

Reuse it!

Time: 90 minutes (but could be shortened by leaving bits out)

Group

Purpose

- To explore the possibilities of reusing materials rather than throwing them away
- To learn more about what happens to waste

Background to the task

Every day we throw stuff away – packaging, paper, broken things, old CDs, bottles, shoes, batteries and so on. This has two consequences, both bad:

- The waste often goes into landfill sites and we are running out of places to put it. Also landfill sites can cause pollution.
- Making anything can use oil or gas (energy), raw materials (wood, metals, fibres, oil for plastics) and generate pollution. If we could reuse or recycle materials more, we would need to produce less new things.

Throwing things away is bad for the environment. More and more designers recognise this, and are designing products that *either* can be disassembled so that parts can be recycled or reused, *or* which make use of recycled materials (*or both*).

In this task you will look at some of these products. But first let us examine what happens to waste in this country!

Carrying out the task and recording results

You will work in groups.

1. Log onto <http://www.recyclezone.org.uk/> and find out how much waste is generated in UK each year (How many double-decker bus equivalents? How much waste per person?) *Fill in answers on work sheet.*
2. See how much you know about waste go to the Fun Zone and try the quiz 'Is your brain full of rubbish?'
Write down what surprised you most.
3. Log onto <http://www.stepin.org/>. Click onto the cog 'Case Studies' and then onto one of the following
'Making toys from reclaimed materials'
'Making hoes from tractors'
'Recycled fleeces'
Prepare a one-minute oral presentation for the rest of the class on this product. Say why it is good for the environment compared to similar products. Write on your worksheet the key points your group will present.

4. Look at the materials given out by the teacher. What can you design and model with them? Before the end of the lesson you will give a presentation of your design. Say

- what it is
- who will use it
- what you think about it (mini-evaluation)

Make notes on you worksheet.

Extension activity

How much rubbish *does* your family create in one week? Try this provided that the others at home agree to it!

For a whole week keep all the **hard** stuff that you might otherwise throw away. This includes anything made from glass, metal, wood or plastics. Make sure that it is rinsed out or otherwise clean. Do not keep anything like peelings, hair or toenail clippings, old food. Just the hard stuff that is safe to carry.

Safety warning

Do not keep anything that has had poisons in such as bleaches!!!

Leave anything sharp well alone!!!!

Bring in your household waste to this lesson next week.

Teachers' notes

To find out about how much waste is generated in the UK each year go to <http://www.wastewatch.org.uk/> -> 'information' -> 'wacky facts about waste'. This has the same information as the students will find on <http://www.recyclezone.org.uk/> but will print out more easily. You might want to use this as a handout if you do not have access to computers.

Before using this activity it is worth looking at the STEP website to decide which case studies you want the students to consider. Three are proposed:

- 'Making toys from reclaimed materials'
- 'Making hoes from tractors'
- 'Recycled fleeces'

In addition, look at the links on the 'Research' pages in this unit 'Reuse it'.

You might also wish to look at <http://www.informationinspiration.org.uk/> Click onto 'inspiration' and then 'recycled materials'. This gives a good range of products from northern contexts.

In either case ask the students to prepare a one-minute presentation.

Materials needed

Access to computers or sheets printed from the websites.
Re-usable materials, tools for modelling

Extensions

The rubbish collection activity is proposed as an extension but you might wish to do this at the start

Other extension activities can include:

Take a more detailed look at the <http://www.informationinspiration.org.uk/> site but this time go into the information side and then onto 'recycling'. Ask the students to make a presentation on strategies that designers can use to improve the recyclability of products.

Worksheet

Name

1. How many double-decker bus equivalents of waste do we generate in UK each year?

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How much waste per person?

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2. What is the most surprising thing you found out about waste from the quiz 'Is your brain full of rubbish?'

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3. Product you looked at on the web

Key points for your presentation

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4. Product you have modelled

Who will use it?

Good and bad points about it

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