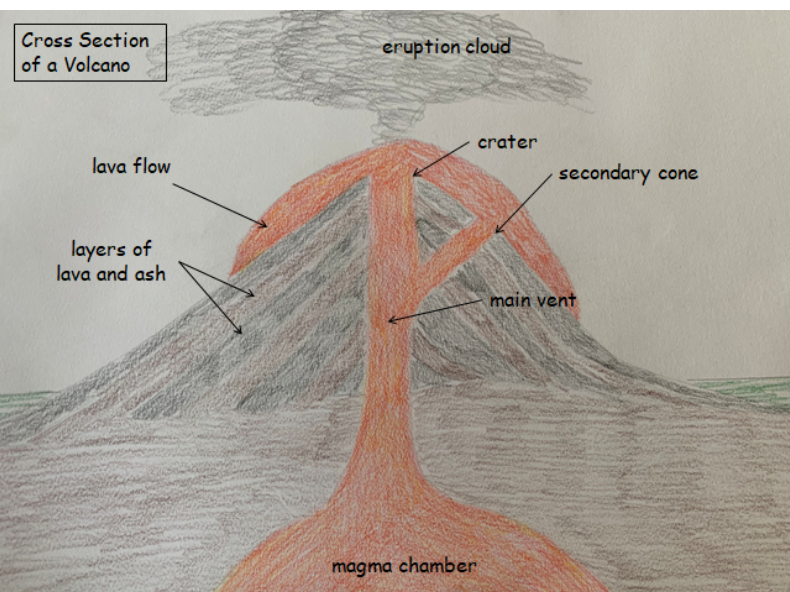




VICIOUS VOLCANOES

You will need:

- Playdough or plasticine (2 colours or use our playful playdough recipe to make your own in advance
<https://www.atomseducation.co.uk/science-ninja-resources>)
- a test tube or small yoghurt pot or similar
- vinegar
- bicarbonate of soda
- food colouring
- a pipette or jug
- a teaspoon
- a messy tray to catch all of the mess (we normally use foil tray bake trays or similar)



KEY VOCABULARY

lava	magma	crater
lava flow	cone	main vent
magma chamber		erupt
eruption cloud		crust
inner core	mantle	outer core
tectonic plates		Vulcan
Roman	gas	ash

METHOD

1. Place your test tube or yoghurt pot in your messy tray and fill it with vinegar to about 3/4 full.
2. Now add a little bicarbonate of soda and observe the chemical reaction that occurs.
3. Experiment with how much to add to make sure the "lava" comes over the top of your container. Once you are happy empty your container and empty your messy tray ready to make your volcano.
4. Now look at the cross section of a volcano sketch and notice that it is made up of layers of ash and lava built up over years of repeated eruptions. The volcano erupts and the lava flows then the ash cloud falls on top and the layers are created.
5. Use your two colours of playdough to build up layers of lava and ash to make a volcano around your container making sure to leave the top open to represent the crater.
6. Now fill your crater with vinegar but this time add some food colouring too.
7. Add in your bicarbonate of soda and enjoy watching your volcano erupt.
8. You can repeat making your eruptions as many times as you like.

FUN VOLCANO FACTS

- A volcano is an opening in the Earth's surface (crust). The opening allows gas, hot magma and ash to escape from beneath the Earth's crust.
- The word "volcano" comes from the Roman name "Vulcan" who was the Roman god of fire.
- The Earth's crust is not one solid piece. It's made up of pieces called tectonic plates that fit together like a jigsaw floating on top of the mantle (molten rock) below. Volcanoes are often found at meeting points of tectonic plates.
- Magma and lava are two different things, magma is the name given to hot liquid rock inside a volcano. It's only called lava once it leaves the volcano.
- The world's largest active volcano is Mauna Loa in Hawaii. It is 4,169m tall and last erupted in 1984.
- Volcanoes are classified as active (there's regular activity), dormant (currently quiet but there has been some recent activity) or extinct (no activity for so long that it is unlikely to ever erupt again). Arthur's Seat in Edinburgh is actually an extinct volcano.

ACTIVITY TIME: 30 MINS TO 1 HOUR