Daily Routine

- Sit in your appropriate seat quietly
- Have all necessary materials out
- All back packs on the floor
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Bell Work

- Students are trying to figure out the density of two objects their science teacher gave them. They found that object one had a mass of 5 grams and was shaped like a rectangular prism. Its measurements where 5 cm (L) x 2 cm (W) x 1 cm (H). Calculate objects one's volume and density.

- Object two had an irregular shape. The students had to use the displacement method. Their initial volume of water was 20 mL and their final volume was 30 mL. The object also had a mass of 20 grams. Calculate the objects volume and density.

Earth Science Announcements

Syllabus Signature Sheet

Lab Safety Contract

Quiz on Friday (Metric, Density, and Latitude and Longitude

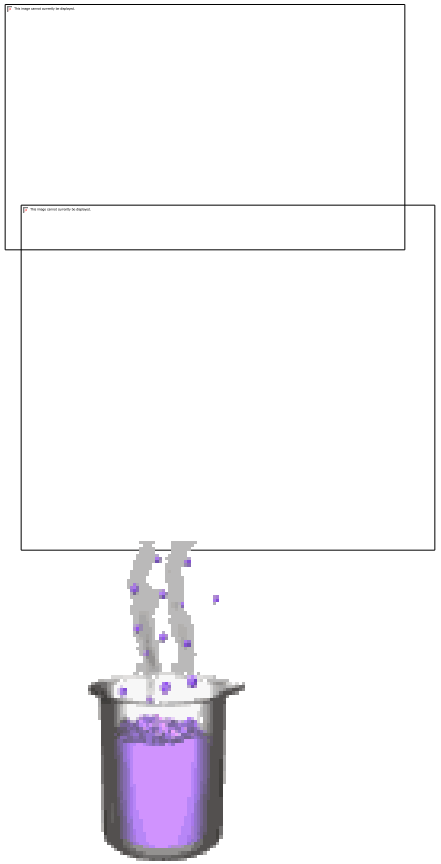
Back to School Night – TONIGHT!!!

Mass, Volume, Density

The Metric System

A measurement *system* based on units or powers of 10

- **Meter** measures length
- **Gram** measures mass
- **Liter** measures volume

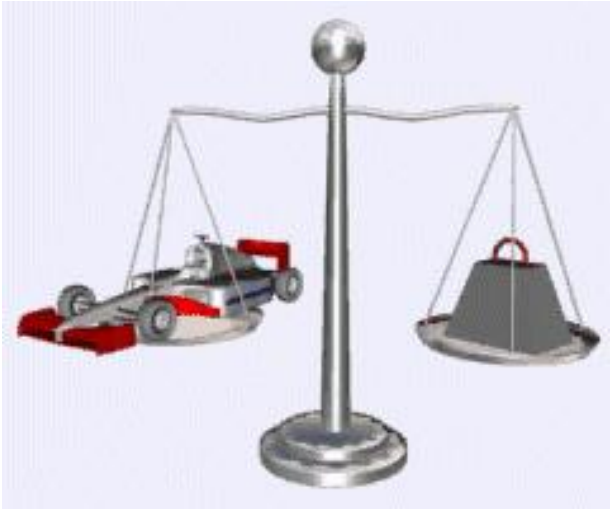


The Meter

- The meter is used to measure length and distance
- A Kilometer is a 1000 meters and is similar in length to the mile

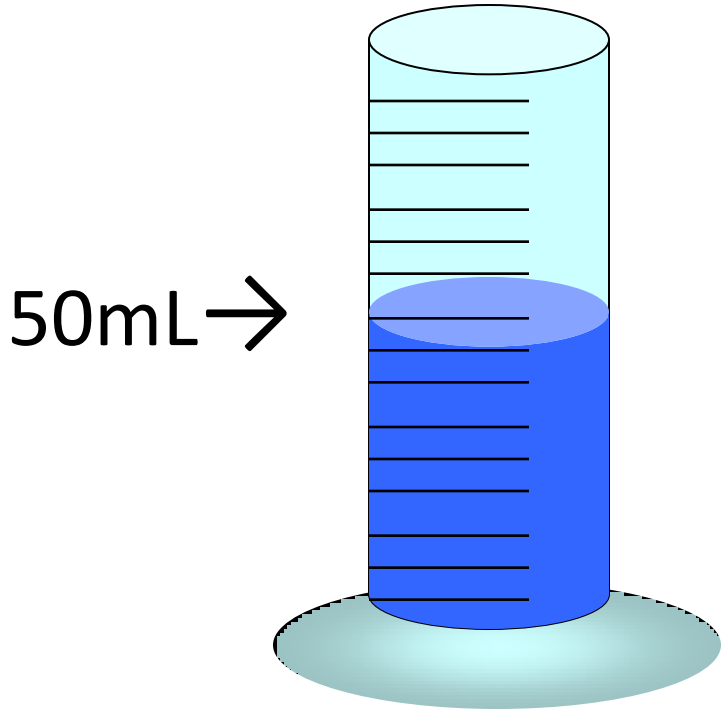
The Gram

- A gram is used to measure Mass
- Mass is a measure how much stuff (or matter) the object is made of
- We find mass by weighing the object



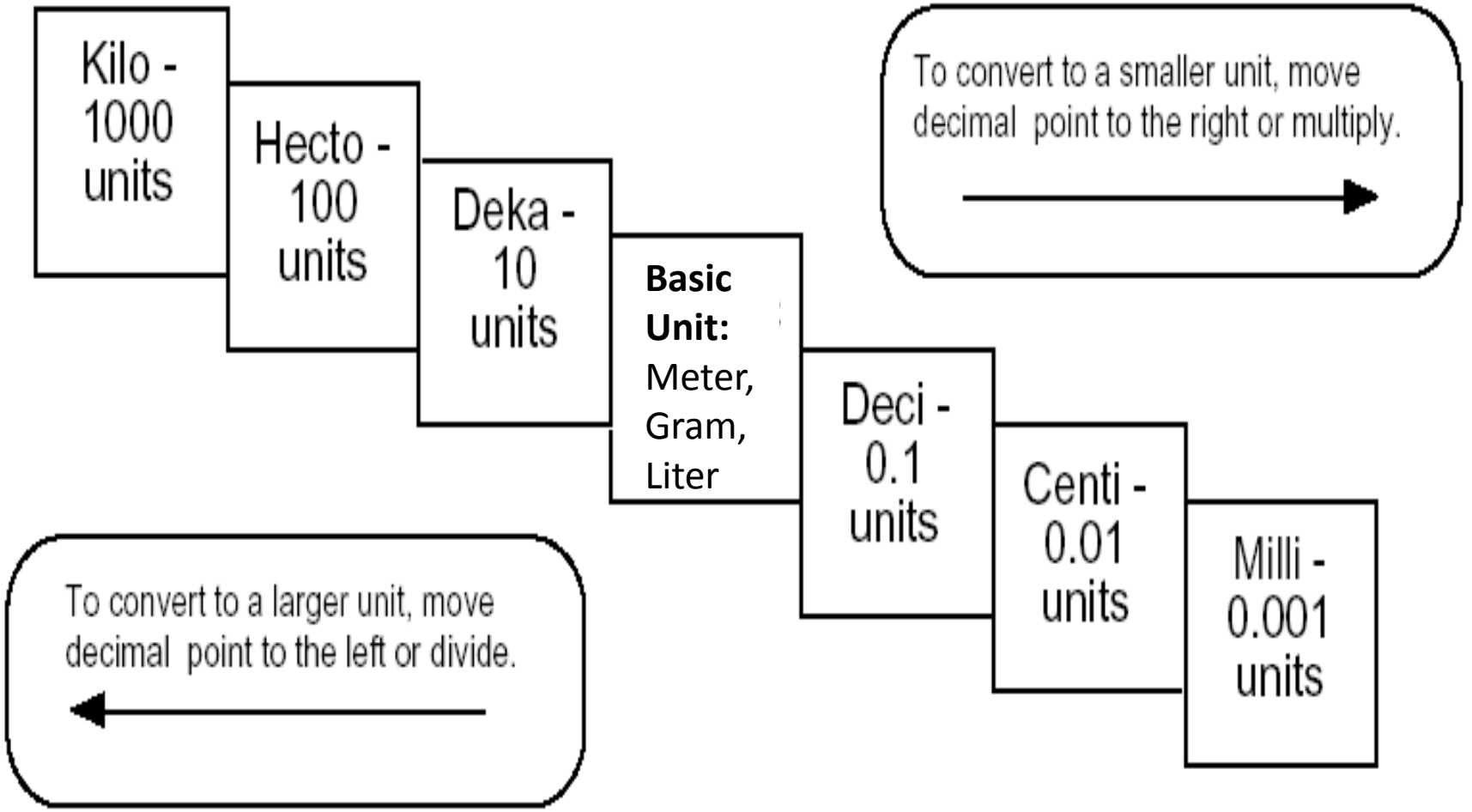
The Liter

- A liter is used to measure Volume
- Volume is how much space an object uses up



Symbol	Prefix	Multiplication Factor	
E	exa	10^{18}	1,000,000,000,000,000,000
P	peta	10^{15}	1,000,000,000,000,000
T	tera	10^{12}	1,000,000,000,000
G	giga	10^{9}	1,000,000,000
M	mega	10^{6}	1,000,000
k	kilo	10^{3}	1,000
h	hecto	10^{2}	100
da	deka	10^{1}	10
d	deci	10^{-1}	0.1
c	centi	10^{-2}	0.01
m	milli	10^{-3}	0.001
μ	micro	10^{-6}	0.000,001
n	nano	10^{-9}	0.000,000,001
p	pico	10^{-12}	0.000,000,000,001
f	femto	10^{-15}	0.000,000,000,000,001
a	atto	10^{-18}	0.000,000,000,000,000,001

Metric Step Ladder



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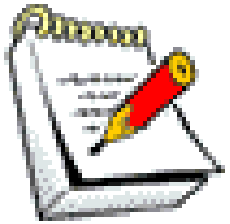
Bell Work



Answer the questions of your choice in complete sentences:

- ✓ What are latitude and longitude lines and what are they used for???
- ✓ What are some things we use maps for???
- ✓ Have you ever looked at a map, what sort of things did you notice on the map??????

Earth Science Announcements

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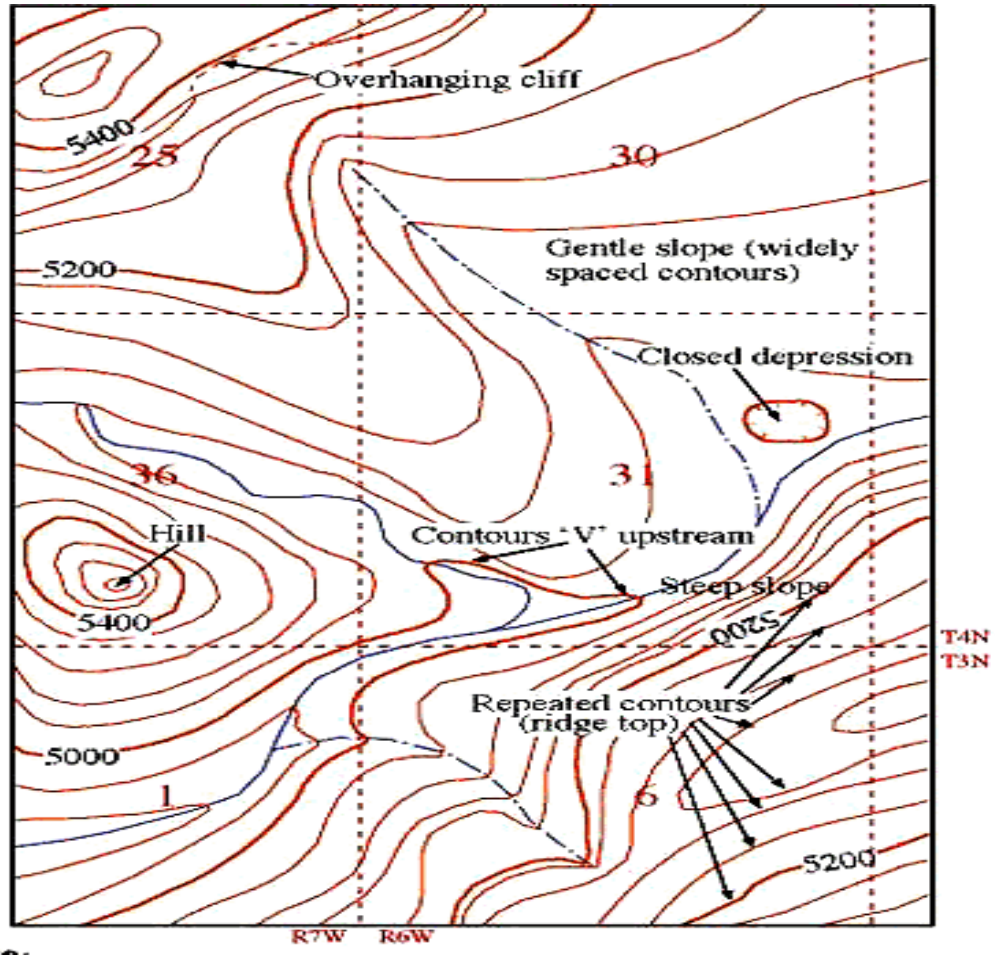
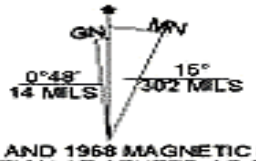
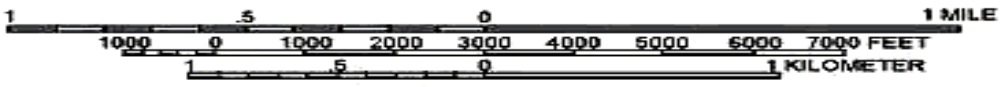
Quiz on Friday (Metric, Density, and Latitude and Longitude

Maps: Latitude and Longitude





UTM GRID AND 1968 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



CONTOUR INTERVAL 40 FEET
SUPPLEMENTARY CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Unit: **Maps**

Topic: **Latitude and Longitude**

Objectives: *Day 1 of 3*

- To know the difference between latitude and longitude
- To learn how to plot latitude and longitude coordinates

Pre Assignment

- Find the correct cities for the corresponding lines of latitude and longitude.

Reading about Latitude and Longitude

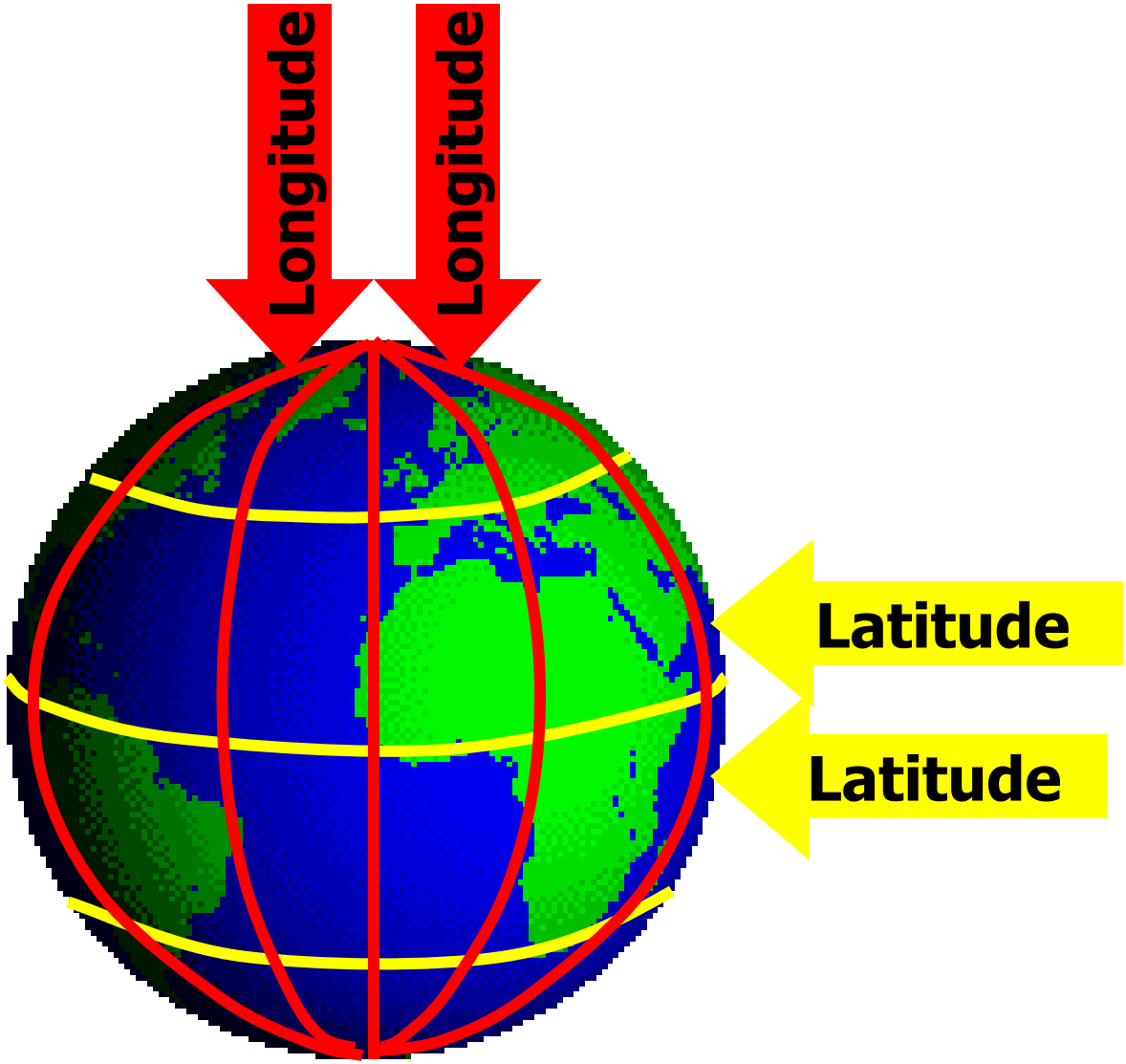
- Please do not write on these readings!!!!

Reading Questions

- What are the seven major continents and the four major oceans?
- How do we break up our Earth into different hemispheres?
- What are lines of latitude and longitude?
- What are the 0^0 lines of latitude and longitude call?
- What is the significance of Greenwich, England?
- Compare and contrast a flat map and a Mercator map.

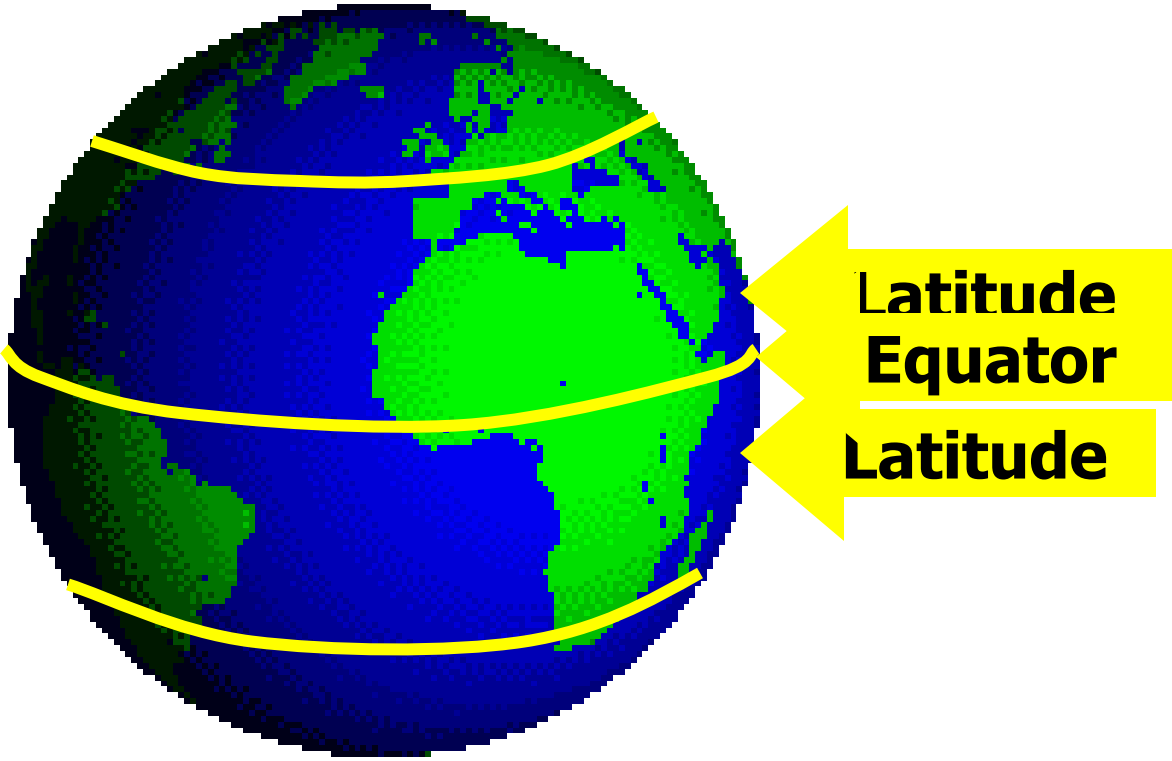
Latitude and Longitude

- The earth is divided into lots of lines called **latitude** & **longitude**



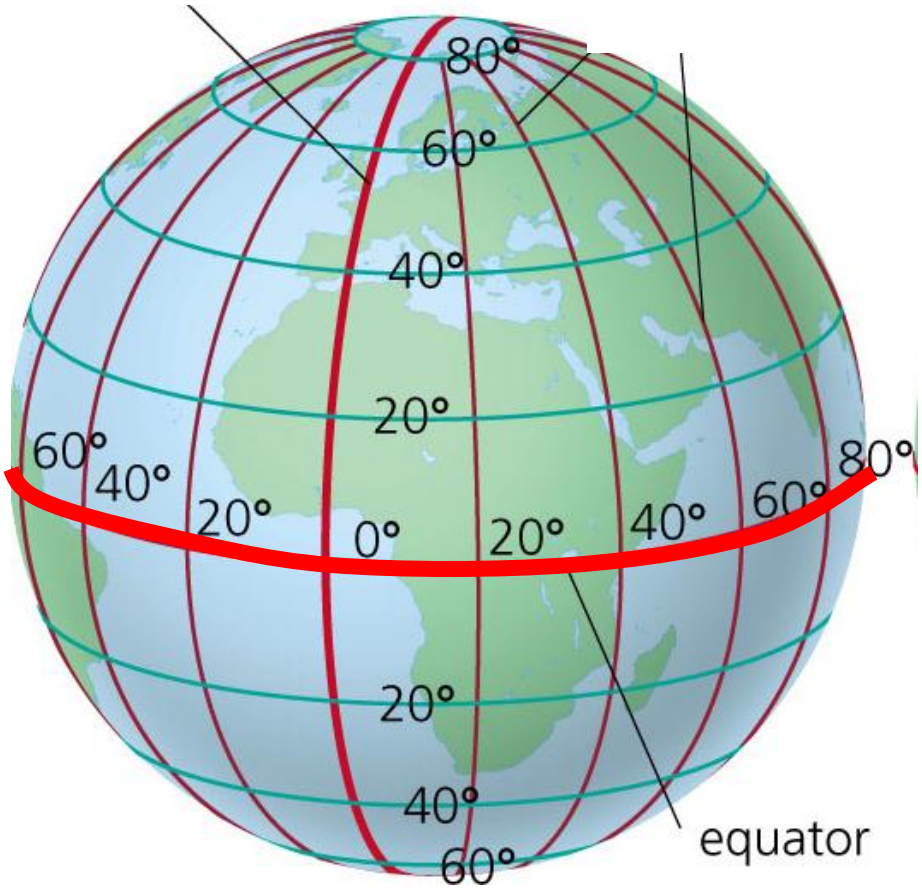
Latitude Lines

- Latitude lines run horizontally around the Earth.
- The lines run parallel to each other and measure distances in degrees N or S.
- The equator is at 0 degrees



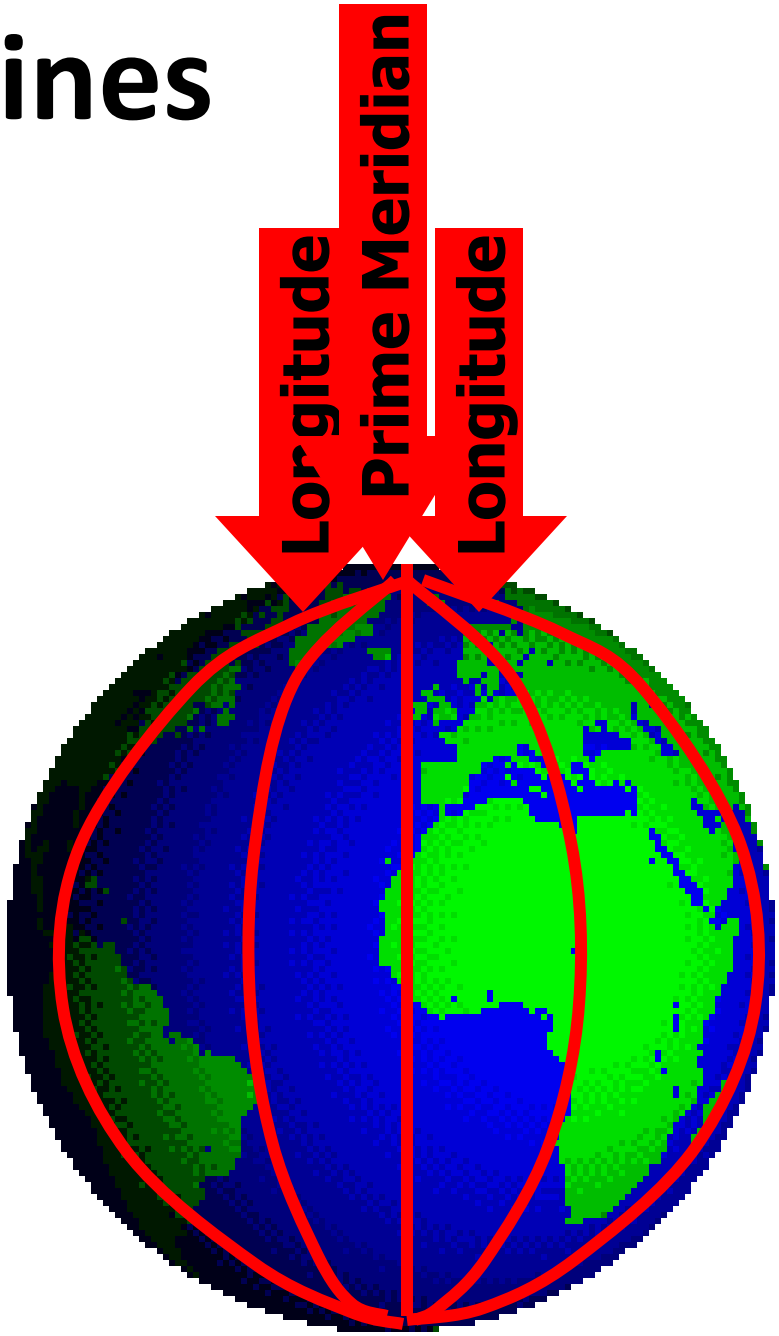
Equator

- The **Equator** is at 0 degrees latitude
- All latitude lines run parallel to the equator either measure north or south
- Poles are the ending line at 90^0



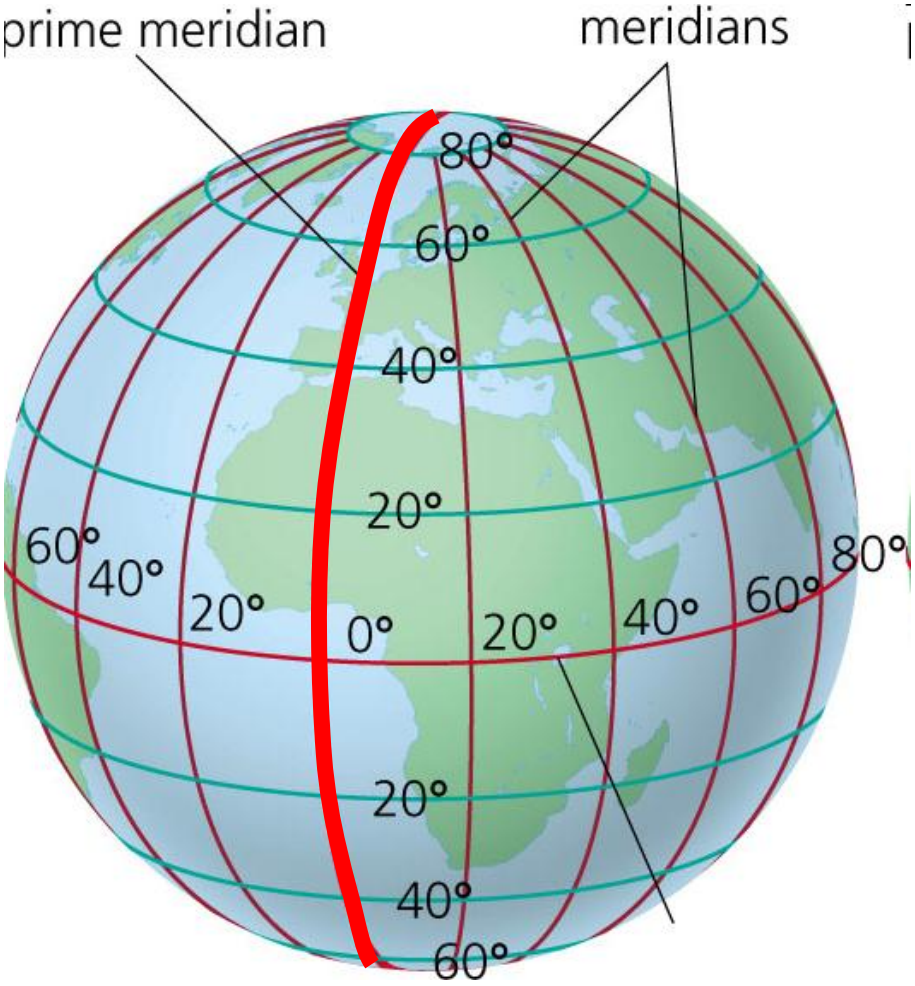
Longitude Lines

- Longitude lines run north and south.
- The lines also run parallel to each other and measure distances in degrees East or West.
- The Prime Meridian is at 0 degrees



Prime Meridian

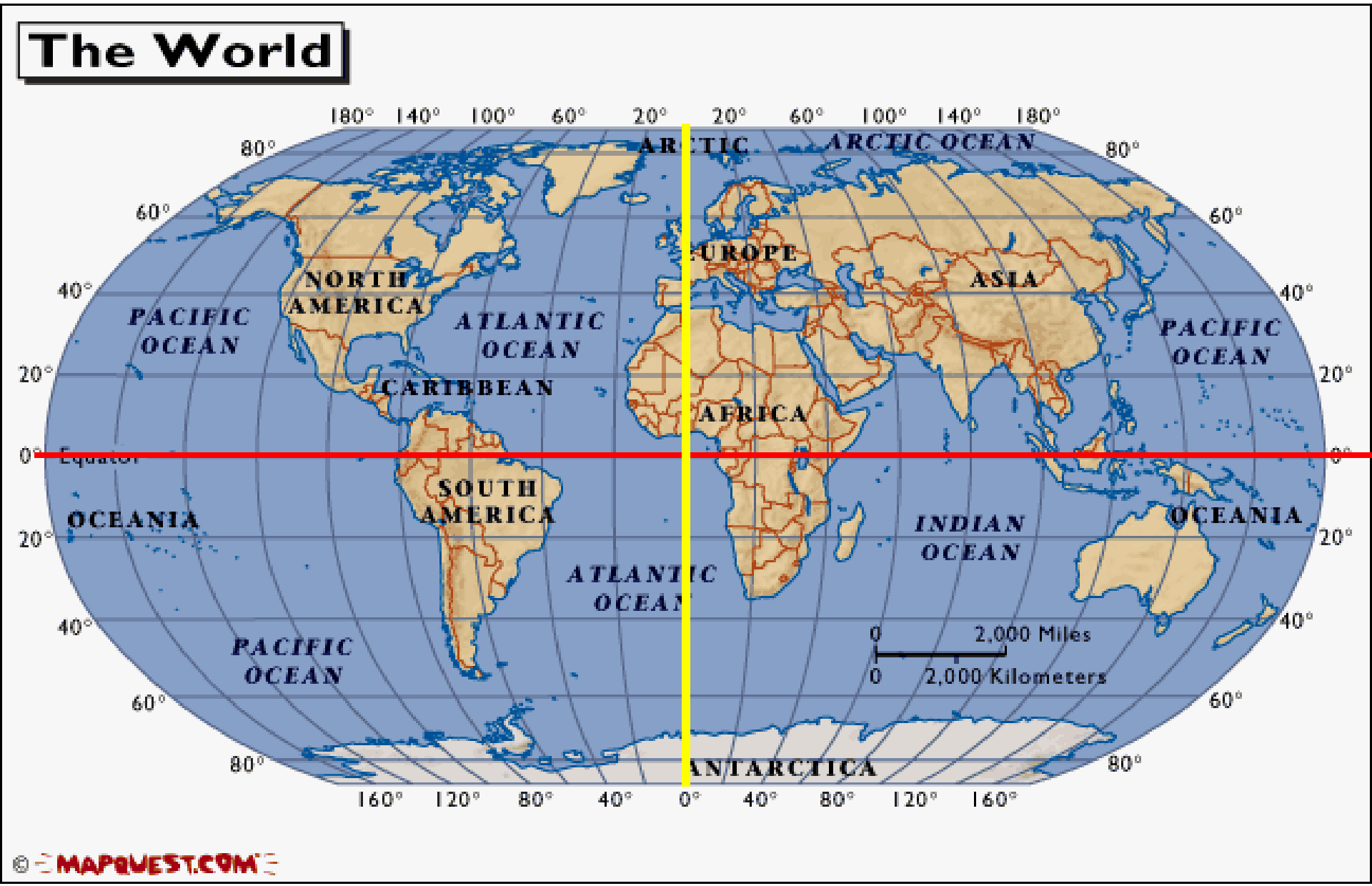
- The **prime meridian** is 0 degrees longitude. This imaginary line runs through the United Kingdom, France, Spain, western Africa, and Antarctica.
- All longitude lines run parallel to the prime meridian
- Meridians measure to 180 degree East and West of the Prime Meridians

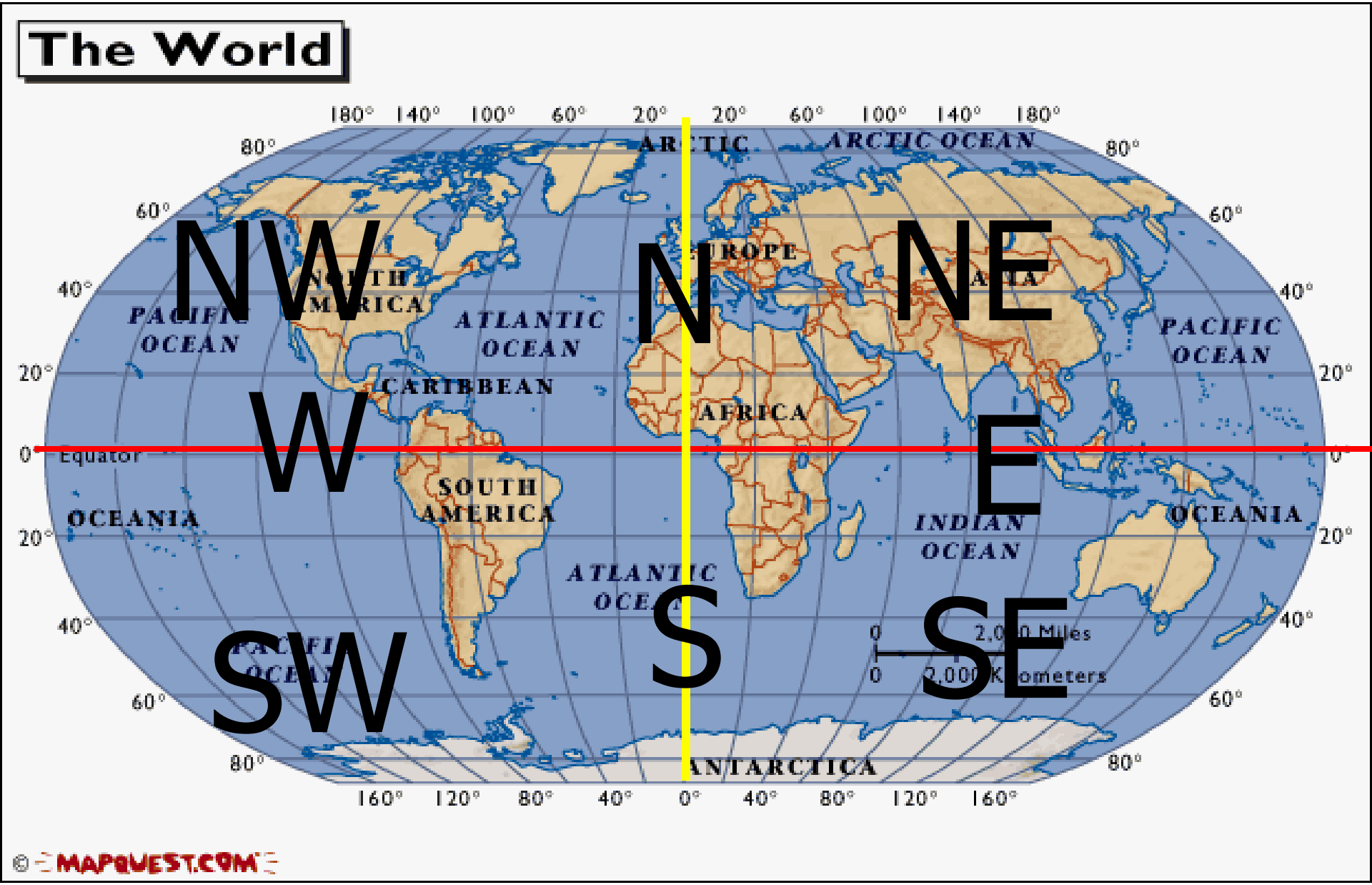


Hemispheres

- By using the equator and prime meridian, we can divide the world into four **hemispheres**, north, south, east, and west.

The World

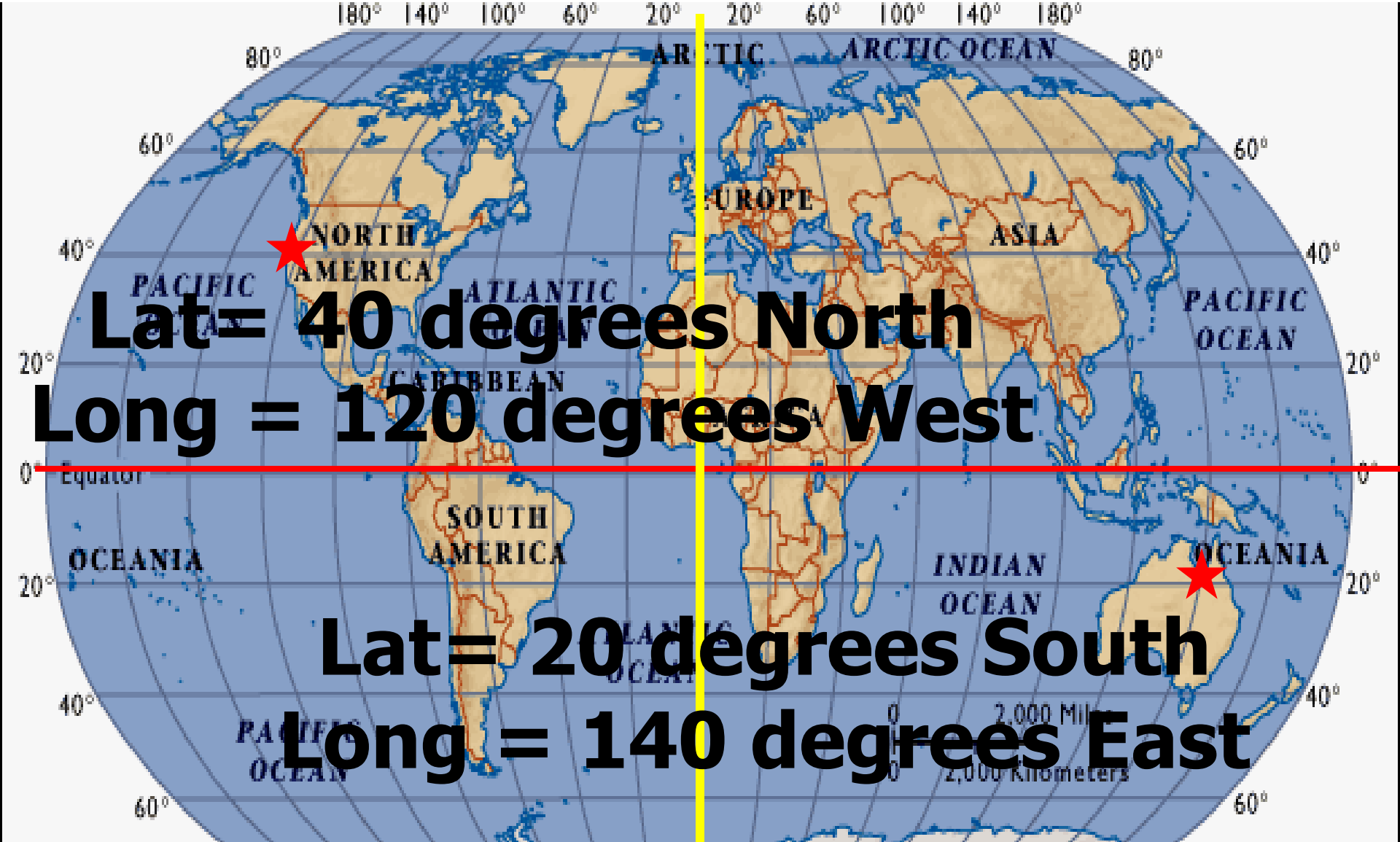



The World
NW
N
NE
W
E
SW
S
SE
ARCTIC OCEAN
PACIFIC OCEAN
ATLANTIC OCEAN
CARIBBEAN
AFRICA
Equator
SOUTH AMERICA
OCEANIA
INDIAN OCEAN
ANTARCTICA
0 2,000 Miles
0 2,000 Kilometers
180° 140° 100° 60° 20° 20° 60° 100° 140° 180°
80° 60° 40° 20° 0 20° 40° 60° 80°
160° 120° 80° 40° 0° 40° 80° 120° 160°
© MAPQUEST.COM

What is the latitude & longitude for:

-Sacramento California

-Darwin Australia



What is the latitude & longitude for:

-Mount Everest

-Lima Peru