**Name: Date:**

**Earth Science**

**Introduction to Meteorology Notes Outline**

**Student Learning Objectives:**

**1). Students will be able to describe what happens during a solstice and equinox.**

**2). Students will know how the Earth’s tilt causes during solstices and equinoxes causes changes in seasons.**

**3). Students will understand the difference between direct and indirect sunlight.**

**What does the Earth’s orbit around the Sun really look like?**

* Actual Orbit is Almost Perfectly

**If the Earth’s orbit around the Sun is the same, then how do we get seasons?**

* **Earth’s Tilt On Its Axis**
	+ Degree

**Solstice: “Sun Stands Still”**

1. **Summer Solstice**
* June 21st
* When the Northern hemisphere of Earth is tilted 23.5 degrees the Sun
	+ longest day and shortest night of the year
1. **Winter Solstice**
	* December
	* When the Northern hemisphere of Earth is tilted 23.5 degrees away from the Sun
	* shortest day and night of the year

**Equinox: “ ”**

1. **Autumnal/Fall Equinox**
* When Earth is not tilted away from or toward the Sun.
* September 22nd
	+ Day and Night
1. **Vernal/Spring Equinox**
* When Earth is not tilted away from or toward the Sun.
* March
	+ Equal Day and Night

**How Does The Earth Having A Tilt Effect Seasons?**

* **Generates 2 Forms of Sun-Light that Reach Earth**
	1. **Direct Light**
* Degree Angle
* Concentrated
* Passes Through Less Atmosphere
	1. **Indirect Light**
		+ Over 90 Degree Angle
		+ Less Concentrated
		+ Spread over
		+ Passes Through Much more