# SCIENCE

Lesson 10

## Prep

### Topic: Applying knowledge of properties of materials

## Considering recycling

**Lesson concepts**

- Objects are made of materials that have observable properties
- Science involves exploring and observing the world using the senses
- Questions can obtain responses
- Observations can be made using the senses
- Observations can be discussed and ideas can be represented
- Observations and ideas can be shared

**Suggested next steps for learning**

- Explain that the recycling companies need to separate rubbish by material otherwise they cannot remake it into other objects.

Today students will:

► understand that rubbish can be sorted by identifying its material.

## Resources

**Find and prepare**

Sheet — Recycling labels

Sheet — Images of bins

Recyclable and non-recyclable objects/materials (for example, milk carton, water bottle, drink can, plastic lid, chip packet, plastic bag, polystyrene, meat tray)

Sheet or large towel

# Lesson

**Explain texture as a property**

## Say to students

Today we are going to learn about why it is important to know what materials are made from for recycling. Science tells us that if we recycle rubbish, then we will help to save our planet from pollution.

1. Display word card for 'recycling' from **Sheet —** Recycling labels.

## Say to students

**Recycling** is the process of taking a piece of rubbish, like a milk bottle or a cereal box, and grouping it with objects of the same material. It is then broken up into pieces and cleaned and then remade into another object. It is much better for our planet to recycle a used object than to make a brand new one.

2. Display recyclable packaging items.




## Say to students

These are the main materials which can be recycled because of their properties.

a. Display a plastic bag.

## Say to students

In some areas, plastic bags and plastic wrappings can now be taken to the supermarket and placed in a collecting bin to be recycled. Unfortunately, however, they cannot go into our home recycling bins.

b. Display non-recyclable objects.

## Say to students

These are materials which cannot yet be recycled in Australia. Polystyrene is a problem material because it is very light and blows into our creeks and oceans. This means many water animals eat it by mistake and it makes them very sick. A lot of fast food shops use polystyrene packaging for their food, which means a lot of rubbish to dispose of.

Some plastics can still not be recycled. Small plastic parts also tend to fall through the recycling machines or just get thrown into the rubbish bin instead of the recycling bin.

Things like toys are very difficult to recycle because they are made from many different materials all joined together. If we take care of our toys we can hand them on to other children rather than just throwing them out; this in itself is a form of recycling.

3. Display **Sheet —** Images of bins.

## Focus questions

*Q: Why do the bins have different coloured lids?*
A: For example: So we know which bin is for the recycling and which is for general waste.

## Say to students

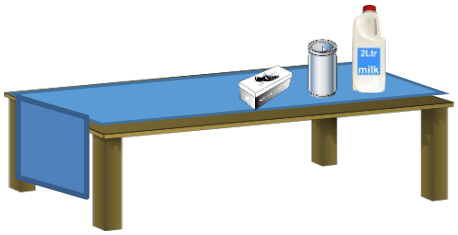
Many objects can be recycled but only if we can get them to the recycling factories. This is why we need different bins and why we must learn to sort our rubbish carefully. If we put food scraps in with our recycling we may ruin a whole truck full of recycling.

**Sort materials that can be recycled**

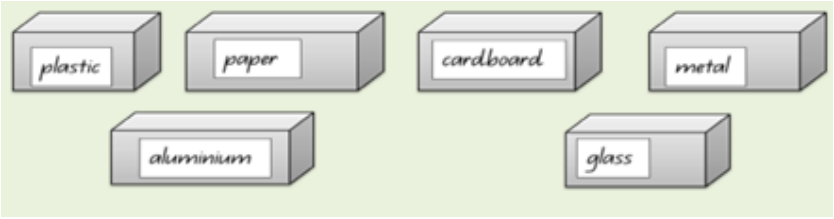
**Say to students**

> We are going to play a game where we decide if an object can be recycled and then sort different objects by their material. We are going to make a pretend conveyor belt to help us sort our recycling.

4. Display a sheet or large beach towel and prepare the conveyor belt.
   - Fold the sheet/towel lengthwise and place along a table or bench.
   - Arrange the recycling game objects at one end of the sheet/towel.




   - Display the recycling labels or recyclable and non-recyclable objects.
   - Read the labels and place each on a box or on the objects to be used in the recycling game.




**Say to students**

> I am going to pull the sheet towards myself very gently and slowly like a conveyor belt. As I pull the sheet, the objects will move slowly along. You are a worker at the recycling plant and you have to sort the rubbish into the correct group. You have to think quickly because if the objects reach me then they will not be sorted correctly and I win the game. We will start with just a few objects in the first game and then add some more when you are ready.

   a. Say ‘Ready?’ and then ‘Go!’ and gently begin pulling the sheet towards you.
   b. Support student to identify materials (if needed).
   c. Play again with more objects.
   d. Swap roles.