

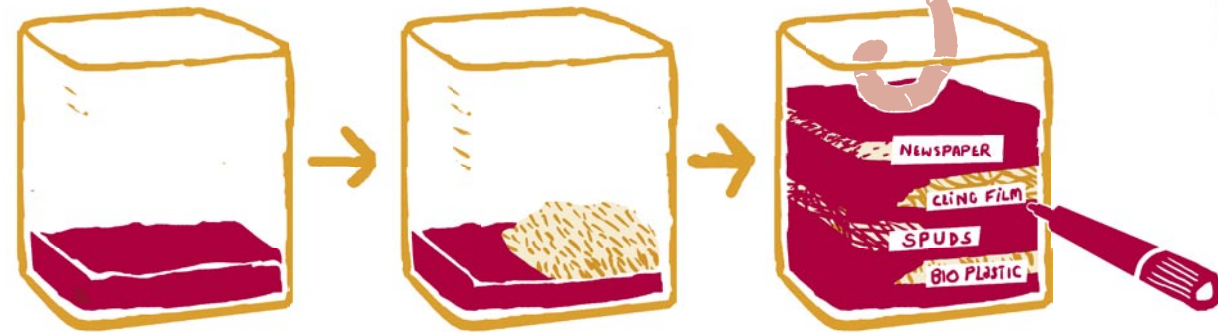
## Investigation 9 Piles of packaging

As a society, we generate an ever-increasing amount of waste, most of which comes from packaging material.

This investigation looks at how some types of waste break down quicker than others.

**YOU WILL NEED** Soil • Sand • A glass or clear plastic container with a depth of at least 35cm • Cardboard to cover container • Worms • Potato peels • A newspaper • Biodegradable plastic i.e. biodegradable bin liners • Plastic wrapping • Dry leaves •

- 1 Fill the glass or plastic container with layers of sand and soil, approx 7cm from the top of your container.
  - 2 At different points between these layers, place the potato peels, newspaper, biodegradable plastic and plastic wrapping. It is important that the plastic wrapping is not layered across the soil; preventing the worms from getting through.
  - 3 Using a marker, record on the outside of the container the location of each of the materials listed at 2 and the date.
  - 4 Cover the top of the container with some dry leaves.
  - 5 Scatter some worms from the garden on top of the leaves.
  - 6 Using a biro, make a number of air holes on a sheet of cardboard and use it to cover the container.
  - 7 Take a photo or draw a diagram of the container, showing where all the materials are located.
  - 8 Surround the container with a black bag.
  - 9 Leave the container in a warm dry place for two weeks.
  - 10 After two weeks, remove the packaging and have a look at all the materials.
- Consider this**  
Is everything in the same place? With a different coloured marker, mark where the materials are. Write a description of what has happened to each material.
- You could leave a diary by the container and assign one person to do this job every two weeks and report back to the class.



### Tell Me More!

Organic waste is waste that breaks down over time, such as leftover food, egg shells and tea bags. Worms play a very important role in keeping soil healthy because, as well as eating organic waste, they move it through the soil and enable air to circulate through their burrows.

In Ireland we currently dispose of most of our waste in landfill sites. A landfill is a large hole dug into the ground; it can be the size of many football pitches. The hole is lined with special plastic to prevent the chemicals from the waste soaking into the soil underneath.

Certain materials take a very long time to decompose i.e. plastic bags. Over 70% of domestic waste in Ireland comes from packaging. Think about your lunch today: How much packaging is on it? Could you reduce the amount of packaging by using a lunch box or reusing plastic bottles?

Most packaging is made from plastic. It takes a lot of energy to produce plastic, as one of its main ingredients is crude oil. Scientists estimate that, at current oil consumption levels, we only have enough oil in the world for another 50 years. This will have a huge effect on the oil industry and all its associated products such as petrol and plastics.