Unit 10 part 2: Mapping and GPS: Prater: Spring 2017

“What is a topographic map?” and “what is topography?”

*Contour Lines:*

* Every point on a single contour line represents the same elevation.
* Every contour line must eventually connect at its ends- one contour cannot run into or connect to another contour line.
* In some cases contour lines will run off of the edge of the map (appearing to not close on itself) in this case the contour has run into the edge of the map and but connects to an adjacent and eventually closes on itself.
* Contour lines can never cross one another; each line represents a separate elevation.

*Contour Intervals:*

* Moving from one contour line to another always indicates a change in elevation. That interval is the exact same between each contour on a single map, the scales of maps vary and therefore may be different from map to map.
* The closer that contour lines are to one another, the steeper the slope is in the real world (e.g. mountains). Contours that are spaced further apart represent a shallow to flat slope (e.g. valley).
* A series of enclosed contours generally represent a hill or mountain peak. Closed contours that are hachured (short, inward pointing lines drawn perpendicular to the contour line) indicate that there is a closed depression (e.g. crater).
* Contour lines crossing a stream valley will form a "V" shape pointing in the uphill (and upstream) direction.

LT2: I can locate places on earth using latitude and longitude

Latitude is defined as a measurement of distance in degrees north and south of the equator

• The word latitude is derived from the Latin word, “latus”, meaning “wide.

There are 90 degrees of latitude from the equator to each of the poles, north and south.

• Latitude lines are parallel, that is they are the same distance apart

• These lines are sometimes referred to as parallels.

The equator is the longest of all lines of latitude

• It divides the earth in half and is measured as 0° (Zero degrees).

Positions on latitude lines above the equator are called “north” and are in the northern hemisphere. • Positions on latitude lines below the equator are called “south” and are in the southern hemisphere.

Longitude is defined as measurement of distance in degrees east or west of the prime meridian.

• The word longitude is derived from the Latin word, “longus”, meaning “length.”

The Prime Meridian, as do all other lines of longitude, pass through the north and south pole.

• They make the earth look like a peeled orange.

The Prime meridian divides the earth in half too.

• It is also 0°. It passes through the community of Greenwich, England.

There are 180 lines of longitude on each side of the prime meridian.

• But on the opposite side, the primer meridian is not zero degrees but 180°.

• It is called the International Date Line.

Longitude lines to the left of the prime meridian give locations west, in the western hemisphere.

• Longitude lines to the right of the primer meridian give locations east, in the eastern hemisphere.

Each degree of latitude is about 69 miles on earth.

Each degree of both latitude and longitude are sub divided into 60 minutes and each minutes is divided into 60 seconds. These are units of time but rather parts of a circle. Example: 23 degrees 34’ 17” N

To fine your exact location on a map, you need to determine which latitude line and which longitude line meet where you are standing. • When writing locations, the latitude is given first.

– For example • Miami, Florida, has a location of 25° North and 80° West. • This is usually written in a short form as 25° N 80° W