## Lesson Plan: Earthquake Measurement: The Richter Scale using the Khan Academy Video

**Standards: 7th Grade Science: R 8.1.8, 8.1.9**

**7th Grade Language Arts:** (A) **7.1.III-** Create a summary including the main idea and the most important text-based facts, details, and/or ideas from informational/expository text.

**Objectives:** Students will learn about how the Richter scale measures earthquakes

**Materials:** Computer with access to the Internet, worksheet (attached) color pencils

**Vocabulary:** Earthquake, Seismograph, Richter scale, Lithosphere, Magnitude

**Procedure:**

1. Discuss earthquakes and have students peruse earthquake photos and information at:

http://earthquake.usgs.gov/learn/photos.php

1. Next have the students discuss the Richter scale by answering the questions:

* How are earthquakes measured?
* What is the Richter scale?
* Where do you typically hear the word Richter scale?

1. Explore the International Registry of Seismograph Stations to find the nearest station to your class. http://www.isc.ac.uk/cgi-bin/regions?zone=North+America

Below is Casper’s Station Information- Casper Region: Wyoming, U.S.A.

Code: K22A Latitude: 42.65069 Longitude:-106.52400 Elevation: 1686.0

1. **Worksheet:** Using colored pencils-Have students color the legend of the attached worksheet first, then color the map according to the legend.
2. Have students view the Khan Academy lesson on how the Richter scale is factored.
3. **Video:** http://www.khanacademy.org/math/algebra/logarithms/v/richter-scale
4. Have students write a summary of the effects of an earthquake’s magnitude to the Earth’s Lithosphere.
5. **Additional Activity**- Online Richter scale word search: http://earthquake.usgs.gov/learn/kids/wordsearch/richter.php
6. Present summary findings to class.

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

