How Earth Moves

Ancient astronomers studied the movements of the sun and the moon as they appeared to travel across the sky. It seemed to them as though Earth was standing still and the sun and moon were moving. Actually, the sun and moon seem to move across the sky each day because Earth is rotating on its axis. Earth also moves around the sun. **Earth moves through space in two major ways: rotation and revolution.**

Rotation The imaginary line that passes through Earth's center and the North and South poles is Earth's **axis.** The spinning of Earth on its axis is called **rotation.**

Earth's rotation causes day and night. As Earth rotates eastward, the sun appears to move westward across the sky. It is day on the side of Earth facing the sun. As Earth continues to turn to the east, the sun appears to set in the west. Sunlight can't reach the side of Earth facing away from the sun, so it is night there. It takes Earth about 24 hours to rotate once. As you know, each 24-hour cycle of day and night is called a day.

FIGURE 2
Rotation
The rotation of Earth on its axis is similar to the movement of the figure skater as she spins.

Revolution In addition to rotating on its axis, Earth travels around the sun. **Revolution** is the movement of one object around another. One complete revolution of Earth around the sun is called a year. Earth follows a path, or **orbit,** as it revolves around the sun. Earth's orbit is not quite circular. It is a slightly elongated circle, or ellipse.

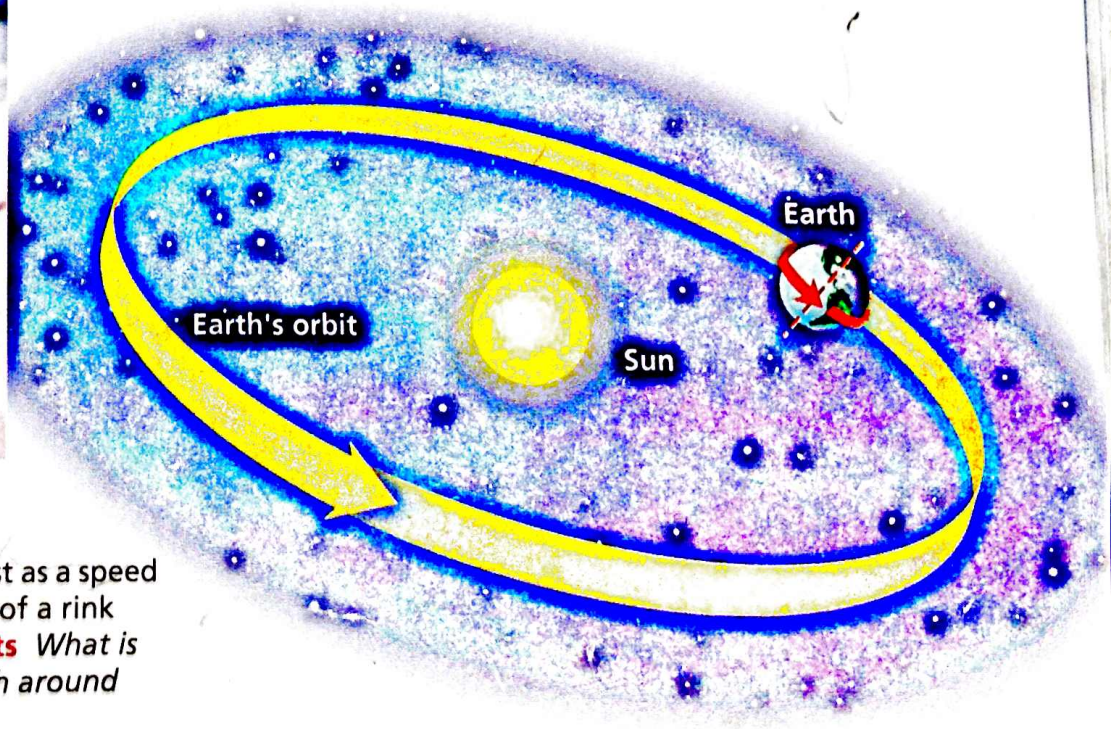

FIGURE 3
Revolution
Earth revolves around the sun just as a speed skater travels around the center of a rink during a race. **Applying Concepts** *What is one complete revolution of Earth around the sun called?*