

Astronomers discover 'earth-like planet'

Elementary

1 Warmer

There are eight planets in our solar system. How many can you name?

2 Key words

Fill the gaps in the sentences with these key words from the text. The paragraph numbers will help you.

light year

discover

observatory

astronomer

habitable

1. An _____ is someone who studies the stars and planets using scientific equipment including telescopes. (para 1)
2. An _____ is a building with a telescope, where people study the stars. (para 1)
3. If people _____ something, they find something that no one knew about before. (para 1)
4. A _____ place is one that people can live in. (para 2)
5. A _____ is a unit for measuring distances in space. (para 3)

3 Find the information

Find the following information in the text as quickly as possible.

1. What is the name of the new planet?
2. Is the planet bigger or smaller than Earth?
3. How often does it go round its sun?
4. How many light years is the planet from Earth?
5. How long would it take us to visit the new planet?
6. How many new planets has the Kepler mission discovered?

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6 October, 2016

- 1 Astronomers from the European Southern Observatory have announced the discovery of a new planet. Scientists often find new planets but this news is very exciting because the planet, named Proxima b, is in the solar system of Proxima Centauri, the nearest star to our own solar system.
- 2 The planet is in what scientists call the 'habitable zone', which means that it could have the conditions necessary for life to develop. The most important of these conditions is water. The planet must not be too near its sun or any water would boil, or too far away so that any water would freeze. Planets in the habitable zone have temperatures which, in theory, can support life.
- 3 Proxima b is 1.3 times the size of Earth. It orbits its sun every 11 days and is located 4.2 light years from Earth or 40 trillion kilometres. It is different from Earth because it does not rotate so the same side faces its sun all the time. This means there is no day or night as we have here on Earth. It would take a long time for us to visit our nearest neighbour. Using the latest technology, it would take 70,000 years.
- 4 NASA's Kepler mission, located in a space observatory, continuously measures the brightness of 150,000 stars in the hope of finding new planets. So far, it has discovered over 4,500 new planets but only 21 of them are in the habitable zone.

4 Comprehension check

Match the beginnings to the endings to make statements about the text.

- | | |
|---|--|
| 1. The news is exciting ... | a. ... by measuring the brightness of stars. |
| 2. If a planet is in the habitable zone, ... | b. ... the same side always faces its sun. |
| 3. The most important condition ... | c. ... because the new planet orbits the nearest star to our solar system. |
| 4. The planet does not rotate so ... | d. ... because it would take 70,000 years to get there. |
| 5. The Kepler mission finds new planets ... | e. ... it has the conditions to support life. |
| 6. People will not be able to visit Proxima b ... | f. ... is water. |

5 Chunks

Rearrange the words to make phrases from the text.

1. important of the these most conditions
2. it time would a long take
3. of 21 them only
4. the technology using latest

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6 Vocabulary focus

Match the words from the text with their meanings.

- | | |
|-----------------|--|
| 1. rotate | a. without stopping |
| 2. orbit | b. one million million |
| 3. trillion | c. change into ice |
| 4. continuously | d. turn round |
| 5. freeze | e. the situation in which something can happen |
| 6. conditions | f. move around a planet or star |

7 Two-word expressions

Match the words in the left-hand column with the words in the right-hand column to make phrases from the text.

- | | |
|--------------|---------------|
| 1. nearest | a. news |
| 2. solar | b. neighbour |
| 3. latest | c. theory |
| 4. exciting | d. zone |
| 5. habitable | e. system |
| 6. in | f. technology |

8 Discussion

Do you believe life exists on other planets? Why? Why not?

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(in order from the Sun) Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune

Teacher's note: There is an ongoing dispute about whether to include Pluto in the list of planets. Since it was established that it is definitely not a comet (the reason for its downgrading), it has been reclassified as a dwarf planet and may be reclassified as a planet in the near future.

2 Key words

1. astronomer
2. observatory
3. discover
4. habitable
5. light year

3 Find the information

1. Proxima b
2. bigger
3. every 11 days
4. 4.2
5. 70,000 years
6. over 4,500

4 Comprehension check

1. c
2. e
3. f
4. b
5. a
6. d

5 Chunks

1. the most important of these conditions
2. it would take a long time
3. only 21 of them
4. using the latest technology

6 Vocabulary focus

1. d
2. f
3. b
4. a
5. c
6. e

7 Two-word expressions

1. b
2. e
3. f
4. a
5. d
6. c