***Astronomy…What is it?***

**Astronomy…what is it?**

1. It’s the study of the

*So … where do we begin? Let’s start by finding out where we are!*

**Terrestrial Coordinate System**

1. How would you tell someone where we are located?

   2. (similar to using a coordinate system…just like the coordinates on a graph!)
2. To use a coordinate system you must determine the

So…what’s the coordinate system for locating a place on Earth’s surface?

**Latitude and Longitude**

1. **Latitude:**
2. **Longitude**:
3. What is the zero point?
4. Latitude:
5. Longitude:
6. Ok…latitude and longitude are the we use to locate a position on the earth’s surface.
7. What coordinate system is used to locate objects in the sky?

**The Celestial Sphere**

1. The refers to the appearance of the night sky being similar to an inverted bowl.
2. Referred to as the “ ”
3. Whatever we see from earth ( ) is considered to be a part of the Celestial Sphere
4. The Celestial Sphere . We only see the above our horizon.
5. Now we know what we are looking at in the night sky….let’s think about how to locate something….

**Angular Measurements**

1. To locate stars on the celestial sphere
2. Commonly measured in terms of .
3. A few handy approximations:
   1. 2° =
   2. 10° =
   3. 20° =
4. Most Constellations range in size from
5. Ex… .

**Horizon System**

1. The Horizon System of locating has 3 points in common with latitude/longitude:

1. .

a. So what’s a Great Circle?



(ex. Equator)

2. One coordinate is measured

(ex. Longitude).

The other is measured

(ex. Latitude)

3. The could have been chosen anywhere along the great circle.

• , but everyone must then

use the same one.

1. The great circle this system is based on is called the .

a. NOT the line separating the sky and earth.

1. Celestial Horizon is defined with respect to the .
2. The zenith is
3. Coordinates used in the Horizon System:

1. Altitude: *(corresponds to latitude)*

2.Azimuth: (*corresponds to longitude*)

1. Pros & Cons of the Horizon System:
2. Advantage -
3. Disadvantage - as you change your locations or the time of observation…

1. This is because the celestial sphere