

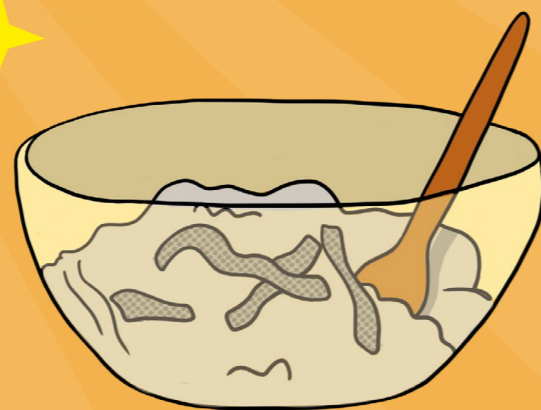
ERUPT A MARTIAN VOLCANO!

There are some amazing things in space – from comets whizzing around the solar system to diamond icebergs floating in the seas of Neptune. If you took a trip to Mars then you could see Olympus Mons – the largest volcano in the solar system. At 25 km high it makes even the largest of Earth's volcanoes look like rather small hills.

Olympus Mons is a shield volcano. Its gently sloping sides are made up from many layers of hardened lava. In this activity you will make 'lava' erupt with a chemical reaction!

YOU WILL NEED:

- a mixing bowl and spoon
- half a cup of flour
- half a cup of water
- a tablespoon of salt
- newspaper
- a clean, empty, small plastic drinks bottle
- a piece of cardboard about 30 cm x 30 cm
- some red-brown paint
- a paintbrush
- a sink or a large tray
- three teaspoons of bicarbonate of soda
- a piece of tissue paper
- a cup of white vinegar
- red food colouring
- washing-up liquid



1 Make papier-mâché glue by mixing the flour and water into a paste. Add the salt to stop it going mouldy. Tear up lots of strips of newspaper.

You are now ready to get messy and build your volcano.

2

Put the drinks bottle on the cardboard. Dip newspaper strips into the papier-mâché glue, then place them around the base of the bottle. Let them dry. Build up more layers around the bottle in a volcano shape. Leave a hole at the top.

When your volcano is completely dry, paint it a red-brown colour to match the rocks found on Mars. (Your volcano will be a different shape to Olympus Mons because of the bottle inside.)



3

When the paint is dry, put your volcano in a sink or on a tray. Wrap three teaspoons of bicarbonate of soda in a piece of tissue paper.



4

Pour the white vinegar into the bottle. Add a few drops of food colouring and a good squirt of washing-up liquid. Drop in your bicarbonate of soda and stand back. After a few seconds, red foamy lava should erupt out of your volcano!



SCIENCE FACT

The foam is a result of a chemical reaction between the acidic vinegar and the alkaline bicarbonate of soda. The reaction causes bubbles of carbon dioxide to be released, which are then trapped by the washing-up liquid.