

The Moon, Mars, and Beyond

People have always looked up at the **moon** and wondered what it is like. The moon is Earth's closest neighbor in space, but it is still very **far away**. For thousands of years, people could only **dream** about visiting it. Then, in 1969, astronauts finally landed there. Since that day, humans have wanted to **explore** even more of space. Scientists now study other **planets** too, like Mars. Each planet is different. Some are hot, some are cold, and some have no air at all. Today, new technology helps us travel farther than ever before. Space is no longer just a dream — it is becoming a real place to visit and study.

In 1969, an **astronaut** named Neil Armstrong became the first person to **land** on the moon. He stepped onto the moon's **surface** and said famous words people still remember today. He planted a **flag** there to mark the moment. His **footprint** is still on the moon because there is no wind to blow it away. This event changed how people saw space. It showed humans could travel far from Earth and survive in a new place. After this first trip, five more missions landed astronauts on the moon. Each one taught scientists more about our solar system. These early missions opened the door for all future space travel, including trips happening right now.

Getting to the moon is not easy. A **spacecraft** must **launch** from Earth using a powerful rocket. The rocket needs a huge amount of **fuel** to escape Earth's gravity. The trip, or **journey**, to the moon takes about three days. Astronauts train for years before they are ready to go. They learn how to live in a small space, eat special food, and handle emergencies. After their mission is finished, they must **return** safely to Earth. This is one of the most dangerous parts of the trip. The spacecraft must enter Earth's atmosphere at the right angle and speed. If all goes well, the astronauts land safely, ready to share what they learned with the world.

Now scientists look beyond the moon toward **Mars**, often called the **red planet** because of its rusty color. Mars is much farther from Earth, so trips take many months instead of days. Robots called **rovers** already explore Mars for us. These rovers move slowly across the Martian **soil**, taking pictures and collecting samples. Their main job is to **search** for signs that water, or even life, once existed there. So far, scientists have found proof that Mars had rivers and lakes millions of years ago. This makes many people excited about the planet's past. Some day, humans hope to walk on Mars just like astronauts once walked on the moon. Mars could become the next giant step for explorers.

Space travel used to belong only to governments, but that has changed. Today, **private** space **companies** also **build rockets** and send people into space. These companies work with space agencies, and sometimes they compete too. This competition pushes everyone to make faster and cheaper ways to travel beyond Earth. Some rockets can now be used more than once, which saves a lot of money. This was almost impossible just twenty years ago. Because of these new ideas, more people may travel to space in the future, not just trained astronauts. Tourists, scientists, and engineers could all take part in upcoming missions. Space travel is changing quickly, and new companies are a big reason why.

Looking ahead, space agencies and companies have a big **plan**: building a **base** on the moon or Mars where people could **live** for months. A base would give astronauts shelter, power, and a safe place to do research. This long-term home in space sounds like science fiction, but engineers are already designing it. In the **future**, a moon base could even help launch missions to Mars, since the moon has less gravity than Earth. This would make travel cheaper and easier. Scientists believe that within a few decades,

people might live and work in space the way they do in remote parts of Earth today. The moon and Mars may feel closer to home.

Beyond the Headlines

Here is something surprising: moon **dust** is dangerous! It looks soft, but it is sharp, like tiny pieces of glass. There is no wind or water on the moon to wear it down smooth. Astronauts who walked there wore a special **suit** to stay protected and to **breathe**, since the moon has no air at all. The dust stuck to everything and was almost impossible to clean off. Because the moon has much less **gravity** than Earth, astronauts could not just walk normally. Instead, they had to bounce or **float** across the surface in big, slow hops. Photos from the moon show astronauts jumping joyfully, almost like they were playing in slow motion!

Vocabulary

Paragraph 1

moon (n.)	(n.) The bright object that orbits Earth at night. <i>"You can see the moon clearly on a clear night."</i>
far away (adv. phrase)	(adv. phrase) A long distance from a place. <i>"The space station is far away from the city lights."</i>
dream (n.)	(n.) A hope or wish for something in the future. <i>"It was always her dream to become an astronaut."</i>
explore (v.)	(v.) To travel somewhere new to learn about it. <i>"Scientists want to explore other planets in our solar system."</i>
planets (n.)	(n.) Large round objects in space that orbit a star. <i>"There are eight planets in our solar system."</i>

Paragraph 2

astronaut (n.)	(n.) A person trained to travel and work in space. <i>"Every astronaut must train for many years before a mission."</i>
land (v.)	(v.) To arrive safely on a surface after flying. <i>"The spacecraft will land on the moon early tomorrow."</i>
surface (n.)	(n.) The outside or top layer of something. <i>"The rover moved slowly across the rocky surface."</i>
flag (n.)	(n.) A piece of cloth with a design that represents a country. <i>"The astronauts placed a flag on the ground."</i>
footprint (n.)	(n.) The mark a foot leaves behind on a surface. <i>"You could still see his footprint in the soft dust."</i>

Paragraph 3

spacecraft (n.)	(n.) A vehicle built to travel in space. <i>"The spacecraft carried three astronauts toward the moon."</i>
launch (v.)	(v.) To send something powerfully into the sky or space. <i>"Engineers worked for years to launch the new rocket."</i>
fuel (n.)	(n.) A substance burned to create power or energy. <i>"The rocket needs enough fuel to reach orbit."</i>
journey (n.)	(n.) A long trip from one place to another. <i>"The journey to the moon takes about three days."</i>
return (v.)	(v.) To come back to a place. <i>"The crew will return to Earth after their mission."</i>

Paragraph 4

Mars (n.)	(n.) The fourth planet from the sun, known for its red color. <i>"Many scientists hope humans will visit Mars one day."</i>
red planet (n. phrase)	(n. phrase) A common nickname for Mars because of its color. <i>"People often call Mars the red planet."</i>

rovers (n.)	(n.) Small robotic vehicles that explore a planet's surface. <i>"Several rovers have already explored the surface of Mars."</i>
soil (n.)	(n.) The loose material that covers the ground. <i>"The rover collected samples of soil to study."</i>
search (v.)	(v.) To look carefully for something. <i>"Scientists search for signs of water on Mars."</i>

Paragraph 5

private (adj.)	(adj.) Owned by a person or business, not the government. <i>"A private space company built the new rocket."</i>
companies (n.)	(n.) Businesses that sell products or provide services. <i>"Several companies now build rockets for space travel."</i>
build (v.)	(v.) To make something by putting parts together. <i>"Engineers build rockets in large factories."</i>
rockets (n.)	(n.) Vehicles that use powerful engines to fly into space. <i>"New rockets can be used more than one time."</i>

Paragraph 6

plan (n.)	(n.) An idea for how to do something in the future. <i>"Engineers have a plan to build a base on Mars."</i>
base (n.)	(n.) A place where people live and work for a long time. <i>"Scientists hope to build a base on the moon."</i>
live (v.)	(v.) To make your home in a place. <i>"Astronauts may one day live on the moon for months."</i>
future (n.)	(n.) The time that has not happened yet. <i>"In the future, people might travel to Mars easily."</i>

Beyond the Headlines

dust (n.)	(n.) Tiny dry pieces of dirt or material. <i>"Moon dust is surprisingly sharp and hard to clean."</i>
suit (n.)	(n.) Special clothing that protects the body. <i>"Astronauts wear a thick suit to survive in space."</i>
breathe (v.)	(v.) To take air into your lungs and let it out. <i>"Astronauts need special equipment to breathe in space."</i>
gravity (n.)	(n.) The force that pulls objects toward the ground. <i>"The moon has much weaker gravity than Earth."</i>
float (v.)	(v.) To move gently through the air without falling quickly. <i>"Astronauts seem to float when they jump on the moon."</i>

Language Review

Exercise A — True or False

Read each statement. Write True or False on the line.

1. Neil Armstrong was the first person to land on the moon. _____
2. Footprints on the moon disappear quickly because of strong winds. _____
3. A trip to the moon takes about three days. _____
4. Mars is called the red planet because of its color. _____
5. Rovers have already explored the surface of Mars. _____
6. Only governments are allowed to build and launch rockets. _____
7. Some rockets today can be used more than one time. _____
8. Moon dust is soft and easy to clean off equipment. _____

Exercise B — Matching

Match each word in Column A with its meaning in Column B. Write the correct letter.

Column A	Column B
1. astronaut	a. the force that pulls objects toward the ground
2. launch	b. to send something powerfully into the sky or space
3. journey	c. a place where people live and work for a long time
4. rovers	d. small robotic vehicles that explore a planet's surface
5. companies	e. a person trained to travel and work in space
6. base	f. to take air into your lungs and let it out
7. gravity	g. businesses that sell products or provide services
8. breathe	h. a long trip from one place to another

Exercise C — Multiple Choice

Choose the best answer (a, b, c, or d) for each question.

1. Who was the first person to land on the moon?
 - a. Buzz Aldrin
 - b. Neil Armstrong
 - c. John Glenn
 - d. Yuri Gagarin

2. In what year did the first moon landing happen?
 - a. 1959
 - b. 1965
 - c. 1969
 - d. 1975
3. About how long does the journey to the moon take?
 - a. One day
 - b. Three days
 - c. One week
 - d. One month
4. Why is Mars often called the red planet?
 - a. Because of its size
 - b. Because of its color
 - c. Because it is close to the sun
 - d. Because it has rings
5. What do rovers do on Mars?
 - a. They build bases
 - b. They carry astronauts
 - c. They collect samples and take pictures
 - d. They launch rockets
6. What has changed about who can build rockets today?
 - a. Only the military can build them
 - b. Private companies can also build them
 - c. No one can build them anymore
 - d. Only one country can build them
7. Why might a moon base help future missions to Mars?
 - a. The moon has more water
 - b. The moon has less gravity
 - c. The moon is warmer
 - d. The moon is closer to Mars
8. Why is moon dust considered dangerous?
 - a. It is radioactive
 - b. It is sharp like glass
 - c. It is very heavy
 - d. It is extremely hot

Exercise D — Discussion Questions

Talk about these questions with a partner or in a small group.

1. Would you like to travel to the moon or Mars? Why or why not?
2. What do you think life would be like inside a moon base?
3. Why do you think people are so interested in exploring space?
4. Do you think regular tourists will travel to space someday? Why or why not?
5. What is one question you would ask an astronaut if you met one?