

# AT HOME ON MARS

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A Will humans someday live and work on Mars? Many scientists think so. In fact, they are already working on plans to turn Mars into a new Earth.

B Humans need three basic things to live: water to drink, air to breathe, and food to eat. Because of the **lack** of these necessities, it isn't possible to live on Mars right now. For one thing, there is not enough oxygen. There is also no **liquid** water—just some ice. So how can we make Mars habitable?<sup>1</sup> The answer, scientists suggest, is a process called *terraforming*.

C Terraforming means changing the **environment** of a planet so that it is similar to Earth's. On Mars, the **average** temperature is

about minus 60 degrees Celsius. So one goal of terraforming Mars is to warm it up. Most scientists agree that Earth is becoming warmer due to increased **levels** of greenhouse gases in our atmosphere. We might be able to create similar conditions on Mars.

D One solution is to build factories on Mars that **release** greenhouse gases. The gases will change the Martian atmosphere, resulting in warmer temperatures. Mars's polar regions will begin to melt, releasing more carbon dioxide **trapped** inside the ice. Rain will eventually fall. It may then be possible to grow **plants** outdoors for food. The plants will add oxygen to the air, making human colonies on Mars a real possibility.

<sup>1</sup>If a place is habitable, you can live there.



## TURNING THE RED PLANET GREEN

### 1 FIRST VISITS

E Terraforming Mars will probably be a thousand-year project, starting with several survey missions. The flight to Mars will take 6 months, but the entire mission might last more than 18 months.

### 2 HOMES ON MARS

F Each new mission will build more habitation modules—places to live. These will allow future visitors to spend more time on Mars and learn more about living on the planet.

### 3 GLOBAL WARMING

G Factories on Mars will release carbon dioxide into the atmosphere, warming the planet and allowing water to flow.

### 4 LIFE UNDER DOMES

H Enormous domes will provide climate-controlled living spaces, first for plants and later for humans. It will take centuries to improve the rocky surface so that people can grow plants.

### 5 POWERING THE PLANET

I Nuclear power<sup>2</sup> and wind turbines<sup>3</sup> are two current technologies that we might be able to use on Mars.

### 6 DON'T FORGET YOUR MASK

J Even 1,000 years from now, there may not be enough oxygen for humans to breathe, so people on Mars may still need to use special breathing equipment.

<sup>2</sup>Nuclear power comes from the energy that is released when the central parts of atoms are split or combined.

<sup>3</sup>Wind turbines are engines with blades. They produce power when wind spins the blades.

**Task 3: Complete the following sentences with NO MORE THAN TWO WORDS from the reading on pages 112-113. Note the paragraphs where you find the information.**

1. There is no \_\_\_\_\_ on Mars - just ice. (Paragraph \_\_\_\_ )
2. Terraforming Mars means making it similar to \_\_\_\_\_. (Paragraph \_\_\_\_ )
3. For many years, humans probably won't be able to \_\_\_\_\_ on Mars without special equipment. (Paragraph \_\_\_\_ )
4. The flight to Mars will take \_\_\_\_\_ months. (Paragraph \_\_\_\_ )
5. One way to warm up Mars is to build \_\_\_\_\_. These will release \_\_\_\_\_ gases into the air. (Paragraph \_\_\_\_ )
6. Two technologies that exist now will probably give us power on Mars: \_\_\_\_\_ and \_\_\_\_\_.