

## Subject #3: Geography

**Project #41: Where is that? (Google Earth)** Locate the Earth's major latitudes and longitudes using Google Earth. Locate cities, countries along the same latitude/longitude. Zoom in to see how exacting lats and longs get.

Higher-order thinking skills	Technology-specific:	Subject Area/ Learning-specific	Standard: NETS-S
<i>See patterns, organize parts, interpret facts</i>	<i>Transfer current knowledge to new technologies, use to broaden understanding</i>	<i>Lats and longs, explore the world</i>	<i>2.d, 3.b</i>

Grade level: 4-7  
 Prior knowledge: Google Earth tour/demo  
 Time required: 45 minutes  
 Software required: Google Earth (free download from [www.earth.google.com](http://www.earth.google.com) )  
 Vocabulary: lats and longs, pan, degrees-seconds-minutes, populate

### Lesson Description

- Explore countries located on major latitudes and discuss what that means to climate, geology, etc.

### Computer Activity

- Open Google Earth. Bring up latitude (lat) and longitude (long) lines by going to View-grid or Ctrl+L. Notice that major lats and longs are yellow; the others gray. Zoom in and notice how they populate as you pan in on a location.
- Discuss how exact lats and longs are in finding a spot on earth. Explain what minutes, seconds and degrees mean. Discuss uses of lats and longs.
- Explain what this means in terms of climate, biomes, habitats. For example, any country located along the equator will be hot year round. Any country north of the arctic circle will be cold year round. Now, show students how to find several countries



located along each major latitude by clicking-dragging the globe along the major lat and see which countries can be found that cross it.

- Have students work in teams to complete worksheet on next page.
- If they are studying a particular spot in the world in class, have them locate it and determine its lat and long.

### Extensions

- Have students find the latitude and longitude for their home
- Find the distance between their home and the locations identified around the world using Google Earth's ruler .

### Troubleshooting Tips

- *There is no International Date Line (it's called the Antimeridian on some versions of Google Earth—it's the back side of the Prime Meridian).*
- *I can't see which country the latitudes cross (turn on the 'Borders and Labels' layer. Zoom in or out to focus on the names.)*



Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

## Latitude and Longitude Practice

Find **two countries** that each major lat and long (latitude and longitude) listed below bisect:

1. Equator \_\_\_\_\_, \_\_\_\_\_

2. Tropic of Cancer \_\_\_\_\_, \_\_\_\_\_

3. Arctic Circle \_\_\_\_\_, \_\_\_\_\_

4. Tropic of Capricorn \_\_\_\_\_, \_\_\_\_\_

5. Antarctic Circle \_\_\_\_\_, \_\_\_\_\_

6. Prime meridian \_\_\_\_\_, \_\_\_\_\_

7. International date line \_\_\_\_\_, \_\_\_\_\_

My house is at \_\_\_\_\_ latitude and \_\_\_\_\_ longitude

What country is at N20, E80? \_\_\_\_\_

What country is S85, E10? \_\_\_\_\_