



How Does Earth Rotate and Revolve in Space?

Science Words

Say each word quietly to yourself. Then read the meaning.

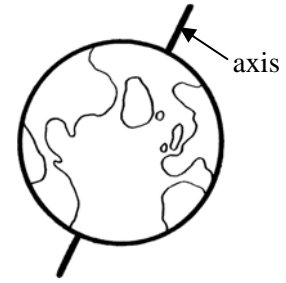
Read the tip to help you remember.

rotate [ROH•tayt] spin

Rotate and *round* begin with the same sound. The Earth spins round and round, like a top, as it *rotates*.

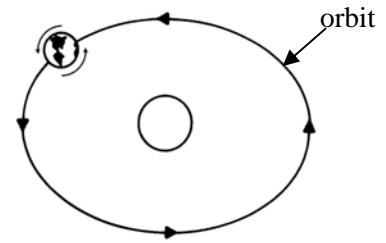
axis [AK•sis] an imaginary pole that runs through Earth's center from the North Pole to the South Pole

The second letter in *axis* is *x*. A line of the *x* looks like the *axis* that runs through Earth's center.



orbit [AWR•bit] the path that Earth takes around the sun

Orbit begins with an *o*. You can think of the *o* as Earth's path around the sun.



constellation [khan•stuh•LAY•shuhn] a group of stars that seem to form a pattern

Constellation and *collection* begin with the same sounds. A *constellation* is a collection of stars.

This constellation is called the Big Dipper.



Name _____

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Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Earth rotates, or spins, on its axis once every 24 hours.
2. As it rotates, one side of Earth faces the sun and has daytime.
3. The other side of Earth faces away from the sun and has nighttime.
4. Earth's rotation causes day and night.
5. Earth revolves around the sun in a path called an orbit.
6. Earth takes about 365 days to make one orbit around the sun.
7. Earth's orbit and the tilt of Earth's axis cause the seasons.
8. Earth is divided into halves called hemispheres. The upper half is the Northern Hemisphere; the lower half is the Southern Hemisphere.
9. The part of Earth tilted toward the sun has summer. The part of Earth tilted away from the sun has winter.
10. A constellation is a group of stars that seem to form a pattern.

What Are Moon Phases?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

moon phase [MOON FAYZ] change in the appearance of the moon's shape

Phase and *face* sound almost alike. You can think of a *moon phase* as if it was a face. Seeing a full moon is like looking directly at someone's full face. A first quarter moon as well as a third quarter moon is like looking at someone's profile, or side view.



Name _____

What Are Moon Phases?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Neil Armstrong was the first person to walk on Earth's moon.
2. The moon is a satellite that completes an orbit around Earth in about one month.
3. The moon is only about one-fourth the size of Earth, but it looks large because it is close to Earth.
4. The moon has no air, wind, or liquid water.
5. We can see the moon because light from the sun reflects from it and back to Earth.
6. We see only one side of the moon because the moon takes the same amount of time to rotate once as it does to orbit Earth once.
7. As the moon orbits Earth, the side we see may be completely lit or only partly lit.
8. The moon looks full when the side that faces Earth is completely lit.
9. The moon is in a crescent, or C-shape, when the side that faces Earth is only partly lit.
10. One month on our modern calendar is based roughly on the moon's phases.



How Does Technology Help Us Learn About Space?

Science Words

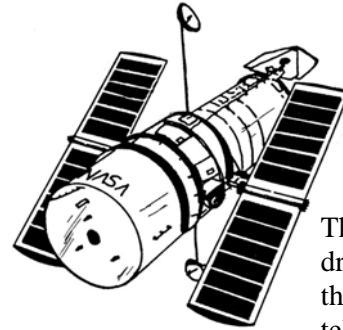
Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

telescope [TEL•uh•skohp] a tool that uses lenses to make faraway objects appear closer and larger

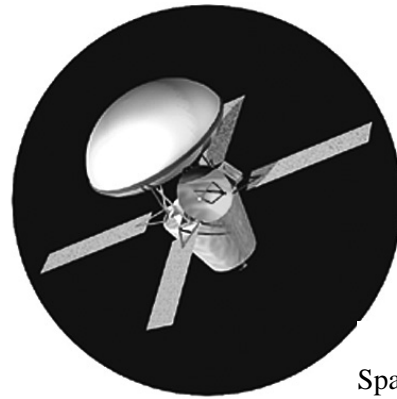
Telescope and *television* begin with *tele-*. Both words name things that make faraway objects appear closer.

space probe [SPEYS PROHB] vehicles that move through space, but are controlled from Earth

A *probe* is a tool used to explore and investigate. A dentist may use a probe to examine a patient's teeth. Scientists use *space probes* to explore distant places in space.



This is a drawing of the Hubble telescope



Space probe

Name _____

How Does Technology Help Us Learn About Space?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Early astronomers believed that Earth was the center of the universe.
2. The telescope, invented in the 1600s, let Galileo and other astronomers observe objects in space.
3. By the early 1600s, astronomers knew that Earth revolved around the sun.
4. In 1969 Neil Armstrong was the first person to set foot on the moon.
5. Today astronauts live on the International Space Station, a giant space lab orbiting Earth.
6. The Hubble Space Telescope, which orbits Earth, takes pictures of faraway galaxies.
7. In 1976, *Viking I* was the first space probe to successfully land on Mars.
8. Rockets are built and launched from the Kennedy Space Center in Florida.
9. Florida is a good place for launching rockets, because of its fair weather.
10. Scientists originally developed cordless power tools and other products we use daily for the space program.