# Insulation

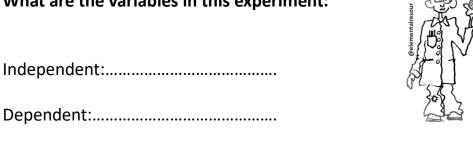
## Organise the method used to measure the effects of different insulation:

- Plot cooling curve graphs for each material.
- Use the kettle to boil water and put 80 ml of this hot water into the small beaker.
- Insert the thermometer through the hole in the cardboard lid so that its bulb is in the hot water.
- Record the temperature of the water and start the stopwatch.
- Put the small beaker inside the larger beaker.
- Repeat steps 1-6 using the different materials each time to fill the space between the small and large beaker.
- Use a piece of cardboard as a lid for the large beaker. The cardboard must have a hole for the thermometer.
- Record the temperature of the water every 3 minutes for 20 minutes Add your results to a table.

## Choose a real life situation and explain how the results of this experiment would be used:

Real life situation: How the results would be used	
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### What are the variables in this experiment:



ut the materia	als in order o	of best insulator	to worst i	nsulator:

**Bubble Wrap** Tin Foil Newspaper Polystyrene Sawdust Corrugated Cardboard

Control Variables:		

How would you control these variable to minimise their effects?

#### Worst

Best:

Explain in your own words why some materials are better insulators than others

# Plan Without turning over (!) write a step by step plan for measuring the effects of different insulations.

## **Results**

Time (min)	Newspaper	Bubble Wrap
0	75	80
3	72	77
6	68	74
9	64	71
12	62	68
15	60	65
18	58	63

Look at the table of results and graph. Which material is the better insulator? How do you know?

# Complete the sketch graph for Bubble Wrap and Newspaper