

COMPETITION 1.3: TELLING THE TIME

Why should we want to date volcanic eruptions?

One reason why we might want to date volcanic eruptions is to see if there is a common pattern. Volcanic eruptions create a plethora of dangers and consequences, besides from lava flows. After a volcanic eruption, it's important to evacuate regions when necessary. By dating volcanic eruptions, this will allow regions and countries to be better prepared and warned for the volcanic disruptions. This will economically benefit the region/ country as perhaps there will be fewer disruptions caused by the volcanic eruptions as the government can use the money wisely for better precautions and warnings. Additionally, due to the fact, there could be less damage done to the infrastructure and land. This allows people to go to work and continue agriculture. Clearly this positively impacts the economy as people can still go to work. This is the positive multiplier effect as the citizens earn more money, taxes increase, therefore the government can use this money for better precautions.

After a Volcanic eruption, ash is created. The volcanic ash is made of sharp pieces of volcanic glass and rocks, each less than 2mm across. The ash is created as the gasses which are in the rising magma. This then shatters the cooling rocks as they burst from the volcano's mouth. This is not only very dangerous to inhale but it's heavy and builds up quickly. Furthermore, volcanic ash can cause structures to become weak and collapse; it is a challenge to shovel away post-eruption. Clearly, if we realise a pattern in the volcanic eruptions, better methods of prevention can be planned, which can possibly reduce the damage caused by a volcanic eruption.

What can tephrochronology help us with?

- Tephrochronology is chronological framework in which can make archeological records
- This allows us to see patterns in the occurrences of volcanic structures
- This can help create warnings
- This will perhaps then decrease the impact and destruction caused
- Will benefit the economy positively
- Also, it can make sequences widely separated by location into a unified chronology that correlates climatic sequences and events.