

Science The Earth's movements

Objectives

- do a science quiz.
- learn about the solar system.
- read about the science of day and night.
- write a description of one of the planets.

Background

Pluto was said to be a planet until 2006 when astronomers chose to reclassify it as a *dwarf planet*. It was decided that Pluto's orbit around the Sun was different to that of the other planets of the solar system.

Warm-up

- Write the following on the board: _ _ _ _ _ . Ask students to call out letters in turn until the word *planet* is spelt out.
- Ask: *How many planets can you name in English?* Accept the names of the planets in L1 as students are unlikely to know all of them in English.
- Drill the names of the planets and check that students are pronouncing them correctly.

- Ask students to open their books at page 116.
 - Before students do the quiz, explain the meaning of *wonder*, *revolve* and *satellite*. Point out that, in this context, *satellite* refers to a body that revolves around a planet rather than a technological object sent into space to send and receive messages.
 - Read out the large numbers in question 4 and ask students to repeat them after you. Doing this means students will be prepared for them when they come to listen to them.
 - Ask students to work in pairs to complete the quiz. Either allow students to use their phones to look for information online or tell them that this is a 'phones-off' activity.

-  **1.43** Play the recording for students to check their answers.

Audioscript

We live on a planet called Earth. Earth is a planet in the solar system. There are eight planets in our solar system and they all revolve around the Sun. The Sun is a star. It is 150,000,000 km from the Earth. The Earth travels at 108,000 km an hour around the Sun. It takes 365.25 days for the Earth to revolve around the Sun. The Earth has got a satellite called the Moon. The Moon revolves around the Earth. It takes 27 days for the Moon to go around the Earth.

Answers

1 b 2 b 3 a 4 b 5 b 6 a 7 c

-  **1.44** Before students read the text, elicit or teach the meaning of *rotate*, *rotation*, *axis*, *face* and *face away from*.
 - Students work in pairs or small groups to match the sentence halves.
 - Check answers.

Answers

1 d 2 c 3 b 4 a

Your turn

- Before students do this activity, introduce them to the pronunciation of high numbers.
 - Write the following numbers on the board:
10,250,612 224,780,520
 - Read out the numbers: *ten million, two hundred and fifty thousand, six hundred and twelve; two hundred and twenty four million, seven hundred and eighty thousand, five hundred and twenty.*
 - Drill the numbers with the class a few times, then ask a few students to say the numbers on their own, but remember to choose the most confident students.
 - Write further such high numbers on the board and drill the pronunciation of them with the class.
 - If you have access to the Internet, do this activity in class. If not, set it for homework.
 - Give students 20 minutes to search the Internet to find the information on the planet of their choice.

Suggested answers

Name	Distance from the Sun	Number of moons	Time of rotation around the Sun	Duration of a day
Mercury	57,900,000	none	88 days	59 days
Venus	108,160,000	none	224 days	243 days
Earth	149,600,000	1	365.25 days	24 hours
Mars	227,936,640	2	687 days	24 hrs 37 mins
Jupiter	778,369,000	63	9 hrs 55 mins	9 hrs 55 mins
Saturn	1,427,034,000	61	10 hrs 39 mins	10 hrs 39 mins
Uranus	2,870,658,186	27	17 hrs 14 mins	17 hrs 14 mins
Neptune	4,496,976,000	13	16 hrs 7 mins	16 hrs 7 mins

Optional activity

- Students can use the information about their planet to make a multiple-choice quiz (like in Exercise 1).
- Students read out their quiz questions for their partner to answer.





2.4 Mars

See page 133 for activities you can do with this video.


 For homework, students can watch a video about the science of day and night: <http://www.bbc.co.uk/learningzone/clips/how-does-the-earths-rotation-create-day-and-night/2173.html>