

# Effusive Fissure Eruption

## Required:

Liquid soap container, empty (rectangular, eg. Carex)

Base – sturdy tray or piece of wood

Washing up liquid – regular unscented type

Baking soda / bicarbonate of soda

White vinegar

Red food dye

Small beaker

Teaspoon

Duct tape

Sharp scissors or knife

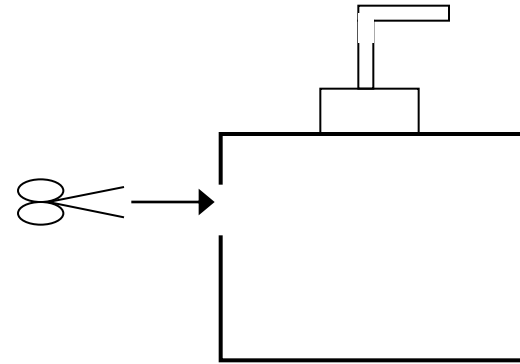
Gravel and dirt; alternatively use plastic sheeting or foil

## Optional:

Plastic container or wooden block (to raise height of the “fissure”)

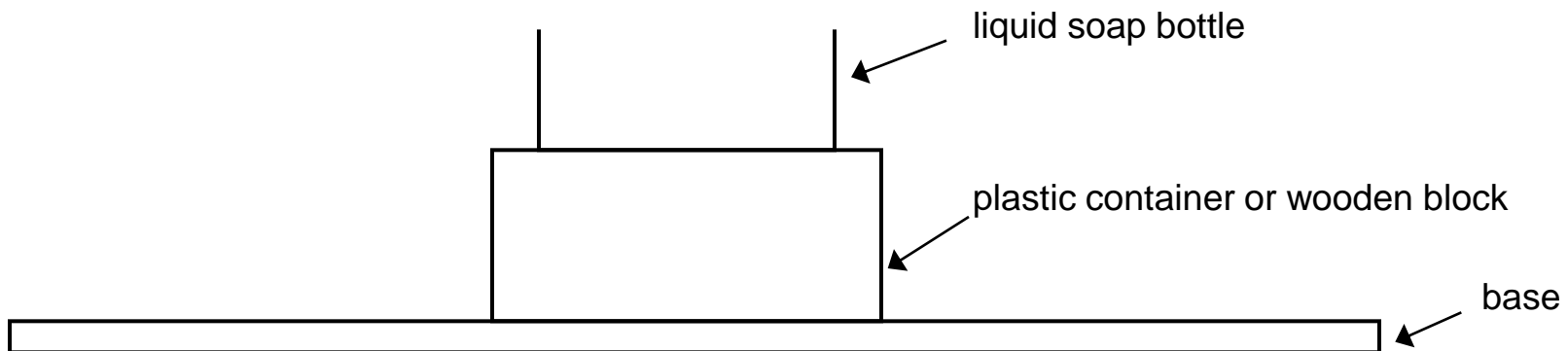
Cut the top off the liquid soap container so there is no rim.

Clean the container thoroughly.

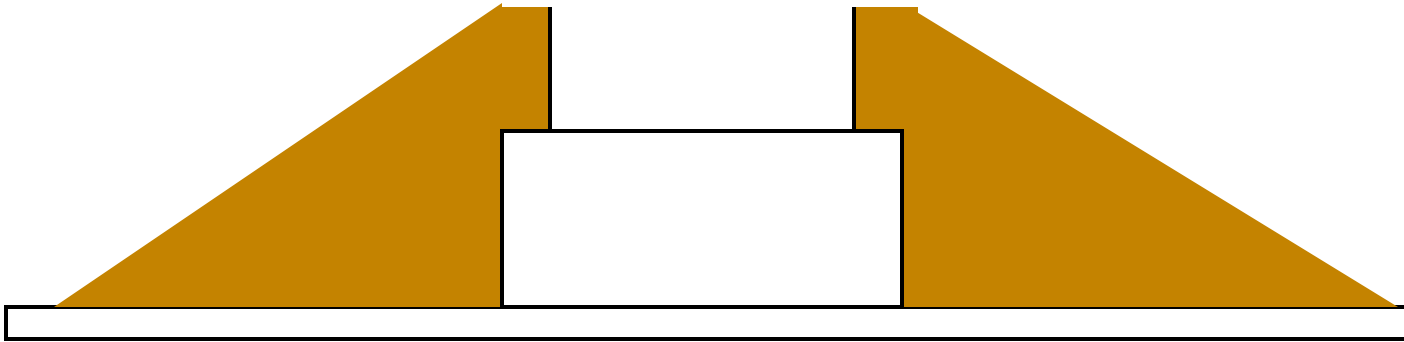


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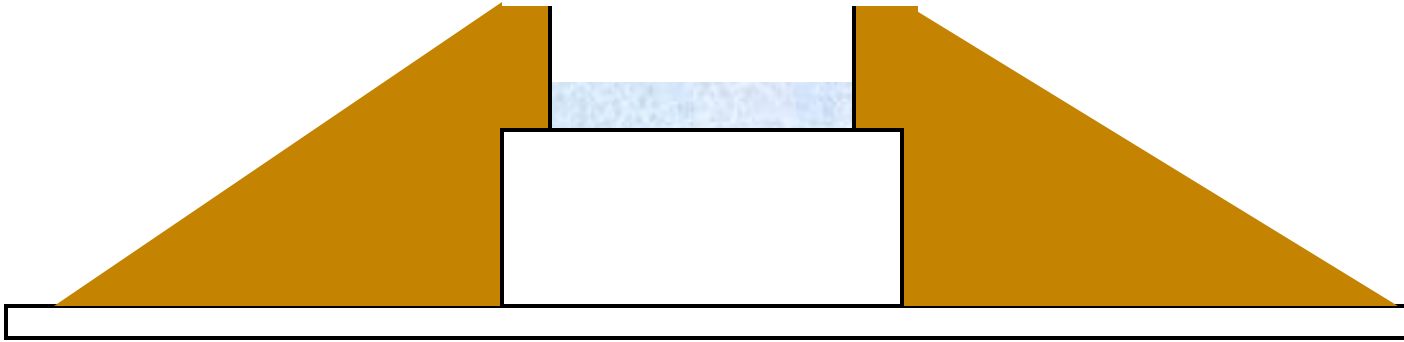
Tape the liquid soap container firmly to the plastic container or wooden block you are using to give the “volcano” height. Tape this firmly to the base – see diagram.

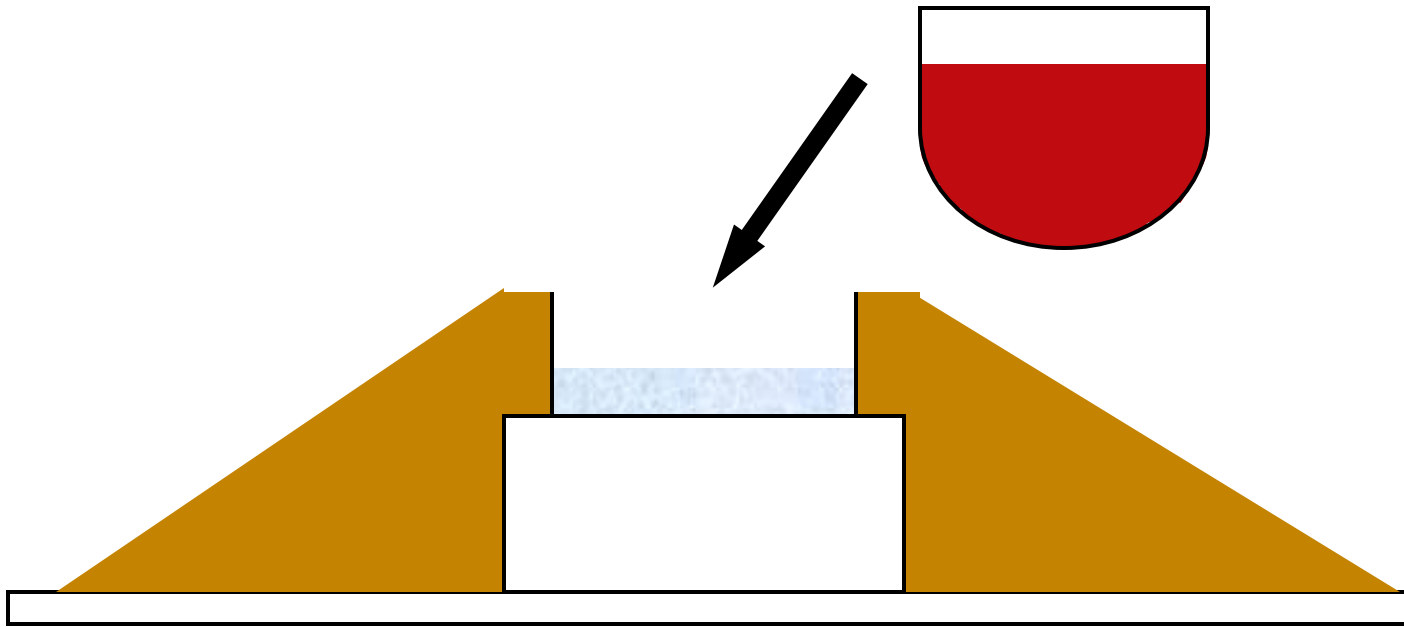


Pack gravel and dirt (or screwed up plastic sheeting / foil) tightly around the “vent” and smooth the surfaces. They must be smooth so that “lava” can flow over them.



Tip baking soda into the open “fissure” until it is about 3 cm thick.





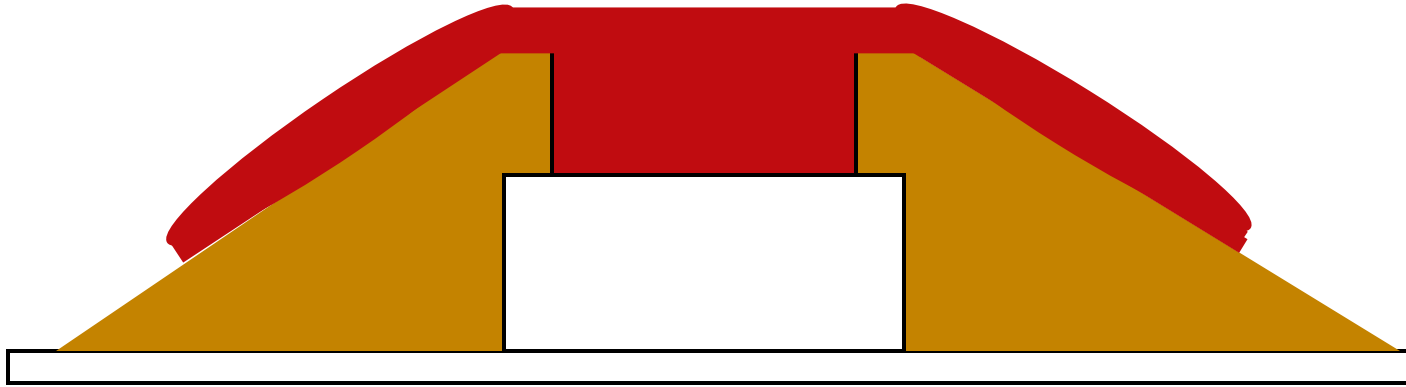
Mix ~70% white vinegar and ~30% washing up liquid in the beaker. Add a splash of red food dye for colour.

Pour this mix into the “fissure”, on top of the baking soda, until the liquid layer is about 3 cm thick.

Tip: Practice! Quantities vary a bit with brands. The best reaction will take less than 10 seconds to emerge from the “fissure”, and it will keep going for well over a minute. Get the quantities wrong, and the reaction is slow and less spectacular.

A thick foam will rise out of the “fissure” and flow down the flanks.

Scoop out the liquid soap bottle using the teaspoon before running the activity again.



## Useful Information

The speed of the flows is right – although they can be faster and slower. People can outrun these flows, but they travel a very long way and destroy property.

Vents are not always round!

This lava is basalt. It spreads quite thinly, forming rounded lobes as it moves. Compare the photo (supplied) with the lobes in your reconstruction.

This lava pours out onto the surface because it does not contain much gas. When there is a lot of gas, you get a more explosive eruption, like Strombolian (now move on to next demo!)