

EXPLORATION #1: Partners

The United States Geological Survey (USGS) collects earthquake data from around the world. In this first exploration of earthquake data, you and your partner will work together to identify the locations of recent earthquakes.

- 1) Google search: USGS
- 2) Click on "Latest Earthquakes" link (do not click on the "Welcome to the USGS")
- 3) Click on the "Zoom to" button in the upper right under corner and select "World." (You will notice that the world will "repeat" itself—just focus in the middle of the map)
- 4) Click on the "Settings" (looks like a Sun/Gear button in upper right-hand corner):
 - a. Click on "Auto Update" so that it is checked
 - b. Click on the blue button: "Search Earthquake Catalog"
 - i. Check to make sure the following are "clicked:"
 1. Magnitude- 2.5+
 2. Date and Time- Past 7 Days
 3. Geographic Region- World
 - ii. Scroll Down and click "search"

****Your map should have updated and you should be seeing a lot of different colored circles and sizes around the world.****

- c. Return to the "Settings" button--**BE sure "Auto Update" still checked
 - d. click: **7 Days, All Magnitude U.S.**
 - e. Scroll down to **Map Layers**: click on "Terrain."
 - f. Then **Uncheck** "Plate Boundaries."
- 5) Click the "Settings" button again to close the pop-up.
- 6) Zoom in. (1x) until you see multiple circles in various locations.
- 7) **Answer the questions below in your binder on a piece of paper:**
- a. Where are most world earthquakes located?
 - b. Where in the world was the most recently recorded earthquake? (Use the list on the left)
 - c. Record magnitude (# on far left) and depth (the far right number with km)
 - d. When and where in the US was the last recorded earthquake? (If it is the same answer as above find the most recent earthquake that was NOT in the US, record location.)
 - e. Record the magnitude and depth.
- 8) Click "Zoom to..." **U.S. (may have to maneuver the map so Alaska and Hawaii is visible)**
- a. How many earthquakes within the past week?



b. Find the most recent earthquake **closest** to North Carolina. Record location, magnitude, and depth (may have to zoom in on United States to locate the earthquake).

Now focus in California (click the Zoom to button, click California).

Go to settings and change settings to 7 Days, Magnitude 2.5+ U.S.

9) a. How many earthquakes have been recorded in California this week (2.5+ magnitude)

b. What was the largest magnitude EQ in California region? (include location)

c. What was the deepest EQ? (Include location)

Now find "Your Region" (aka your Pen Pal's region) on the earthquake map. Make a small dot on your map for each earthquake located in your region.

Analyze your Data

1) What did you find the most fascinating in the activity? Anything surprise you?

2) What patterns are you starting to see in earthquakes?

3) Why do you think some earthquakes are more frequent in specific locations than others?

4) "Zoom into" Oklahoma region (middle of US). Why do you suppose Oklahoma is receiving multiple earthquakes and other spots in the Midwest is not?

