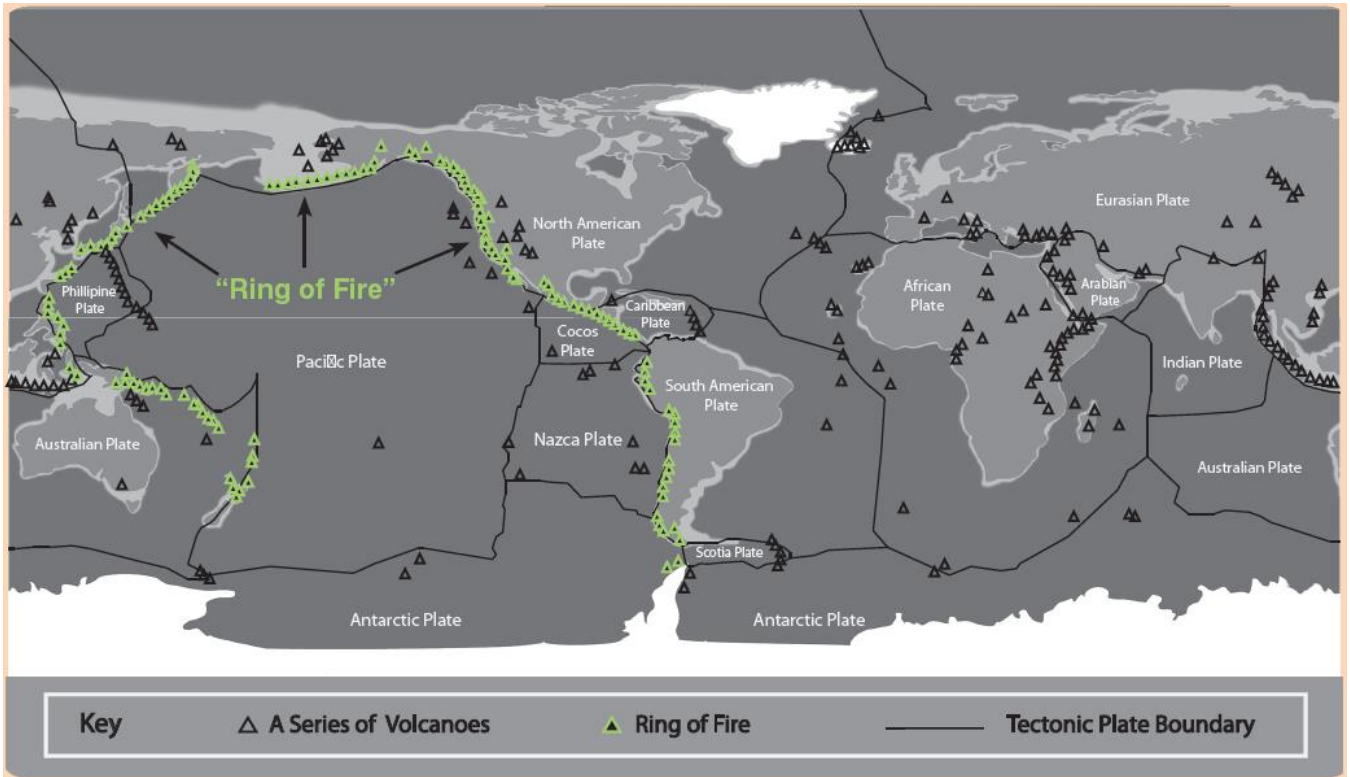


4th Grade – Earth Science: Changing Earth

- Week 1
 - **Countries of Fire** - Use the Internet to research volcanic activity or earthquakes in one of the countries bordering the green Ring of Fire shown on the map below. Make a list of the earthquakes or volcanic eruptions that have occurred in this country during the past 50 years.



- **Science in the News** – Select an article about a recent earthquake or volcanic eruption. Write a short report about how people in the area were affected by it, and how they overcame challenges after the natural disaster.
- Week 2
 - **Read Literacy Article 2A: Cool Rocks** ([link](#)): Answer the questions to help understand different types of rock and how they are formed.
 - **Between a Rock and a Hard Place**: An idiom is a phrase that has a meaning of its own, sometimes completely unrelated to the meanings of its individual words. For example, “between a rock and a hard place” is an idiom that is sometimes used to describe a difficult situation that has no easy solution. Make up an idiom for how it is important it is to work hard and have ambitions using words about landforms.

- Week 3
 - **Read literacy Article 3A: Water Can Create Landforms** ([link](#)): Answer the questions to help understand the different kind of landforms that result from the weathering or erosion of land by water.
 - **Take Home Science: Rocksicle** ([link](#)): Investigate the effects of repeatedly freezing and thawing rocks.
 - **Flowing Paint:** Meanders, or twists and turns in a river, are the result of the movement of water. What happens to a drop of liquid paint if you blow on it with a straw? Does the liquid move in one direction? Place a small drop of paint in the middle of a sheet of paper and blow on the paint through a straw. Describe how air moves the paint on the paper.

- Week 4
 - **River Carvers:** The Colorado River, which flows through the Grand Canyon, has carved a path through millions of years of geologic history. Research other rivers that have left their mark on Earth's surface, such as the Red Deer River in Canada, the Amazon River in South America, and the Nile River in Africa.
 - **Read Literacy Article 4A: Geologists and Cartographers** ([link](#)): Answer the questions to understand how geologists and cartographers work together to study and model landforms on Earth's surface.

- Week 5
 - **Read Literacy Article 5A: Fascinating Fossils** ([link](#)): Answer the questions to understand types of fossils and how they are formed.
 - **Make Rocks:** Make a model of sedimentary rocks using different layers of homemade clay. Follow the directions below to prepare the clay. Next, layer the colors. Can you identify which layer of your sedimentary rock is the oldest? Which layer is the youngest? Follow these directions for making homemade clay:
 - Mix three-quarters cup flour, one-half cup salt, and one-half cup cornstarch in a bowl.
 - Divide the mixture into 2–4 different parts, each in its own bowl.
 - Prepare one cup of warm water and food coloring for each bowl of dry mix.
 - Add the warm, colored water to the dry ingredients and mix until the mixture becomes slightly hardened. Knead the mixture.

- **Innovators in Science** – Pick a person below, research and write about why they can be called an "innovator in science."
 - Alfred Wegener – www.famousscientists.org/alfred-wegener/
 - Rosaly Lopes – www.science.jpl.nasa.gov/people/Lopes/
 - Lucy Jones – www.seismosoc.org/award-recipient/lucy-jones/