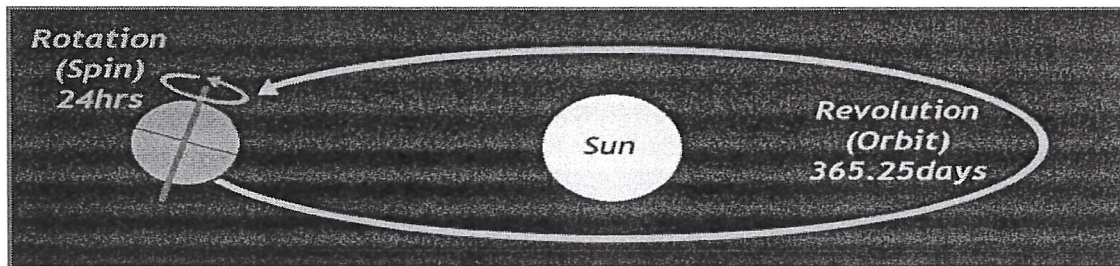


Earth's rotation

- Axis: The invisible line that runs from the North Pole to the South Pole on which Earth rotates upon.
- Rotation: The spinning of Earth on its axis
 - Takes Earth 1 day (24 hours) to complete one full rotation on its axis
 - From a view of the North Pole, the earth rotates at a counterclockwise motion → sun rises in the east and sets in the west

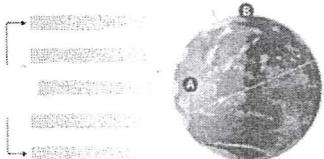
Earth's revolution

- While rotating on its axis, the earth is also revolving around the sun.
- Revolution: the movement of Earth around the sun
- Traveling at a speed of approximately 30 km/s
- One full revolution around the sun takes 1 year (365 ¼ days)
- Earth's orbit is NOT a perfect circle (more elliptical)
- Earth is _____ to the sun on January 4 and _____ on July 4



Earth's tilt

- Earth's axis is tilted at 23.5 degrees.
- Axis always points to the North Star so during a revolution the North Pole may be tilted toward the sun or away from the sun



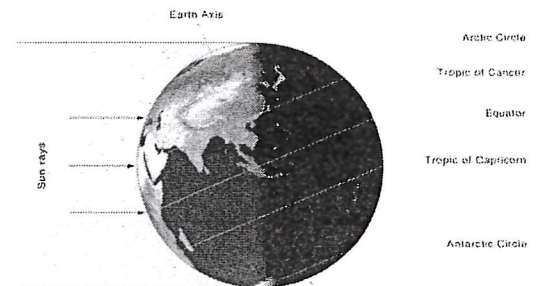
- Tilted toward the sun = Northern Hemisphere receives more direct sun

- Shape of the earth also affects sun's intensity on an area

- The tilt of the earth's axis, in combination with its orbit, causes the different seasons
- When the Earth is tilted toward the sun, it is summer
- When the Earth is tilted away from the sun, it is winter
 - It is the opposite season in the southern hemisphere because when we're pointed toward the sun, they are pointed away, and vice versa

Solstices

- The solstices occur when the area of sunlight is at a maximum in one hemisphere and at a minimum in the other hemisphere.
 - The summer solstice (around June 21) is the longest day in the northern hemisphere.
 - This is the day that the Earth is pointed most toward the sun. The sun travels directly over the Tropic of Cancer, located at 23.5° north latitude.



- The winter solstice (around December 21) is the shortest day in the northern hemisphere.
 - This is the day that the Earth is pointed most away from the sun. The sun travels directly over the Tropic of Capricorn, located at 23.5° south latitude.

