Reading: C1

Life on Mars

Read an article about life on Mars to practise and improve your reading skills.

Before reading

Do the preparation task first. Then read the text and do the exercises.

Preparation task

Circle the word that does not belong.

1. Which word does not belong?
    a. sulfur
    b. cardboard
    c. methane
    d. carbon

2. Which word does not belong?
    a. astonishing
    b. amazing
    c. tedious
    d. remarkable

3. Which word does not belong?
    a. data
    b. query
    c. evidence
    d. findings

4. Which word does not belong?
    a. speculate
    b. suspect
    c. consider
    d. rehearse

5. Which word does not belong?
    a. periodically
    b. repeatedly
    c. consistently
    d. frequently

6. Which word does not belong?
    a. source
    b. result
    c. origin
    d. root

Reading text: Life on Mars

A new study published in the journal *Science* shows definitive evidence of organic matter on the surface of Mars. The data was collected by NASA's nuclear-powered rover Curiosity. It confirms earlier findings that the Red Planet once contained carbon-based compounds. These compounds – also called organic molecules – are essential ingredients for life as scientists understand it.

The organic molecules were found in Mars's Gale Crater, a large area that may have been a watery lake over three billion years ago. The rover encountered traces of the molecule in rocks extracted from the area. The rocks also contain sulfur, which scientists speculate helped preserve the organics even when the rocks were exposed to the harsh radiation on the surface of the planet.

Scientists are quick to state that the presence of these organic molecules is not sufficient evidence for ancient life on Mars, as the molecules could have been formed by non-living processes. But it's still one of the most astonishing discoveries, which could lead to future revelations. Especially when one considers the other startling find that Curiosity uncovered around five years ago.

The rover analyses the air around it periodically, and in 2014 it found the air contained another of the most basic organic molecules and a key ingredient of natural gas: methane. One of the characteristics of methane is that it only survives a few hundred years. This means that something, somewhere on Mars, is replenishing the supply. According to NASA, Mars emits thousands of tons of methane at a time. The level of methane rises and falls at seasonal intervals in the year, almost as if the planet is breathing it.

NASA suspects the methane comes from deep under the surface of the planet. The variations in temperature on the surface of Mars cause the molecule to flow upwards at higher or lower levels. For example, in the Martian winter the gas could get trapped in underground icy crystals. These crystals, called clathrates, melt in the summer and release the gas. However, the source of the methane is still a complete mystery.

The world of astrobiology considers both of these studies as historical milestones. According to this information, Mars is not a dead planet. On the contrary, it is quite active and may be changing and becoming more habitable.

Of course, this means further research is necessary. Scientists say they need to send new equipment to Mars, equipment that can measure the air and soil with more precision. There are already missions underway. The European Space Agency's ExoMars ship lands in 2020 and will be able to drill into the ground on Mars to analyse what it finds. Additionally,

NASA is sending another Mars rover in the same year to collect samples of Martian soil and return them to Earth.

The possibility of life on Mars has fascinated humans for generations. It has been the subject of endless science-fiction novels and films. Are we alone in the universe or have there been other life forms within our Solar System? If the current missions to the Red Planet continue, it looks as if we may discover the answer very soon.

Tasks

Task 1

Are the sentences true or false or is the information not given?

1. The study in the journal *Science* was written by NASA scientists.

   True False Not given

2. This is not the first study to suggest that life existed on Mars in the past.

   True False Not given

3. A scientific vehicle found very small elements of an organic molecule within water extracted from the planet.

   True False Not given

4. It is believed that this conclusively proves that there was once life on the planet.

   True False Not given

5. Methane is a natural molecule that is a sign of life.

   True False Not given

6. All organic molecules have a limited lifespan.

   True False Not given

7. Mars can be said to have a winter and a summer.

   True False Not given

8. There are at least two more scientific expeditions heading to Mars.

   True False Not given

Task 2

Complete the sentences with the correct form of the word in CAPITALS.

1. The vehicle works using a pair of large .....-powered batteries. SUN
2. The data is not ..... to prove the existence of life. SUFFICE
3. The ..... shook the science world. REVEAL
4. It's far too early to reach any ..... conclusions. DEFINITE
5. This tool measures tiny ..... in temperature. VARY
6. The rover can pick up tiny samples with exact ..... . PRECISE
7. We are going to analyse the ..... back at the lab. FIND
8. This process is observed in all ..... from plants to animals. ORGANIC

Discussion

Do you think people will live on Mars?

Answers

Preparation task

1. b
2. c
3. b
4. d
5. c
6. b

Task 1

1. Not given
2. True
3. False
4. False
5. True
6. Not given
7. True
8. True

Task 2

1. solar
2. sufficient
3. revelations | revelation
4. definitive
5. variations
6. precision
7. findings
8. organisms