**Name**: Connor Filipovic

**Title**: Researching seismology, volcanology, geochronology, and geography at the North American Plate

**Objective** The objective of this lab is to understand the different occurrences of seismology, volcanology, geochronology and geography around the plates and plate boundaries. Use these different scientific specialties to show patterns to help identify different types of plates that exist. Use the different maps of the scientific specialties to explain the different boundaries of the North American Plate. Using these specialties try making a conclusion about what type of plate the North American Plate is.

**Background** There are 3 main types of plate boundaries: convergent, divergent and transform. Convergent boundaries occur when two plates move towards each other so that one plate sinks beneath the other (Marshak, 2013). Divergent boundaries occur when two plates move in opposite directions of each other. Transform boundaries occur when one plate slides past another plate. In order to research these different types of boundaries we study the data of seismology, volcanology, geochronology and geography. Seismology is the study of the different seismic waves and events. Volcanology is the study of volcanoes and magma that is visible on the surface of the planet. Geochronology is the study of dating the different geological events throughout Earth’s history. Geography is the study of the land and its features. Using these different scientific specialties we can make conclusions about the different plate boundaries.

**Methods** Using seismology the group concluded that earthquakes occur around all the different plate borders. The group used the found data to create a classification scheme. This classification showed the deepest earthquakes occurred around the coast of land, while the more shallow ones occurred in the middle of the ocean. When we changed groups we discussed the different scientific specialties we had and looked for similarities. The group found that the newest crust occurs around the areas where shallow earthquakes are present.