# Name: Date:

# Unit 3 Pre-Reading Questions & Activities

## Your turn

Use the data in Table 1 to determine the MRIs for the following volcanoes.

|  |  |  |  |
| --- | --- | --- | --- |
| **Volcano Name** | **Years since oldest known eruption (N)** | **# of Confirmed Events since oldest known eruption (n)** | **MRI (T)** |
| Mt. Baker |  |  |  |
| Lassen Peak |  |  |  |

Table 1: Data to calculate MRI. Data is from the Smithsonian Institution’s Global Volcanism Program: <https://volcano.si.edu/>

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mt. Baker | 1880 | 1870 | 1863 | 1859 | 1858 | 1954 | 1852 | 1843 | 1820 |
| Lassen Volcanic Center | 1914 | 1666 | 980 | 880 | 800 |  |  |  |  |

# Seismic Swarms

1. Describe the axes of this graph and what it illustrates in your own words.
2. Circle (or name the date ranges for) the three most important seismic swarm(s) in the year 2017 at Mount St. Helens
3. How did you determine what constituted a seismic swarm?
4. What information do you have, what information is missing? What information/data would you like to know?
5. Did any of this activity result in volcanic eruptive activity? Look on the Mount St. Helens’s Activity Alert page: <https://volcanoes.usgs.gov/volcanoes/st_helens/status.html> and determine if the seismic swarm resulted in any kind of concern by the scientists at the Cascades Volcano Observatory (USGS).

Note that MRIs for earthquake swarms can also be calculated!

X-axis is # of Earthquakes/day
Y-axis is from 1-Jan to end of Dec.
Most days from beginning of Jan to early March,  there are eq's in the range of 0-2. Most of March, there are no eqs. End of March to early April there are 1-3 eq's/day. Late april to early May there are eqs ranging from 4-8/day. between early July and early august there are no eqs. Mid august to mid september the eqs range from 1-4. In mid-sept to early Oct, eqs range from 6-8/day. Early Nov, tehre are no eqs, Most of december, there are eqs from 8-17/day. End of december, there are 1-2.

Figure 1: Number of earthquakes per day at Mount St. Helens in 2017. Data from USGS.