less SYN **roughly**	**a great deal**	a lot SYN **a good deal**
		universe	the whole of space and everything in it, including the planets and stars

1 One word is wrong in each sentence. Cross it out and write the correct word.

▶ The ~~sun~~ circles the earth. moon
1 The planets are in the solar space. .....
2 The earth revolves around the moon. .....
3 The sun is a planet. .....
4 Man first walked on the sun in 1969. .....
5 Mars is a star. .....
6 We can send planes into space. .....
7 We've learned a big deal about space. .....
8 The world is the whole of space and everything in it. .....

2 Complete the sentences.

▶ There are billions of stars in the universe.
1 Is it important to send rockets into _____?
2 Mars, Jupiter and Venus are all _____.
3 As far as we know, all human life lives on _____.
4 For many people, the idea of human life in other parts of the universe is _____.
5 It takes rockets _____ 260 days to _____ Mars.
6 The earth _____ around the sun every 365 days.
7 One of the _____ crashed when it landed.
8 The moon is a _____ of the earth.
9 The sun and all its planets are known as the _____ system.
10 We still don't know a great _____ about life on other planets.
11 The earth revolves around the sun: in other _____, the earth is a planet in our solar system.

3 Cover the text and glossary. Look at the picture. Name five things you can see.

▶ Mars ....
....

TEST YOURSELF

LIVEWORKSHEETS

B Scientific exploration

Why go to Mars?

Scientists have already sent **spacecraft**, including **satellites**, to **explore** the surface of Mars, and **carried out experiments** to see if they can **discover** any signs of life. **So far**, they haven't found any, but an **analysis** of the **solid** rocks brought back from Mars has **confirmed** that they were created by the presence of water and wind, so perhaps life could have **existed previously** on the planet.

SPOTLIGHT *discover or invent?*

If you **discover** something, you learn about or find something for the first time. **discovery** *n*

If you invent something, you create something that didn't exist before. **invention** *n*

- *They've **discovered** a new plant.*
- *Who **invented** the telescope?*

GLOSSARY

scientist	a person who studies the physical world **science** *n* **scientific** *adj*
spacecraft	a vehicle that travels into space, e.g. a rocket
satellite	electronic equipment that is sent into space and moves around a planet
explore	travel round a place in order to learn about it **exploration** *n*
carry out sth	do and complete a task
experiment	a scientific test in order to learn/find out sth
so far	up to now
analysis	the careful study of sth in order to explain it **analyse** *v*
solid	with no holes or spaces inside: ***solid rock***
confirm	say or show that sth is true or definite **confirmation** *n*
exist	If sth **exists**, it is present in the real world. **existence** *n*
previously	in a way that happened before or earlier

4 **Circle the correct word.**

▶ There was an *experiment / exploration* to test the levels of sugar in the blood.
1 These animals only *explore / exist* in South America – nowhere else.
2 They're going to *explore / analyse* the area to see what they can find.
3 The *discovery / invention* of the electric light bulb changed people's lives.
4 Scientists have *carried out / confirmed* experiments on animals.
5 Who *invented / discovered* the ancient city of Machu Pichu in Peru?
6 We've got the information, so now we need to *analyse / explore* it.

5 **Complete the sentences using the correct form of the word on the right.**

▶	Television was an incredible *invention*.	INVENT
1	There's a report from a group of _____.	SCIENCE
2	The _____ of penicillin was of major importance.	DISCOVER
3	We're waiting for _____ of the results.	CONFIRM
4	They will _____ the findings in the laboratory.	ANALYSIS
5	The 60s and 70s were an exciting period for space _____.	EXPLORE
6	Humans are always looking for the _____ of new life forms.	EXIST

6 **Complete the words in the sentences.**

▶ Who *discovered* the planet Venus?
1 At the moment there is no evidence that life e_____ on Mars.
2 They left camp and went to e_____ the countryside to see what they could find.
3 With the use of s_____, TV can show news from anywhere in the world.
4 Doctors believe they will have to c_____ o_____ further experiments with the drug.
5 We have analysed the s_____ rocks brought back from the planet, but s_____ f_____ we haven't found anything interesting.
6 Scientists have now c_____ that climate change is really happening.
7 We are still waiting for an a _____ of the results before we reach a conclusion.
8 There is now s_____ evidence that the ice cap is getting smaller.
9 Do you know if life existed p_____ on other planets in the solar system?
10 Scientists are developing a s_____ which will take paying passengers to the moon and back.

TEST YOURSELF

LIVEWORKSHEETS