

---

1) Can you think of reasons why we would want to date volcanic eruptions?

We do not date volcanic eruptions just so we can know when a certain volcano erupted: we link this data with other pieces of data that can better paint a picture of what the world was like back when the volcano erupted. For example, we can match the date of a volcanic eruption to other evidence hinting at other cataclysmic events at the time, such as large, destructive earthquakes, or connect that date to a meteorological event such as the Little Ice Age or “The Year Without a Summer”. In fact, “The Year Without a Summer” refers to 1816, during which Europe and North America experienced snow, rain, and gloomy weather during summer time due to the eruption of Mount Tambora in April 1815, and which went on to even inspire writers Mary Shelley and Lord Byron while they were on vacation in Lake Geneva and trapped indoors due to constant adverse weather, such that Shelley went on to set her famous novel *Frankenstein* in a stormy environment, and Byron went on to write the poem *Darkness*, which begins, “I had a dream, which was not all a dream. The bright sun was extinguish’d.” Not only that, dating volcanic eruptions helps to date fossils in between separate layers of solidified lava rock, helping to understand what organisms were alive at what time, to further understand the situation at a certain period of time. Therefore, the dating of these volcanoes can help to explain other pieces of data or give more context to them, everything from helping to form a clearer image of historical events, to explaining how writers acquired their inspiration for some of their pieces.

2) Can you think of some things that tephrochronology can help us with?

Tephra is like a chemical fingerprint of a volcanic eruption, which can be identified wherever the volcanic eruption may have affected. Therefore, tephra from a certain volcanic eruption alongside the locations/areas of where it is found and other pieces of data can depict the climatic sequences and events that occurred revolving around the volcanic eruption; what organisms were affected and how the climate then was affected.