



## Recycling Audit Plan

### Introduction

This hands-on activity is suitable for any class from Y2 upwards, or an Eco Team. Pupils sort and weigh the contents of your recycling containers to find out how much of the paper has been used on both sides. They then generate an action plan to increase the amount of paper that is reused before it is recycled.



The audit links to the curriculum in a number of ways. It includes opportunities for pupils to use a range of mathematical skills in a practical context. Follow-up work can include persuasive writing and designing posters to spread key messages to the rest of the school.

A whole-school campaign focusing on reusing paper before it is recycled is a great way to develop your Eco-Schools 'Waste' topic. It raises the profile of your recycling systems, while moving staff and pupils up the 'waste hierarchy' by emphasising the importance of reusing before recycling.

A second audit after a few weeks of high-profile campaign will provide 'before' and 'after' data which is perfect to use in maths lessons, share with the whole school in a celebration assembly, publicise to parents, and show to an Eco-Schools Green Flag assessor.

### Learning objectives

Children should learn:

- to ask and respond to geographical questions
- to collect and record evidence to answer questions
- that recycling helps the environment in many ways
- that, whenever possible, materials should be reused before being recycled

There are also links to the maths curriculum: number, statistics, measurement and percentages as appropriate to the year group.

### Timing and space

Each audit takes about 1½ hours, and can be conducted in a normal classroom. You could ask the same group of children to conduct both the first and second audits, or select a different group / class in order to involve more pupils.



## Preparation

**Equipment (for a class of 30 pupils working in 5 groups):**

- 5 large tables (chairs are not necessary)
- 20 sheets of paper approx A3 size and felt tip pens
- 5 group results sheets
- 10 large carrier bags
- a selection of force meters / hanging scales



**Before conducting the audit:**

- Print one **group results sheet** for each group of pupils (see page 5 of this document)
- Download the recycling audit **spreadsheet** from: [http://zone.recycledevon.org/sites/default/files/recycling\\_audit\\_results](http://zone.recycledevon.org/sites/default/files/recycling_audit_results) (You only need to do this for your first audit; use the same spreadsheet for the second audit.)
- Source a landfill site image from the above link to display on your IWB during the introductory whole-class discussion.
- Ensure that your classroom / office recycling containers are not emptied for several days prior to the audit so that you have a substantial sample of recycling to sort.

## The audit

### Whole class discussion

How the introductory discussion is focused will depend whether the children are conducting your first or second audit, and how much they already know about waste issues.

#### 1. For **first** audits: why do we recycle?

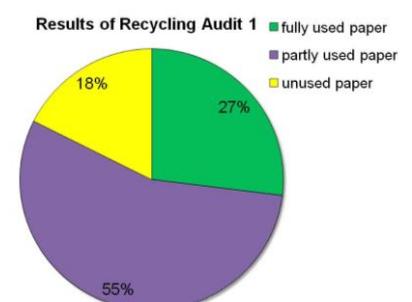
- How does recycling help the environment? Possible answers include:



- ✓ Recycling 1 tonne of paper saves 15 trees. Trees provide habitats for animals, and absorb CO<sub>2</sub>, a greenhouse gas that is contributing to climate change.
  - ✓ Recycling paper uses 60% of the energy used to manufacture it from raw materials.
  - ✓ Recycling paper uses less water than manufacturing it from raw materials.
  - ✓ Landfill sites, where most of our 'rubbish' is buried, are filling up.
- Recycling is one of the 3Rs: Reduce, Reuse, Recycle. This order is very important, and means we should always try to reuse things before we recycle them.

#### 2. For **second** audits: the results from your first recycling audit

- Revisit the reasons for recycling (see above), as appropriate to the group of children.
- Discuss the pie chart from your first audit.
- What have we been doing recently to increase the amount of paper that is reused before being recycled?
- How would we like the chart from today's audit to look?



### 3. For **first** and **second** audits: introducing the activity

- What might we find in the recycling containers? Identify the following sorting categories and list them on the board:
  - a) fully used paper (used on both sides, ready for recycling)
  - b) partly used paper (used on one side, suitable for the scrap paper drawer)
  - c) unused paper (brand new paper that has never been used)
  - d) other materials (some of these could be recyclable, others may be contaminants)
- Explain that each group is going to sort a pile of paper using these criteria, then weigh each pile using carrier bags and force meters.

#### The activity

- Divide the pupils into mixed ability groups.
- Two pupils from each group collect a recycling container from around the school. The rest label the A3 sheets of paper with the sorting categories.
- Pupils arrange their sorting sheets around the table and place the recycling container on / near the table so it is accessible to the whole group.
- Pupils sort the recycling on to their labelled sheets.
- They weigh each pile, record their results and tidy up.



Depending on the time available and the size of your school, it may not be possible to audit the entire contents of every recycling container in the school. If this is the case, make sure you have audited a good sample including a cross section of classes and at least one office.

#### Whole class discussion: sharing and interpreting results

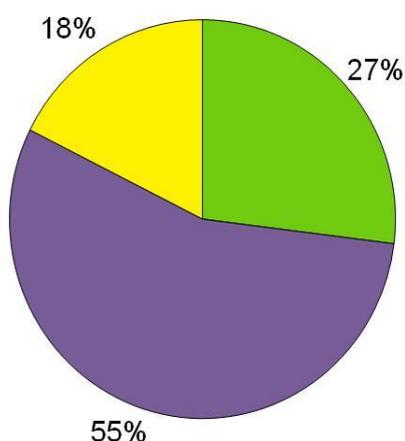
- Enter each group's results into the spreadsheet.
- Display the pie chart for the relevant audit and discuss what it shows.
- For **first** audits: discuss how you would like the pie chart to look. What percentage of fully used paper are you going to aim for? (You may need to discuss the importance of setting a realistic target – 100% fully used would be wonderful, but 75% is more realistic.)
- For **first** audits: explain to pupils that you are going to have a whole-school campaign to encourage teachers and pupils to reuse more paper. Ask pupils to discuss how to go about this. Ideas might include:



- ✓ Checking that each class / office has a drawer for paper for reuse
- ✓ Ensuring that all drawers are clearly labelled
- ✓ Rebranding 'scrap paper' drawers to 'paper for reuse' to give them a higher status
- ✓ Delivering an assembly for the whole school on reusing
- ✓ Running a poster competition to raise the profile of reusing
- ✓ Putting 'paper for reuse' drawers next to photocopiers
- ✓ Rewarding teachers who reuse paper for worksheets etc.

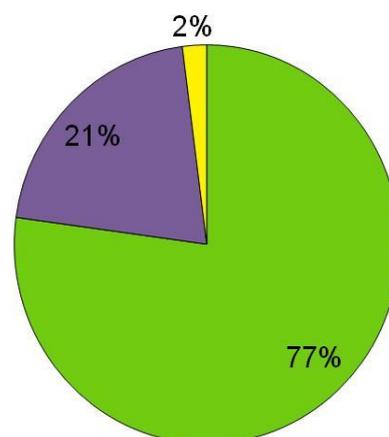
- For **second** audits: display the pie charts from your first and second audits. (See example below.) What do they show about the success of your school's campaign to increase the proportion of paper that is reused before being recycled?

### Results of Recycling Audit 1



- fully used paper
- partly used paper
- unused paper

### Results of Recycling Audit 2



- For **first** and **second** audits: discuss the contents of the 'other' category. Were any of these items that should not have been in the recycling containers (e.g., fruit peel, tissues)? If so, how can you make sure that everybody in the school knows exactly what can, and cannot, be recycled?

### After the first audit

- Share your audit results with the rest of the school as soon as possible (e.g., in assembly, on your Eco-Schools notice board, in your parents' newsletter, on your school website.) Remind them about the 3Rs (Reduce, Reuse, Recycle) and explain what you want them to do to increase the amount of paper your school reuses before it is recycled.

### After the second audit

- Share your results with the rest of the school and celebrate your successes.
- Urge pupils and teachers to keep up the good work - we should remember the 3Rs all year round, not just during high-profile campaigns.
- Consider repeating the audit in a few months' time; you could even incorporate it into your maths scheme of work and repeat it each year.
- Consider conducting 'spot checks' of the recycling containers, to see if teachers and pupils are continuing to reuse before they recycle.

**Don't let Devon go to waste**

# Recycling Audit: Group Results Sheet



To help your school get even better at the 3Rs (**Reduce, Reuse, Recycle**) you are investigating the contents of your recycling containers. How much of the paper your school recycles has been used on both sides?

## Instructions

1. Label your sheets of paper with the category for sorting:  
fully used paper    partly used paper    unused paper    other
2. Arrange your sorting sheets around the table so that everybody in the group can reach them.
3. Sort the materials from your recycling container.
4. Put each pile into a carrier bag and measure its mass.
5. Record your results in the table below.
6. Tidy up – don't forget to check the floor.
7. Discuss your results with your group.

## Results

category	mass (g)
fully used paper <i>ready for recycling</i>	
partly used paper <i>suitable for the scrap paper drawer</i>	
unused paper <i>brand new paper that has never been used</i>	
other	

Discuss your results with your group. Think of 3 actions to share with the rest of the school that will help you **improve** your school's recycling.

1. ....  
.....
2. ....  
.....
3. ....  
.....

**Don't let Devon go to waste**