

IELTS Reading: Lesson 8



ARTICLE: Martian Chronicles

Instructions for 2nd Half of Class:

- 1) Skip to the questions. Do not read the article until you fully understand what the questions are asking.
 - 2) Look for key words. Find key words in the questions that you can reference to navigate the article.
 - 3) Scan the article for clues and answer as many easy questions as you can first. It is still recommended not to skip between question sections as it is easy to miss questions and lose easy points.
- A. While the first flight of the Mars helicopter got a lot of attention this week, an experiment on the Perseverance rover quietly accomplished another first, by making oxygen out of the Martian atmosphere. Embedded within the body of Perseverance is a toaster-sized instrument called MOXIE (Mars Oxygen In-Situ Resource Utilization Experiment). The instrument is a technology demonstrator that produced five grams of oxygen from the mostly carbon dioxide Martian air.
- B. Five grams is not a lot of oxygen. It would only keep you alive for about 10 minutes, but the success of this test is a huge step toward sending humans to live on the Red Planet, and bringing them home again. In simplest terms, Mars will kill you. The atmosphere is extremely thin, only one per cent the pressure of Earth's, and is almost entirely made of carbon. That means explorers from Earth will need to provide their own oxygen by either bringing it from Earth, which is hugely expensive, or making it from resources on Mars.
- C. MOXIE drew in a sample of Martian air, then using a combination of heat and electrochemistry, split the carbon dioxide molecules apart producing oxygen and carbon monoxide. The experiment proved that the process works, so in theory larger units could supply breathable air for Martian colonists. The advantage of a MOXIE-like system is that it can be set up easily and start producing oxygen right away no matter what the location.
- D. But there is another source of oxygen on Mars — ice. Like Earth, Mars has ice at the polar caps, and likely has significant amounts of sub-surface ice-rich permafrost. Not only is ice a source of water but you can crack that water into hydrogen and oxygen for both breathing and rocket fuel. Having a reliable oxygen supply on Mars is a big deal because the first humans to go there will be in for the long haul. Due to orbital mechanics of Mars and Earth, the two planets orbit the sun at different speeds.
- E. A crew must launch toward Mars when both planets are close together on the same side of the sun, but by the time they get there seven months later, they will have to wait for Earth to circle the sun and catch up to Mars again before they can make the return journey. That could take up to a year. Martian colonists will be homesteaders, like early pioneers, living off the land as much as possible. Any problems will have to be dealt with on the spot because help is millions of kilometres and many months away.
- F. Perhaps they will occasionally look up at a small blue dot in the pink Martian sky and think about their home planet, the only one we know of where oxygen is plentiful, the only place where a person can step outside, take a deep breath and not have to wear a space suit. As we celebrate Earth Day this week, let's remember that while the other planets are incredibly interesting, there is literally no place like home. So go outside and breathe some oxygen. It's free on this planet.

Read the rest of this article at: <<https://www.cbc.ca/radio/quirks/first-breathable-air-produced-on-another-planet-1.5998870>>

VOCABULARY & PHRASES

breathable	Perseverance	explorers
occasionally	atmosphere	electrochemistry
orbital mechanics	oxygen	on the spot
crew	hydrogen	no place like home
permafrost	carbon dioxide	no matter what

IELTS Speaking: Lesson 8



QUESTIONS: Martian Chronicles

Questions 1-6

The Reading Passage has six paragraphs A–F. Choose the correct heading for each paragraph from the list of headings below.

- I. A Quiet Discovery
 - II. No Place Like Home
 - III. Another Source of Oxygen
 - IV. The Atmosphere on Mars
 - V. The History of Mars Travel
 - VI. A Long Way from Home
 - VII. Creating Oxygen on Mars
- 1. Section A
 - 2. Section B
 - 3. Section C
 - 4. Section D
 - 5. Section E
 - 6. Section F

Questions 7-11

Answer the questions below with words taken from the Reading Passage.

Use NO MORE THAN THREE WORDS for each answer.

- 7. How long is the trip from Earth to Mars?
- 8. Compared to the atmosphere on Earth, how is the atmosphere on Mars?
- 9. In theory, who would be helped by a larger version of the MOXIE?
- 10. In celebration of earth day, the author suggests we go outside and do what?
- 11. How will martian colonists have to handle issues that arise?

Questions 12

Choose the correct letter A, B, C, or D.

- 12. This word best describes the genre of this article
 - A. Science fiction
 - B. Romance
 - C. Adventure
 - D. Journalism