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Lesson 4: Plotting Earthquakes to Identify Patterns

Purpose: To identify patterns in where earthquakes occur

Guiding Questions: - Which areas on our planet experience earthquakes?
- How is the location of earthquakes related to other geologic features?

Instructions.

1. Use pages 52-53 to plot earthquakes onto your large map. To plot the earthquakes, use the latitude and longitude.
2. When you complete the plotting, take a picture of your map and place it in the space below.
3. Answer questions 7A-7D on the next page of this handout.

In the space below, insert a picture of your completed map.

Questions. Answer the following questions based on the earthquakes you plotted on your large map.

7a. On (or near) which coast of North America do most earthquakes occur?

7b. Which states in the United States are most earthquake prone?

7c. Are the earthquakes located within specific areas or scattered throughout the world?

7d. If the earthquakes are in specific areas, how would you describe those areas?
(What patterns do you see in where earthquakes occur?)

Part 2: Quake Feed.

1. Download the app Quake Feed from the App Store. It's created by Artisan Global LLC.
2. Launch the app and review the functions of the icons at the top of the screen. From left to right you have: a list of earthquakes currently shown on the screen, a data feed selector to change the day and magnitude range, a sorting option, a filtering option based on magnitude, base maps, map layers (turn on/off lines), locator, and a news feed.
3. Follow the steps below and write answers to the questions. Remember to **DATA SMACK!** Your answers are meaning less without data/examples from the app. Be specific in your answers! Screenshots can be extremely helpful, too, but they alone will not be answer to the questions.

Questions

1. Observe the patterns seen in the charted earthquakes. What types of patterns do you see and where do you see them? Be specific.
2. Earthquake magnitude is measured using the Richter Scale; the higher the number, the more severe the quake. Observe the earthquake occurrences by their Richter Scale measurements. Where are the highest magnitudes found? What other observations can you make about these quakes?
3. Now investigate areas where there is a higher frequency of quakes. Where are they? Are the quakes similar in magnitude in that area? Or are they increasing/decreasing in magnitude over time?

4. Observe “lone” earthquakes. Are there as many? Describe where they are found.

5. Compare and contrast your map with the Quake Feed map.