Earth in Space/Astronomy #4

Relate the axial tilt and orbital position of the Earth as it revolves around the Sun to the intensity of sunlight falling on different parts of the Earth during different seasons.

I. How Earth Moves
Earth moves through space in two major ways: rotation and revolution

A. Rotation
The counter-clockwise movement of Earth that causes day and night where the sun appears to move westward across the sky.
Axis- is the imaginary line that passes through Earth's center and the North and South Poles.
Rotation-the spinning of Earth on its axis. One rotation = 24 hours/1day

B. Revolution
The counter-clockwise movement of Earth around the sun.
Revolution-the movement of one object around another. One revolution = 365.25 days/1 year
Orbit- the path Earth follows around the sun.

C. Calendars
A system of organizing time that defines the beginning, length, and divisions of a year.

II. The Seasons on Earth
The four seasons are: winter, spring, summer, and autumn

A. How sunlight hits Earth
The sun hits the equator most directly. The sun hits the poles at a steeper angle.

B. Earth's tilted axis
Earth has seasons because its axis is tilted as it revolves around the sun. The Earth is tilted at 23.5°

C. Earth in June
The North end of the Earth's axis is tilted towards the Sun. More hours of daylight.

D. Earth in December
The North end of the Earth's axis is tilted away from the Sun. Less hours of daylight.

E. Solstices
Solstices- when the Sun is farthest north or south of the equator.
For Northern Hemisphere: June 21st – 1st day of summer, December 21st – 1st day of winter

F. Equinoxes
Equinoxes- when the noon Sun is directly overhead at the equator. Means equal night. For Northern Hemisphere: March 21st – 1st day of spring, September 22nd – 1st day of Fall/Autumn.