Activities for Chapter 3

Activity 3.2
Investigating factors that affect the rate of diffusion

Skills
A03.2 Planning
A03.3 Observing, measuring and recording
A03.4 Interpreting and evaluating observations and data

Agar jelly is a transparent jelly made from seaweed extract. If you make up the jelly using water containing some Universal Indicator, then the jelly will change colour as acids or alkalis diffuse into it.

For example, if you use slightly acidic water to make jelly containing Universal Indicator, the jelly will be red. If you place a cube of this jelly into a Petri dish, and pour a dilute alkali around it (for example, sodium hydroxide solution), you can see the jelly change colour as the particles of the alkali diffuse into it.

Use this technique to investigate the effect of one of the following factors on the rate of diffusion:

- temperature
- surface area of the jelly
- concentration gradient.