**Name:**

**Date:**

**Instructor:**

**Course:**

1. What is the plate tectonic theory? Explain the types of plate boundaries, and provide 1 example for each type of plate boundary.
2. Visit the USGS Advanced National Seismic Station (ANSS) list of ANSS stations at: <https://earthquake.usgs.gov/monitoring/operations/network.php?virtual_network=ANSS>. Identify the station closest to where you live. You can use the “Ctrl + F” command to search for a state name if you do not want to scroll through the whole list. Remember though, that a station in a bordering state may be physically closest to you.

Provide the following:

|  |  |
| --- | --- |
| Name of station |  |
| ANSS designation |  |
| Latitude and longitude |  |
| Elevation (meters) |  |
| Distance from you (in miles) |  |
| Date station commenced operation (year, day of year) |  |

1. Next, copy the Heliplot data for your station, and paste the image below. To complete this step, you should right-click on the Heliplot and select “Copy Image” or “Copy” (this will depend on your computer). Then return to this document and paste the image in the space below.
2. Now visit the USGA Earthquake Fault Map at: <https://earthquake.usgs.gov/hazards/qfaults/map/#qfaults>. Find the approximate location of your ANSS station on the map. Click on a colored line closest to your station (this is a fault). A pop-up window should appear. Use it to provide the following information:

|  |  |
| --- | --- |
| Name of the fault |  |
| Age of the fault |  |
| Slip rate (this is how fast one side of the fault moves past the other) |  |

1. How do geologists determine the age of a fault line? What types of evidence specifically are used?
2. Now, visit the National Geographic MapMaker Interactive Plate Tectonic map at: <http://mapmaker.nationalgeographic.org/3HAuN6mlVI6HWdsaiPJ8Z/>. Be sure you are on the “Plate Tectonics” map. Provide the following:

|  |  |
| --- | --- |
| Name of the plate on which you live |  |
| Closest neighboring plate(s) to you |  |

1. Lastly, use the interactive map found here: <https://www.learner.org/interactives/dynamicearth/plate.html>. Use the map identify the type of plate boundaries that are present between your plate and the closest neighbor(s) you identified.