

Name _____

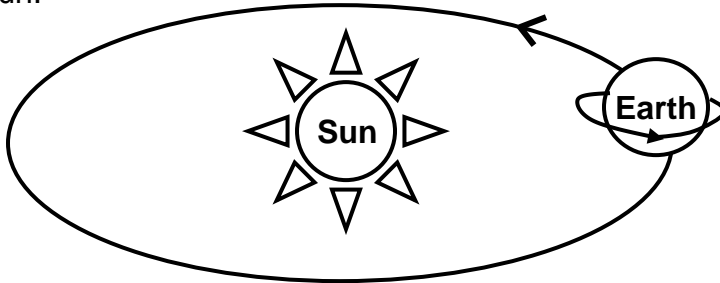
Home Room _____

Universal Motion

The universe is a very large space. It is filled with huge galaxies made up of billions of stars. Some of these stars have planets in orbit around them. A **solar system** is made up of a star and the planets that **revolve** (orbit) around it. Our solar system has eight planets and one dwarf planet revolving or orbiting around our star, the sun.

All of the objects in our solar system are in constant motion. Planets revolve around the sun and moons revolve around their planet. The planets and the moons also **rotate**, or spin as they travel through space. What evidence do we have that the Earth is rotating? The sun appears to move across the sky in the daytime and the moon appears to move across the sky at night. The **rotation** of the Earth on its axis takes about 24 hours. This rotation also causes day and night. The side of the Earth facing the sun experiences day while the side away from the sun experiences night.

As the Earth rotates once a day on its axis, it also travels along its orbit around the sun.



Note: This model is NOT drawn to scale.

It takes the Earth 24 hours, or 1 day, to make one rotation (spin) on its axis. It takes the Earth 365 days, or 1 year, to make one revolution (orbit) around the sun.

Directions: For each statement below, circle **T** if the statement is true; circle **F** if the statement is false. If it is true, then further explain why the answer is true. If it is false, rewrite the statement on the lines to make it true.

1. **T** **F** Our solar system has a star at its center.

2. T F Planets follow orbits around their moons.

3. T F It takes the Earth 365 days to rotate on its axis.

4. T F Day and night are caused by the rotation of the Earth on its axis.

5. T F The Earth rotates 365 times in one year.

Directions: Read and answer the following questions.

6. Every 365 days the Earth makes one complete orbit around the sun. This is called—
- A a year
 - B a day
 - C a phase
 - D an eclipse
7. Which of the following occurs on a daily basis?
- A The Earth rotates once on its axis.
 - B The moon rotates around one time.
 - C The Earth revolves once around the sun.
 - D The moon revolves once around the Earth.
8. The Sun appears to rise in the east and set in the west every day. This happens because—
- A Earth revolves around the Sun
 - B the Sun revolves around Earth
 - C Earth rotates on its axis
 - D the Sun rotates on its axis
9. The tilt of Earth's axis helps to create which of the following?
- A Day and night
 - B The changing seasons
 - C The revolution of the Earth
 - D The phases of the moon

10. Use the letter or number groupings below to fill in the table. Be sure to put the letters from column A in the top table in column A of the bottom table. Each letter or number grouping is only used one time. Cross out the groupings as you use them. The first two words have been filled in for you!

A	B	C	D	E	F
3 S T AX IF TH NCE URS	D R 65 IS TO AKES AROU	T T IT ND AYS THE OTAT	E R S HE ON TO EAR AKES	2 O CE TH UN THE EVOL	4 N O HO IT VE EAR
A	B	C	D	E	F
I T . T A K E S					

Use the back of this paper to make up your own puzzle about the Earth and how it moves in space.