

Would You

Scientists think we could start living, breathing, and even growing food on the Red Planet in your lifetime. So what do you say? BY LAUREN TARSHIS

A spaceship blasts off. Five people are onboard, and they are heading to Mars. Their journey will take approximately 8 months. The travelers will land on a planet that is a huge, empty desert, where no animals live and no plants grow. Until now, not one human has set foot onto its red, dusty soil.

But these people have come to stay. They will build houses and grow their own food, making a new world for humans. Soon, others will join them.

No, this is not a science-fiction story.

For years, scientists have been predicting

that humans would someday live on Mars, and soon it could happen—for real. Scientists believe humans could be living on Mars within the next 15 to 20 years.

What do you think? Would you live on Mars?

Why Mars?

The universe is bigger than we can imagine. There are billions and billions and billions of planets. Seven of those planets are Earth's closest neighbors: Mercury, Venus, Mars, Jupiter, Saturn, Uranus, and Neptune. Our little space neighborhood is known as our solar system.

Each of these planets is different. Saturn is a swirling blob of poison gases, and the clouds of acid on Venus would turn a human body to mush. Mercury's temperatures rise up to 800 degrees Fahrenheit—that's as hot as a blazing campfire.

There is only one planet in our solar system, besides Earth, where humans might be able to live relatively comfortably: Mars.

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VOCABULARY

craters: big holes in the ground

radiation: a kind of energy that can be dangerous if there's too much of it

greenhouse: a glass building used for growing and protecting plants

pioneers: the first people to explore or settle in a new place

climate: the usual weather in a place

Vocab Slideshow 



PAUSE AND THINK: What are some other planets in our solar system like?

Continued 

Move to Mars?

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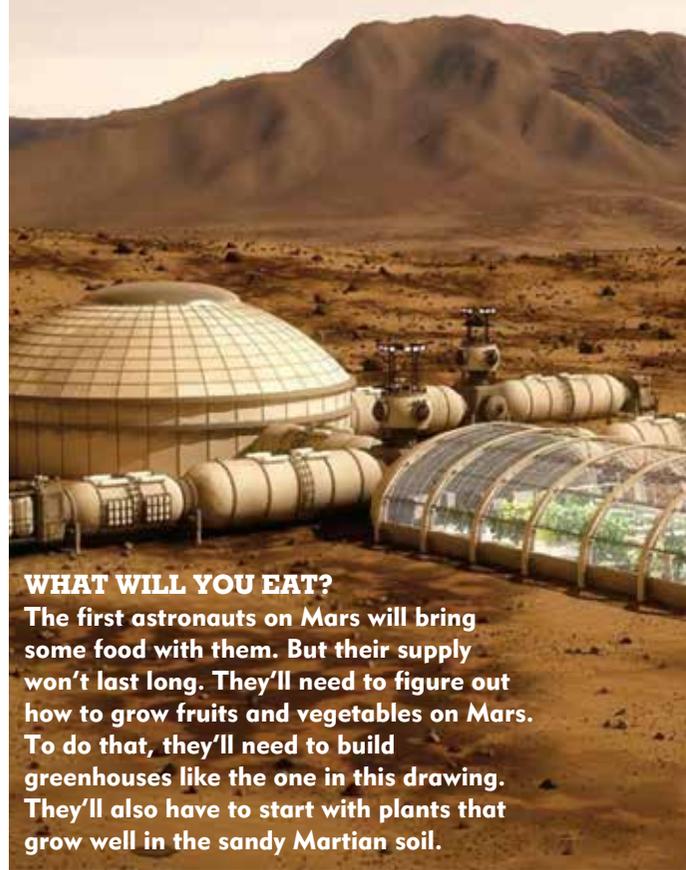
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HOME SWEET HOME

Scientists think people might someday be able to live on Mars.

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HOW WILL YOU GET THERE?

The spaceship that will take people to Mars doesn't exist yet. But a company named SpaceX has made a ship called the Dragon (above). SpaceX hopes to land the Dragon on Mars—without a crew—as soon as 2018.

WHAT WILL YOU EAT?

The first astronauts on Mars will bring some food with them. But their supply won't last long. They'll need to figure out how to grow fruits and vegetables on Mars. To do that, they'll need to build greenhouses like the one in this drawing. They'll also have to start with plants that grow well in the sandy Martian soil.

No Air or Water

Mars and Earth have a few similarities. They have the same amount of land, and they both have mountains and volcanoes.

Mars even looks like parts of Earth. Glance at a photo of red, rocky Mars, and you might believe you were looking at a beautiful desert in Utah.

But don't let the pretty photographs deceive you. Mars is a dangerous place. The air is not breathable—there is an insufficient amount of oxygen in it. There's not a drop of water, and gigantic dust storms fill the air with choking dirt. It can get as warm as 86 degrees F on Mars, but it's usually incredibly cold—only about 81 degrees F below zero.

Another enormous problem? Mars is extremely far away—tens of millions of miles from Earth. Currently, there is no rocket powerful enough to blast people that far into space.

Mission to Mars

But as you read this article, thousands of men and women are working on projects that could put humans on Mars by the 2030s. Most of these people are scientists and engineers working for NASA—the National Aeronautics and Space Administration.

NASA is in charge of America's space missions, and for more than 50 years, NASA experts have been working toward the goal of sending humans to Mars.

"We are further down the path to sending humans to Mars than at any point in NASA's history," says former NASA head Charles Bolden.

An immense breakthrough came in 1997, the year NASA landed its first robot on Mars. Subsequently, it has landed four others, and one, called *Opportunity*, has been exploring Mars for more than a decade.

These robots—called rovers—are controlled by scientists back on Earth. The rovers roll down into Mars's **craters** and climb rocky hills. With their



PAUSE AND THINK: Why is Mars a dangerous place?



WHERE WILL YOU LIVE?

Here's an artist's view of what a home on Mars might look like. Will it be this comfortable? No one knows. But it will definitely have to supply oxygen, since there is very little oxygen in the Martian atmosphere.

cameras and scientific instruments, the rovers send pictures back to Earth, along with information about the planet's soil and air.

The rovers have helped scientists learn about Mars. And now, scientists believe more strongly than ever that humans could live on Mars for months at a time—or even years.



PAUSE AND THINK: What do Mars rovers do? How does this help us?

Daily Life

It wouldn't be easy to live on Mars—or fun. You would spend most of your time inside, and when you did go outside, you would have to wear a spacesuit for breathing. The suit would also protect you from cancer-causing **radiation**.

For food, you'd eat what you could grow in a **greenhouse**—no Big Macs or Taco Bell. Any water on Mars is frozen underground and probably toxic. Scientists are unsure about how you would access the water, but you can be

certain there wouldn't be much of it. Showers would be rare, and probably no more than 60 seconds long.

It might get lonely too.

Staying in touch with your friends and family back on Earth wouldn't be easy. Who knows if you could Snapchat millions of miles from home?

Despite the challenges, many people seem eager to become Mars **pioneers**. In 2013, one company said that it is planning its own Mars colony. Within hours, more than 4,000 people had signed up for a chance to go.



PAUSE AND THINK: Why might it be difficult to live on Mars?

"We'll Get There"

Scientists admit that they see many challenges ahead, one of the biggest being money.

NASA will have to spend hundreds of billions of dollars to put people on Mars, and that money

Continued →

would come from our government. Not everyone agrees that it's worth the expense.

But some scientists say that space exploration is important for America—and for the world. Technologies invented for a Mars mission could help us solve problems here on Earth.

For example, Earth's **climate** is changing, and lessons we learn from farming on Mars could help us fix climate problems on our home planet.

Meanwhile, NASA is determined to keep its mission on track. By next year, NASA will finish building a brand-new rocket—the most powerful rocket ever created—and it will be strong enough to carry people to Mars.

“We have a lot of work to do to get humans to Mars,” says Bolden. “But we’ll get there.” •



PAUSE AND THINK: Why do people think space exploration is important?

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5 Questions About Mars

WHAT TO DO: Answer the questions below. Use full sentences.

HOW

1. How is Mars different from Earth?

WHO

2. Who is working to send people to Mars?

WHEN

3. When do some scientists think it will be possible for people to travel to Mars?

WHERE

4. Where would people on Mars grow food?

WHY

5. Why do some people believe it is important to send humans to Mars?
