Ecliptic

Write a succinct description/definition of the ecliptic: ____________________________

The earth orbits the sun every 365 days. From the perspective of a stationary earth, the sun moves around the ecliptic approximately ___________ per day.

The earth rotates around its axis once every 24 hours and does so counter-clockwise when viewed from the north celestial pole. The earth rotates _________________ around the sun when viewed from the north celestial pole.

A _________ day is the time it takes the sun to rotate ____________________________.

A synodic or _________ day is the time it takes the sun to come back to the same spot in the sky.

When we say the earth rotates once every 24 hours, we are referring to a _______________ day.

It takes ______ hours and ______ minutes for the earth to rotate exactly 360°.

Obliquity

The earth is tilted with respect to its orbital plane. It is tilted ___________ from a line perpendicular to the earth’s orbital plane. This is its obliquity.

During summer, the northern hemisphere is tilted _______________ the sun.

During winter, the northern hemisphere is tilted _______________ the sun.

On the spring and fall equinox, the earth is neither tilted towards or away from the sun.

The cause for the seasons on earth is the obliquity with two main effects: the intensity of sunlight because of angle of incidence and the length of daylight hours.

Light rays from the sun will be most intense when they come straight down.

Light rays from the sun will be least intense when they strike the surface at an angle.

During the summer:

- Light rays are ___________ intense than winter.
- The length of daylight hours is ________________ than winter.