Another medium for waves that was not discussed in this module is the earth, which vibrates in various ways due to earthquakes producing seismic waves. Research and then develop a presentation that describes these seismic waves in terms of the vocabulary you learned in this lesson, and shows how these waves demonstrates several of the wave phenomena that you have learned, such as reflection, refraction, resonance and interference.

Your presentation may include, but is not limited to:

* A comparison P-waves and S-waves
* The discovery of the “Moho” boundary
* A discussion of earthquake energy and magnitude
  + Comparison of Moment Magnitude versus Richter Scale
* The formation and propagation of tsunami waves
* The function of a seismograph

You must clearly document your sources. *If you use any resources outside of this course, please be sure to properly cite those resources with an accompanying bibliography.  Information on how to cite resources can be found in the Developmental Module.*

A selection of resources:

<http://earthquake.usgs.gov>

U. S. Geological Survey, Earthquake Hazards Program

<http://earthquake.usgs.gov/regional/ceus/>

U. S. Geological Survey, Central and Eastern US

<http://earthquake.usgs.gov/learn/glossary/>

Earthquake term glossary from USGS

<http://nisee.berkeley.edu/>

Earthquake Engineering Research Center at U. C. Berkeley

<http://www.scecdc.scec.org/>

Southern California Earthquake Center Data Center

<http://serc.carleton.edu/NAGTWorkshops/geophysics/visualizations/earthquakes.html>

Earthquake visualizations from Carlton College

<http://www.seismolab.caltech.edu/gen_eq_info.html>

A selection of earthquake education links from Cal Tech

**Rubric**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Points | 5 | 4 | 3 | 2 | 1 |
| Overall quality of presentation | Presentation is of professional quality, speaks for itself without additional support | Presentation is of mostly professional quality, and speaks for itself without additional support | Presentation is of reasonable quality but requires additional support to make its case. | Presentation appears of inconsistent quality and does not effectively communicate material present | Presentation is inconsistent and fails to adequately communicate the material |
| Research and data collection | Multiple data sources were used to source and validate information. Complete and appropriate references to resources are included | Several different data sources were used to source information. Appropriate references to resources are included | Limited data sources were used to source information. References to resources are incomplete | A single data sources was used to source data. References to resources are incomplete or missing | Insufficient information to support discussion was collected, and references to resources are incomplete or missing |
| Alignment to Waves module | Information collected and presented aligns well to waves module and actively links to many areas of study from various lessons. | Information collected and presented aligns well to waves module but presents limited links to areas of study from various lessons. | Information collected and presented aligns somewhat to waves module but presents few links to areas of study from lessons. | Information collected and presented aligns poorly to waves module and is lacking in links to areas of study from lessons. | Information collected and presented is unrelated to waves module and does not link to areas of study from lessons. |