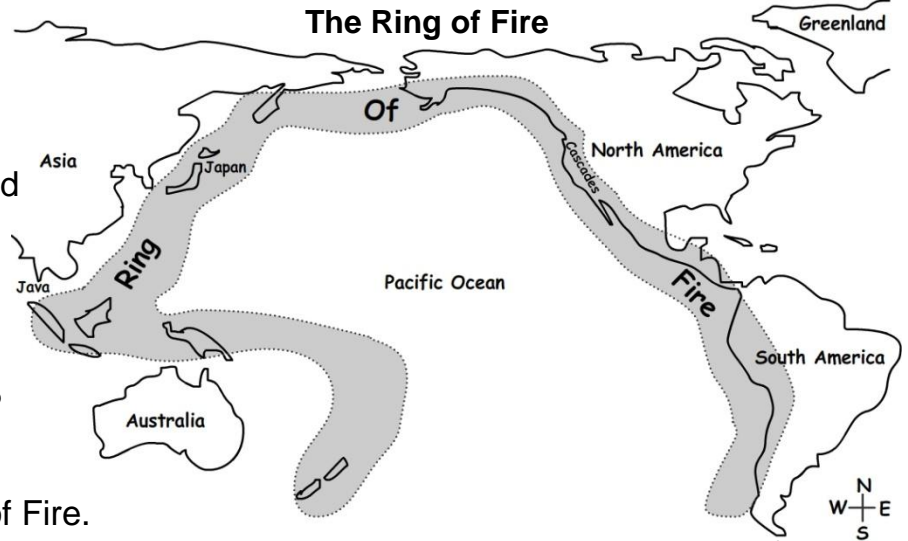


Ring of Fire: Introduction

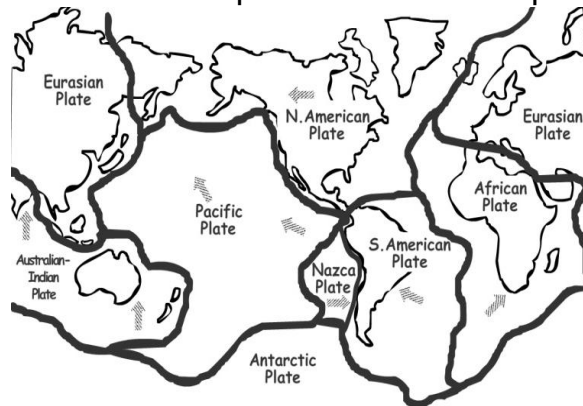
Name _____

Instructions: Read through the information about the Ring of Fire. Then complete the "Fill In" questions.

The *Ring of Fire* is an area that surrounds the Pacific Ocean where the earth's tectonic plates are in continuous motion. Reaching over 25,000 miles, this horseshoe shaped area experiences numerous volcanoes and earthquakes. It is home to 452 volcanoes that make up over 75% of the world's active and dormant volcanoes. About 90% of all the world's earthquakes and most of the world's *largest* earthquakes occur along the Ring of Fire.



The *Ring of Fire* is a direct result of plate tectonics and the movement and collisions of the earth's crustal plates. In many locations such as Japan, the Pacific Plate is being pushed into the earth's mantle (a process called *Subduction*) creating active volcanism and earthquakes. In 2011, Japan experienced one of the largest earthquakes ever recorded as a result of movement along the Ring of Fire. In other locations, such as Java in the South Pacific, numerous volcanoes are created as the Australian Plate is subducted into the mantle underneath the Eurasian Plate. This subduction has created several of the largest volcanic eruptions ever recorded. In 1883 the volcanic island of Krakatau erupted just off the coast of Java. This eruption created an explosion heard over 3000 miles away.



The eastern side of the *Ring of Fire* is just as active as the western. Along North America's western coast the Cascade range forms a line of volcanoes stretching over 700 miles. Included in this range are Mt. Rainier, Mt. Hood, Mt. Shasta, and Mt. St. Helens which had a major eruption in 1980. Farther south you have the San Andreas Fault system that is responsible for 1000's of earthquakes each year in California and the surrounding areas. If you are looking for active geology on the earth, look no further than the *Ring of Fire*.

Complete the "Fill In" questions below using information from the sections above.

- 1- The Ring of Fire forms an active area of geology over _____ miles long.
- 2- _____% of the world's active and dormant volcanoes are found on the Ring of Fire.
- 3- The Ring of Fire is so active because of the earth's moving _____ plates.
- 4- The process of the earth's crust sinking into the mantle is called _____.
- 5- In 2011, one of the earth's largest earthquakes occurred in _____.
- 6- The 1883 eruption of Krakatau created an explosion heard over _____ miles away.
- 7- On western coast of North America, the _____ range contains many volcanoes.
- 8- The area of geology that surrounds that Pacific Ocean is called the _____.

Ring of Fire: Map Investigation

Name _____

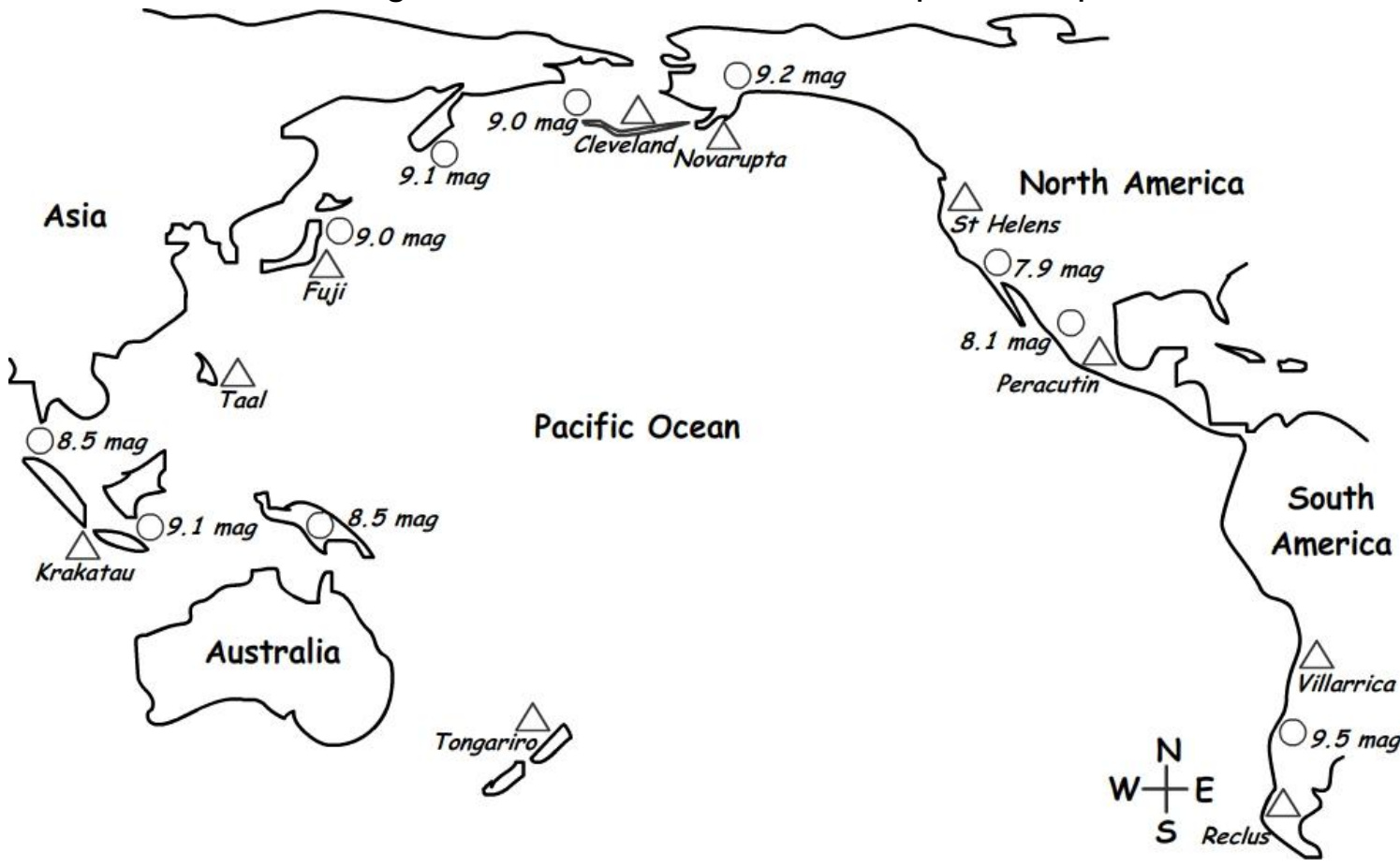
Instructions: Use the color key below to color the Ring of Fire map. Then complete the questions.

Ring of Fire Color Key

△ Red = 10 largest recorded volcanic eruptions.

○ Blue = 10 largest recorded earthquakes.

Ring of Fire – Volcano and Earthquake Map



1- Explain in your own words why the Ring of Fire has so much geologic activity?

2- Subduction usually causes more extreme geologic events. Which side of the Ring of Fire do you think experiences more subduction. Why?

3- Give your opinion on whether or not someone should live near the Ring of Fire.
