

STUFF AND SUBSTANCE:

MELTING BEHAVIOUR OF MATERIALS

Different materials melt in different ways. A material could be just *one* substance or *more than one* substance mixed together. You are going to do an investigation to compare the melting behaviour of different materials.

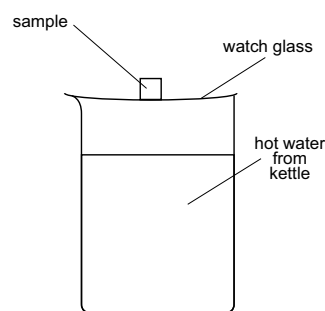
1. You will need samples of three different materials (A, B and C). Note that we are using the word 'material' here to mean any kind of 'stuff' – we are not using it in the everyday sense of a cloth or fabric.

When some materials are heated they show a well-defined change from solid to liquid; others go through a 'goosey' stage and don't show a sharp change. You need to identify the kind of change for each sample.

2. Make a water bath by half-filling a 250 cm³ beaker with hot water from the kettle.
3. Put a watch glass on top of the beaker.
4. Put a small sample of the first material (sample A) on the watch glass, and observe what happens to it.
5. Touch the sample with a spatula. What do you notice? Is it changing sharply from solid to liquid or does it go 'goosey'? Fill in a table like the one shown.
6. Now repeat for the other samples (B and C).
7. What might be the reason for their different behaviours?
8. Can you think of other materials that change from solid to runny liquid when heated? Can you think of other materials that go 'goosey' when heated?
9. In terms of *particles*, what is the difference between a substance and a mixture?



Take care when using hot water. The beaker and watch glass will get hot and could scold. Wear eye protection.



Sample	Observations
A	
B	
C	