

## Life on Mars



Right now, people are planning a one-way trip to Mars.

Elon Musk, an inventor and businessman, is in charge of a long trip through space. He founded a company to build spacecraft. He plans on using those spacecraft to bring 80,000 people to the “red planet,” Mars.

Musk believes the human race is in danger. He thinks that we’re running out of room and resources on this planet. He’s worried that humans could someday go extinct, like dinosaurs. Even today, around 200 different life forms on Earth go extinct every single day.

Musk wants people to live on many planets someday, so he is building rockets to take us there. Many people are interested in Musk’s company and want to know more about flying through outer space.

Getting to Mars, however, is only half the challenge. Right now, it’s impossible for human beings to breathe on Mars. It’s even impossible for human beings to walk around on Mars without a spacesuit. It is no place to live.

So, if humans land on Mars how will they survive?

The answer to this question has a lot to do with biodiversity. Biodiversity is used to describe the number and kinds of different living things in one place. There are many kinds of life forms: humans, dogs and cats, birds, cows and other animals. Different kinds of plants should be counted as life forms, too.

When scientists describe biodiversity, they don't just think about humans, plants and animals. They also think about the entire ecosystem, a whole community of living things from earth to sky, including bacteria and other kinds of organisms. And there can be thousands of kinds of life in the soil alone. Most of these life forms depend on one another to get by. If you go to Mars, how many of these life forms will you bring with you? How will you know what you need?

This is why Elon Musk is trying hard to figure out how humans will grow plants on Mars. Over the years, human beings have learned that soil is one of the most important ecosystems on Earth. In just one handful of soil, there can be thousands of tiny life forms that all help one another survive.

Soil allows plants to grow. The plants release oxygen, allowing animals and humans to breathe. And the entire ecosystem makes it possible for human beings to pick berries, go on hikes, and enjoy all the parts of nature.

So, if we begin by bringing soil with us, maybe one day there will be a forest on Mars.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. People are planning a one-way trip to which planet?

- A Earth
- B Mars
- C Saturn
- D Mercury

2. How does the author of the passage describe soil?

- A an ecosystem that is important for plants but not humans
- B a resource that can be found on Mars
- C one of the least important ecosystems on Earth
- D one of the most important ecosystems on Earth

3. Today, Earth is going through a number of changes.

Which information from the text supports this conclusion?

- A Elon Musk is planning a one-way trip to Mars.
- B Around 200 different life forms go extinct every single day.
- C Elon Musk is afraid that humans will someday go extinct, like dinosaurs.
- D In one handful of soil, there can be thousands of tiny life forms.

4. Based on the passage, why are plants important to human life?

- A Plants grow in soil.
- B Plants are counted as life forms, just like humans or other animals.
- C Plants release oxygen, allowing humans and animals to breathe.
- D Plants produce all of the food that humans will eat.

5. What is the passage mostly about?

- A the life of Elon Musk
- B the way to build a spacecraft
- C the challenge of bringing human life to Mars
- D the way that plants grow

6. Read the following sentences from the passage: "When scientists describe biodiversity, they don't just think about humans, plants and animals. They also think about the entire ecosystem, a whole **community** of living things from earth to sky, including bacteria and other kinds of organisms. And there can be thousands of kinds of life in the soil alone. Most of these life forms depend on one another to get by."

As used in the passage, what does the word "**community**" mean?

- A a collection of completely different living things
- B a group of humans with a common goal
- C a group of life forms who are all a part of the same ecosystem
- D a group of bacteria who live under the ground

7. Choose the answer that best completes the sentence below.

Elon Musk believes the human race is in danger, \_\_\_\_\_ he is planning a way for people to live on Mars.

- A so
- B but
- C finally
- D for instance

8. What do scientists mean when they say biodiversity?

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9. Explain how humans are affected by the other life forms around them. Use information from the passage to support your answer.

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10. Why is it so important to bring soil to Mars if humans are going to live there? Use information from the passage to support your answer.

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## Teacher Guide &amp; Answers

Passage Reading Level: Lexile 870

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8. What do scientists mean when they say biodiversity?

**Suggested answer:** Students should explain that biodiversity is used to describe the number and kinds of different living things in one place. Students may also explain that scientists consider the entire ecosystem, which includes every living thing from under the earth to in the sky when describing biodiversity.

9. Explain how humans are affected by the other life forms around them. Use information from the passage to support your answer.

**Suggested answer:** Humans, just like every other life form, are a part of an ecosystem and dependent on the other life forms in that ecosystem. Plants produce oxygen, and humans need oxygen to breathe, so humans are dependent on plants. But plants are also dependent on soil and the tiny living organisms in the soil to grow and continue to produce oxygen, which makes human life dependent on those life forms as well.

10. Why is it so important to bring soil to Mars if humans are going to live there? Use information from the passage to support your answer.

**Suggested answer:** Soil is one of the most important ecosystems on Earth. It is what plants need to grow, and the oxygen that plants produce is what humans need to breathe. Because there is no soil, plant life, or oxygen on Mars, soil is one of the most important things to bring to create an ecosystem that human beings can live in on Mars.