

Scientists find water on Mars

Elementary

1 Warmer

Put the planets of our solar system in order from 1 (nearest to the Sun) to 8 (furthest from the Sun).

- | | |
|----------|------------|
| 1. _____ | a. Jupiter |
| 2. _____ | b. Neptune |
| 3. _____ | c. Mercury |
| 4. _____ | d. Earth |
| 5. _____ | e. Mars |
| 6. _____ | f. Uranus |
| 7. _____ | g. Saturn |
| 8. _____ | h. Venus |

2 Key words

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

survive

lake

radar

bacteria

pole

enormous

- _____ is a system that uses radio signals to find exactly where something is. (para 2)
- A _____ is a large area of water with land all around it. (para 2)
- A _____ is one of the points on the very top or bottom of a planet. (para 2)
- If something is _____, it is very, very big. (para 3)
- _____ are very small living things. (para 5)
- If living things _____, they continue to exist. (para 5)

3 Find the information

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

- When did Mars Orbiter reach Mars?
- What is another name for Mars?
- How wide is the lake?
- How deep is the water in the lake?
- What is the temperature of the water?
- How long have the bacteria in the lake in Antarctica survived?

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6 September, 2018

- 1 Are we alone here on Earth or is there life on other planets? People have tried to answer this question for many years but now, we may be a little bit closer to finding that answer.
- 2 The European Space Agency's Mars Orbiter first reached Mars in 2003. Since then, it has sent pictures and other data back to Earth. Using a radar instrument called Marsis, scientists have found an underground lake near the south pole of the Red Planet.
- 3 Just as the North Pole and the South Pole here on Earth are covered in thick ice, the poles on Mars are also covered in ice. But now, we know that there is an enormous lake about 1.5km below that ice. The lake is around 20 kilometres wide. Scientists are not sure how deep the lake is but believe that it must be at least one metre deep.
- 4 The water in the lake is probably very cold – between minus 30 and minus 60 degrees Celsius but it is not ice. It is not frozen because it contains a lot of salt and because there is so much ice above it.
- 5 Are there live bacteria in this underground lake? Scientists are not sure. They will only know the answer to this question when they can test the water. This will not happen for many years. However, there are underground lakes on Earth, too, near the North Pole in Greenland and near the South Pole in Antarctica. Living bacteria have been found in one deep underground lake in Antarctica and these bacteria have survived for millions of years. Perhaps the same will be true of the lake on Mars. Then, we will know for the first time that we are not alone.

4 Comprehension check

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

- | | |
|--|--|
| 1. Scientists used a radar instrument ... | a. ... a lot of salt so it is not frozen. |
| 2. The underground lake ... | b. ... we will finally know that we are not alone. |
| 3. The lake is around ... | c. ... to find the underground lake on Mars. |
| 4. The water in the lake contains ... | d. ... if there are bacteria living in the water in the lake. |
| 5. Scientists do not know ... | e. ... is about one and a half kilometres below the ice at the south pole of Mars. |
| 6. If they find bacteria in the water, ... | f. ... 12 miles wide and three feet deep. |

5 Chunks

Rearrange the words to make phrases from the text.

1. least deep one at metre
2. of millions years for
3. it a salt lot contains of
4. twenty wide around kilometres

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6 Two-word phrases

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

- | | |
|----------------|---------------|
| 1. underground | a. agency |
| 2. space | b. instrument |
| 3. radar | c. bacteria |
| 4. living | d. lake |

7 Prepositions

Use these prepositions to complete the phrases from the text.

for

since

of

in

- covered _____ ice
- _____ the first time
- _____ then
- the south pole _____ the Red Planet

8 Discussion

- Would you like to visit Mars? Why? Why not?

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KEY

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Teacher's note: Pluto is not included because it is now considered a dwarf planet.

1. Mercury
2. Venus
3. Earth
4. Mars
5. Jupiter
6. Saturn
7. Uranus
8. Neptune

2 Key words

1. radar
2. lake
3. pole
4. enormous
5. bacteria
6. survive

3 Find the information

1. in 2003
2. the Red Planet
3. around 20 kilometres
4. probably at least one metre
5. between minus 30 and minus 60 degrees Celsius
6. for millions of years

4 Comprehension check

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

5 Chunks

1. at least one metre deep
2. for millions of years
3. it contains a lot of salt
4. around twenty kilometres wide

6 Two-word phrases

1. d
2. a
3. b
4. c

7 Prepositions

1. in
2. for
3. since
4. of