

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

Date: \_\_\_\_\_



## Does the Earth Have the *Shakes*?

### Materials needed:

- pencil
- Map of the world (attached)
- Internet connection (optional)

During a World Series baseball game in San Francisco in 1989, the ground began to shake. The game had to be canceled, because the stadium was an unsafe place to be. Many years before, San Francisco had another similar event, but it was much stronger. Thousands of people died.

When the ground shakes, it is called an *earthquake*. Earthquakes are hard to predict. They can happen anywhere at any time. Yet, other large cities, like New York City, has never had a major earthquake. Why does San Francisco have so many, while New York so few? Is there a *pattern* to where they occur?

You will be instructed by your teacher how to obtain a list of the most recent earthquakes. Your job is to plot points on the world map attached showing the locations of each earthquake. They are listed by latitude and longitude.

When plotting the points on your map, remember that the latitude lines are those that run from left to right across the map. Latitude is a measure of distance north or south of the Equator. Numbers of degrees of latitude get higher as you travel from the Equator ( $0^\circ$ ) to the North Pole ( $90^\circ$  N). They also get higher from the Equator ( $0^\circ$ ) to the South Pole ( $90^\circ$  S). Make sure you notice whether the latitude is north or south of the Equator.

Longitude lines are those that run from the top to the bottom of your map. Longitude is a measure of distance east or west of the Prime Meridian. The Prime Meridian runs through a town in England, named Greenwich. Longitude numbers get higher as you travel from the Prime Meridian ( $0^\circ$ ) eastward or westward. The maximum longitude is the International Date Line, which is  $180^\circ$  away.

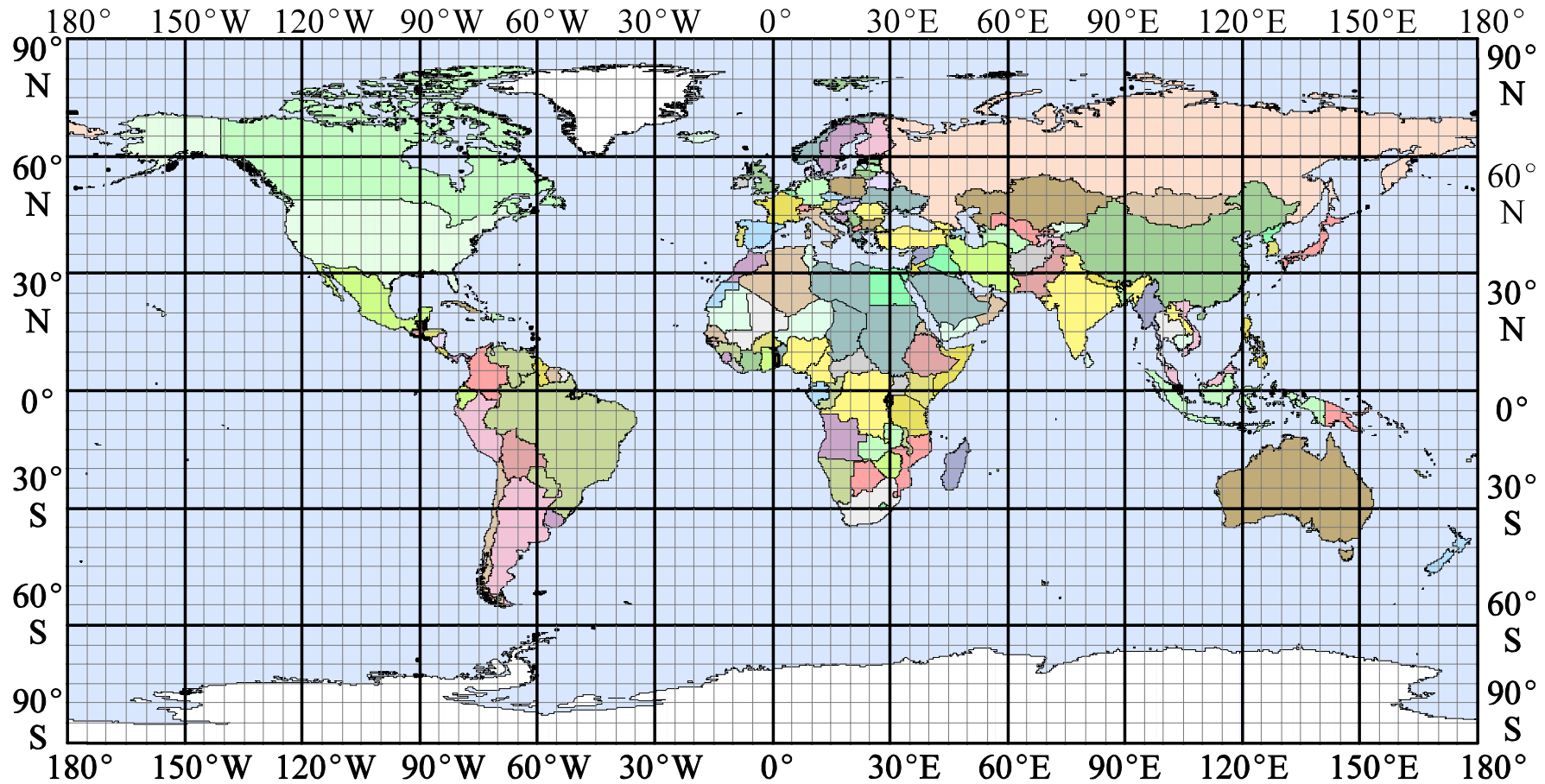


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Procedure:

A. Plot each earthquake with a small dot, and label its code number.



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B. When you have completed plotting the points representing earthquake activity, answer the following questions.

Questions:

1. Describe the patterns (if any) as shown on your map:


2. Which parts of the world are probably the most 'at risk'?


3. Which of the following tend to be the 'safer' places to be: a) the edges of continents, or, b) the middle of continents? What evidence do you have to support this?


4. Locate where you live on the world map. Draw a star at your approximate latitude and longitude. Given the information you have recorded, are you at risk for earthquakes? Give an explanation of why you think you are—or why you think you are not.