**The Moon**

The moon is Earth's satellite. A **satellite** orbits or goes around a larger object. The Moon's **orbit** is not a perfect circle. Sometimes it is farther away from Earth than at other times. Gravity pulls the Earth and the Moon close together. **Gravity** is a force which pulls objects together. The Moon's gravity is one-sixth that of Earth. A person or object is pulled down to the surface of the Moon with only one-sixth the force.

The Moon is much smaller than the Earth. Its diameter is only about one quarter that of the Earth. Its diameter is 2,160 miles. A **diameter** is the distance from one side of a circle to the other. The distance from the Earth to the Moon is about 238, 855 miles. The average temperature on the Moon is -4 degrees Fahrenheit.

The Moon seems to change shape throughout the month. That happens because people only see the part of the Moon which the Sun lights up. The Earth travels around the Sun. The Moon travels around the Earth. When the Moon is between the Earth and the Sun, the Moon looks dark to Earth. The Sun is shining on its other side. The Moon spins on its axis once every 27 days. An **axis** is an imaginary line through the Moon from pole to pole.

The surface of the Moon is made up of rock and dust. The surface rock has been smashed into pieces by many meteorites. A **meteorite** is a rock which hits the Moon from space. Heating and cooling during the day and night also break up the rock. The surface never changes because new rock is never made as it is on Earth.

**Craters** on the Moon were formed by the crash of meteorites against it. The largest craters are called **basins**. They range in size from a few inches to hundreds of miles across. Mountains thousands of feet high stand around the rim of these basins. Rilles are deep canyons made by flowing lava. Dark areas called maria (seas) were formed when giant craters were flooded by liquid rock leaking out from under the top layer of the Moon. There is no wind or rain on the Moon to move the dust around.

In ancient times **astronomers** recorded the movement and shape of the Moon. They wondered why it seemed to move across the sky. The ancient Greek astronomer Hipparchus was one of the first to think that the Moon was a **sphere** or globe. The **telescope** was invented in the 1600's. People could see much more of the Moon's surface using the telescope. Scientists have sent probes to the Moon to study it. Astronauts have landed on the moon several times.

A **spacecraft** being launched from the Earth needs a powerful rocket to lift it. It has to overcome Earth's gravity or it could be pulled back down to Earth. The spacecraft must protect the occupants from **radiation** from the Sun and space. It must keep them warm and provide air to breathe. It must land safely on the Moon and protect the astronauts from the tremendous heat while re-entering Earth's atmosphere.

In summary, the Moon is a satellite which travels around the Earth. Its orbit is not a perfect circle. Sometimes the Moon is farther away from the Earth than at others. Gravity keeps the Moon and Earth together.

Top of Form

1) Which of the following is a satellite?

**A:** It is a planet.

**B:** It is a part of the Moon.

**C:** It is an object that goes around a larger object.

**D:** None of the above

2) Which of the following tells how often the Moon spin on its axis?

**A:** Every 52 days

**B:** Every 27 days

**C:** Every year

**D:** Every other month

3) Which of the following tells how the craters on the Moon were formed?

**A:** Areas on the Moon sank.

**B:** Meteorites hit the Moon.

**C:** Both of the above

**D:** None of the above

4) Which of the following did Hipparchus discover?

**A:** That the Moon was a globe

**B:** That the Moon traveled around the Sun

**C:** That the Earth was larger than the Sun

**D:** That the Earth was colder than the Moon

5) Which of the following tells why a spacecraft needs a powerful rocket to lift it?

**A:** It is filled with a lot of equipment.

**B:** Earth's gravity is trying to pull it down.

**C:** The Moon's gravity is less.

**D:** The Moon is very far from the Earth.

6) Which of the following statements is true?

**A:** The Earth is smaller than the Moon.

**B:** The telescope was invented in the 1800's.

**C:** Basins on the Moon are usually about 2 feet across.

**D:** New rock is never made on the Moon