Get Rocking! Age 7–12

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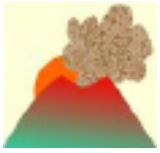


A Volcanic recipe

You will need:
some sand or soil
1/2 cup vinegar
large tub – or do this outside!
3 tablespoons dishwashing liquid
several drops red food colouring
jar/bottle with thin neck
1/2 cup baking soda

Put the baking soda in the jar and add the dishwashing liquid.
Place the jar in the middle of the tub.
Pile **sand** or **soil** around about it to a make a volcano shape Mix the food colouring with the vinegar. Pour this into the jar

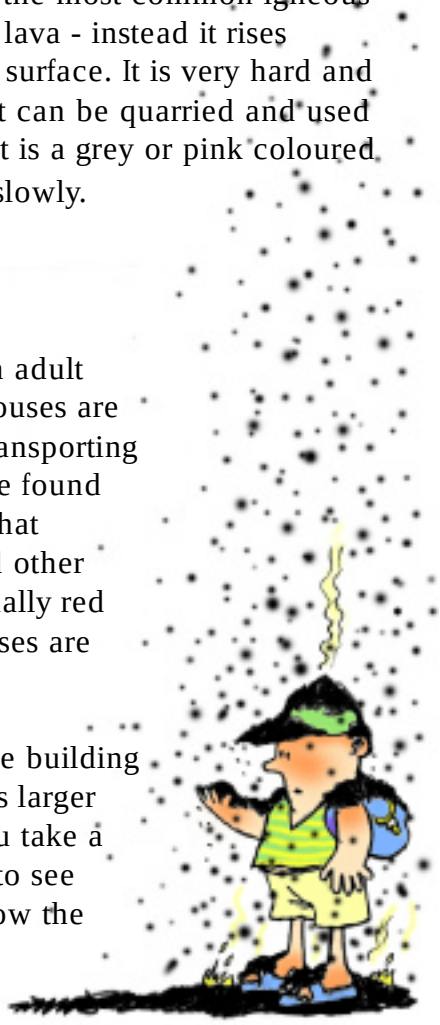
It's an eruption!

It is a liquid as a result of rock melting in the heat and pressure below the Earth's surface.

Real **volcanoes** are not made from bicarbonate of soda and vinegar! However the principle is similar: liquid is being pushed out of a confined space under pressure. **Volcanic rock** such as **lava** from a volcano is very hard rock. It has become liquid as a result of the melting of rocks below the Earth's surface.

Volcanic rocks such as **basalt** lava are called **Igneous** rock, formed when melted **minerals** cool down and harden. **Granite** is the most common igneous rock but does not erupt onto the earths surface like lava - instead it rises upward in the earth and cools before it reaches the surface. It is very hard and where **erosion** has worn away the overlying rocks it can be quarried and used for buildings and for monuments and gravestones. It is a grey or pink coloured rock with large **crystals** formed as the rock cooled slowly.

Is there a volcano nearby?



Take a wander around your neighbourhood with an adult and look at what the houses are made from. Old houses are the best. It is a likely that in order to save money transporting **stone** around the country they were built from stone found not too far away. It is common in Scotland to find that special buildings such as churches, old schools and other public buildings are built from local **sandstone** (usually red or off white) or **granite** (grey or pink). Modern houses are more often built with brick and concrete.

some will have small sandy grains and others larger crystals

Take a magnifying glass and have a close look at the building stone, some will have small **sandy grains** and others larger **crystals**. Some may have interesting patterns - if you take a rubbing using paper and crayons you may be able to see patterns in the rock - all these clues tell us about how the rock was made.

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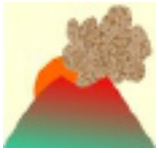

Fossils

the remains of animals and sometimes plants that lived and died in the area

You may be lucky enough to live where there are buildings which are made of **limestone**. This is a **sedimentary rock** which may contain **fossils**. Fossils are the remains of animals and sometimes plants that lived and died in the area where the rock formed. The animals and plants have been caught in **sediment** and dissolved **minerals** carried in water have gradually replaced the remains as the rock formed with the help of pressure. The minerals leave a unique imprint of the ancient life.

Anywhere you find sedimentary rock is a good place to find fossils. Stream banks, shorelines, old quarries and where a new road is being cut through rock are all places you might be lucky enough to find fossils.

These places can be very dangerous and so you must get permission to visit and always go with an adult.

Make your own fossil

You will need :
scissors,
an old sponge,
an old cup and a container,
Epsom salts and food colouring.

the minerals slowly take the place of the dead material

Cut out a **fossil** shape from the sponge. Fill the cup with hot water and stir in the Epsom salts until no more will dissolve. Add the food colouring (just a few drops!) then pour this into the container. Put your sponge fossil into the pan and watch how the holes in the sponge fill up with liquid.

This is just what happens to the plant or animal parts buried in **sedimentary rock** - the **minerals** slowly take the place of the dead material. Leave your fossil alone for a few days to let it harden. Now you have your own fossil!