

A sorting activity using cleaned waste items as a way of teaching recycling skills.

Learning Objectives

Must: recognise similarities and differences between materials and be able to describe these.

Should: sort materials based on their properties and whether they are recyclable or not.

Could: discuss why some materials are chosen for packaging based on their properties.

Introduction

As a class, pass round an object e.g. plastic milk bottle.

Ask: What is this? What is it made of? Why is it made of this?

Discuss any misconceptions,

Continue to pass round objects made from different materials. Question children about the materials used and the suitability of these materials for packaging food or drink, e.g. why would I not use wood to make a drinking bottle? Glass bottles- what is good about it being made out of glass? Why might it be made out of plastic instead?

Discuss properties of the objects, e.g. hard, soft, shiny.

Discuss how these materials are made (man-made, natural).

Ask the children how we could sort these objects into groups. Think, pair, share. Give children equipment to try out their sorting ideas e.g. plastic drink bottle, cardboard cereal box, food and drinks cans. Question the children using appropriate language to describe properties e.g. why have you put the food and drinks cans together? What is similar about them? (both shiny, hard...) what is different about the drink can and the plastic bottle? (e.g. can is shiny) what is similar? (both can bend) Children feed back on how they sorted their objects.

Main Activity

Group activity

Tell the children you have thought of another way to sort them- can anyone explain what recycling means? (Think back to Busta and Pong's assembly).

Key Vocabulary

Materials

Plastic
Metal
Glass
Card
Paper
Wood
Rubber

Properties

Hard
Soft
Smooth
Brittle
Dull
Shiny
Rough
Bumpy
Bendy
Squashy
Absorbent
Transparent
Opaque
Waterproof
Man made materials
Natural materials

Resources

- A variety of cleaned waste items, including recyclable and non-recyclable materials (you will need enough for groups of 4 children to share at least one of each of these).
- 2 hoops for class demonstration
- Labels- can be recycled, can not be recycled
- Sorting recycling worksheet
- For SEN/ EAL- 2 hoops per child, camera (and if possible laptop to share photos in plenary)
- For extension task- pictures of packaging, scissors, glue, A3/4 paper, colouring pencils/ pens

N.C. PoS Science

SC3 1a (use their senses to explore and recognise the similarities and differences between materials),

1b (sort objects into groups on the basis of simple material properties),

1c (recognise and name common types of materials and recognise that some of them are found naturally),

1d (find out about the uses of a variety of materials and how these are chosen for specific uses on the basis of their simple properties)

Main Activity cont'd

Discuss that some objects can be recycled, but others can not (see Key Questions). Look at an item of packaging and ask the children whether they think it can be recycled. Help them to sort the materials into two hoops- materials that can be recycled and materials that can not.

Discuss why it is important to recycle (see Key Questions).

Ask the children for ideas on what could be done to encourage people to recycle (e.g. more places to recycle, more awareness of recycling, clearer instructions on what can be recycled, incentives).

Individual activities

Worksheets- sort objects into the two hoops. Children can either draw or write materials/ objects in the circles on the worksheet.

Support group LA/ SEN/ EAL give children two hoops and a small selection of objects. Children to sort objects into hoops – take photographs for evidence.

Main group: encourage children to record some of the properties of the materials using key vocabulary e.g. bendy, soft. Encourage them to verbally describe why some materials may be more suitable than others to make packaging.

Extension group: show the children a ready meal pack- discuss which parts can be recycled (cardboard can be, thin plastic film may not be recyclable). Ask the children how they would sort this object. Can they think of any other packaging that may fit into both categories? (e.g. drink bottle and lid)

Extension idea

- Can you create a collage, using pictures of different materials/ packaging, showing the things that you can/ can not recycle?

Key Vocabulary cont'd

Recyclable

Non-recyclable

Suitability

Raw materials

Natural resources

(on www.sparklebox.com there are vocabulary labels for materials which may be useful for classroom displays and for visual prompts for SEN/ EAL children)

Key Questions

What can we recycle?

(Please check locally for what you can recycle in your area. You can use the postcode locator on the Recycle Now website to check what you can recycle and where, <http://www.recyclenow.com/>)

Recyclable items may include newspapers and magazines, food and drink cans, plastic bottles, glass bottles and jars.

Non-recyclable items may include sweet wrappers, crisp packets, paper towels, old pens.

Why do we recycle?

- Recycling reduces the amount of rubbish sent to landfill.
- Recycling saves energy and natural resources
- Recycling can transform something old into something new.

Organisation

Variety of packaging
If possible EAL/ SEN children should be introduced to the key vocabulary before the lesson (either by TAs, teacher or by sending key vocabulary home to parents).

During the activity teachers/ TAs need to be modelling the vocabulary and encouraging children to extend their own language rather than trying to get the children to complete the worksheets if they are not able to do this. (Photographs can be used for evidence)

Plenary

- Share worksheets/ photographs- discuss which objects fitted into which hoop. Check all children have the correct answers.
- Reinforce that similar objects have been grouped together.
- Ask children what do they/ their parents recycle and where can they recycle?

The class could look at the regeneration game to reinforce what can/ cannot be recycled in their area, using the school's postcode:

http://www.recyclenow.com/applications/recyclenow_08/regeneration_game

Key Questions cont'd

- Recycling helps tackle climate change.

What is Climate change?

Rising global temperatures due to the release of carbon dioxide, methane and other powerful greenhouse gases. These gases can be given off by biodegradable materials as they rot under pressure in landfill sites.

Where can we recycle?

(answers dependent on recycling scheme in your local area, but encourage the children to think about recycling facilities at home, at school and in the community)