



HANDS-ON EXPERIMENTS

MODEL OF THE
EARTH



To understand how volcanoes form, we must look inside the Earth. The Earth is made of a solid core, surrounded by a thick layer of hot molten rock! The Earth's hard crust surrounds this. The crust is broken up into pieces, like the shell of a cracked egg. The heat inside the Earth affects these pieces of crust. In this activity, we will be creating a model of the Earth and investigating what happens to the pieces of crust when they are heated and creating some volcanic eruptions!

Procedure

You will need a large, wide heat-proof dish, ideally with clear sides, a Bunsen burner or other heat source, a tripod, a heatproof mat, a large ball bearing, enough tomato soup to fill the dish to a depth of 5cm, and a piece of toast

- Put the heatproof mat close to the gas supply and place the tripod on top. Put the dish on top of the tripod. Use two tripods if this is more secure
- Place the ball bearing in the centre of the dish. This represents the inner core of the Earth.
- Pour the tomato soup on top of the ball bearing to fill the dish to a depth of 5 cm
- Break the toast into a few pieces, then float them on top of the soup in the original shape like a jigsaw
- Tie all loose hair back and put on safety glasses
- Turn the Bunsen burner on and open the vent to get a blue flame. Position the flame underneath the ball bearing
- Heat the dish in the centre until the soup is simmering (if it gets too hot too quickly, gently move the Bunsen burner around a small area in the centre)
- Write down keywords about what you can see happening to the toast
- In pairs, discuss what you observe and write a paragraph using your keywords

Investigation

- What features does a ball bearing have that make it a good representation of the inner core of the Earth?
- What is going on in the molten rock soup that causes the toast pieces to move?
- Did you witness any 'volcanic eruptions'? What does this model tell us about how volcanoes form?

VIDEOS FOR THIS RESOURCE AT:

INTRODUCTION:



Clickable Link:

<https://youtu.be/BYCULcdAerg>

CONCLUSION:



Clickable Link:

<https://youtu.be/RhpOlj7KB58>

