Essential

How does pollution get into our streams?

Learning outcomes

- Students can recognise that water flows downhill.
- Students can use the term catchment or watershed.
- Students can explain how pollution enters streams through stormdrains

Materials

A plastic container, box or old drawer

Crunched wastepaper, rocks or foil

Plastic or tin foil

A container or spray bottle full of water.

Coloured drink powder

Method

1. As a class or as groups, design and make a 3-D watershed.
2. Use an old box or drawer and fill with crunched-up paper or foil to form a valley. Cover it with a piece of plastic or tin foil. Make sure that one end of your valley is lower than the other end. (You can tilt it to get a deeper valley.)
3. Now spray or pour water onto any part of your watershed and see where it goes. What is happening and why?
4. To see how pollutants can enter streams (and then the sea), get the students to sprinkle coloured drink powder (to represent different pollutants) onto parts of the watershed model.
5. Spray water onto the catchment model and see where the coloured drink powder goes to. Repeat the exercise with different students sprinkling the drink powder, explaining what type of pollution it represents and what affect it might have on the stream.

Teachers' notes

When rain falls onto land it drains towards the lowest point (because of gravity), joins into streams, then flows along rivers, and finally into the sea. A catchment or watershed is the area of land that holds the streams and rivers that catch all those raindrops. Eventually, rain washes land-based pollutants into the streams, damaging the health of the water. This is because water is a solvent and is capable of dissolving many different substances. It carries these dissolved substances with it into the rivers and streams.