

# Objects in the Sky

## Study Guide 1

### Key terms -

- **Axis** - the Earth's axis is an imaginary line going straight through the planet between the North and South poles. The Earth rotates on its axis.
- **Season** - a season is one of four quarters into which a year is commonly divided
- **Tilt** - to tilt is to move or shift so as to slant or tip. The Earth's tilt is 23.5 degrees.
- **Revolution** - a revolution is the completion of one orbit around a center. The Earth completes one revolution around the sun in one year.
- **Rotation** - a rotation is the completion of one spin or turn around an axis. The Earth completes one rotation in one day.

The seasons are a result of the tilt of the Earth and the revolution of the Earth around the sun.

- When a hemisphere is tilted *towards* the sun, that hemisphere is experiencing summer
- The summer solstice is the longest day of the year. It is on June 21st.
- When a hemisphere is tilted *away from* the sun, that hemisphere is experiencing winter
- The winter solstice is the shortest day of the year. It is on December 21st.
- Of the vernal (spring) and autumnal (fall) equinoxes, day and night are the same length. Neither hemisphere gets more direct rays of the sun than the other.
  - The Spring equinox is on March 21st.
  - The fall equinox is on September 21st.

The Earth revolves around the sun in one year.

- The closer a place is to the equator, the more direct sunlight a place receives.
- The further a place is from the equator, the less direct sunlight a place receives for a longer period of time in the summer.

The apparent motion of the sun, moon, and stars across the sky is a result of the rotation of the Earth on its axis.

The Earth makes one rotation in a 24-hour period making day and night.

- The rotation of the Earth makes it appear that the sun is moving across the sky when in reality the Earth is spinning, exposing different parts of the Earth to the sun at different times of the day.