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# The Standardised Waste Audit



**Eco Schools** 

**SEPA**   
Scottish Environment  
Protection Agency

Scottish  
Waste Education  
Support Programme **SWESP**

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## Further advice, information and help

Advice on opportunities to reduce, reuse and recycle in your area can be given by the waste service department at your Local Authority and by local recycling community groups.

For a list of who to contact log on to [www.sepa.org.uk/nws/thenetwork/contacts/search.aspx](http://www.sepa.org.uk/nws/thenetwork/contacts/search.aspx)

Eco Schools contacts can be found at [www.ecoschoolsscotland.org/home/index.asp?linkID=23](http://www.ecoschoolsscotland.org/home/index.asp?linkID=23)

Changeworks contact address is [swesp@changeworks.org.uk](mailto:swesp@changeworks.org.uk) with waste information found at [www.changeworks.org.uk](http://www.changeworks.org.uk)

**Scottish  
Waste Education  
Support Programme** **SWESP**

# Foreword

Scotland produces over 3.3 million tonnes of municipal waste each year and much of this is put in landfill sites creating problems for the environment. Greenhouse gases, pollution and diminishing green spaces are some of the negative effects associated with this ever-growing amount of waste.

Schools have a vital part to play in helping to tackle these problems. By reducing the amount of waste they produce they can set an example to local communities across the country. Young people need to be involved in reducing school waste in order to develop positive attitudes towards the environment. The Standardised Waste Audit is an ideal opportunity for them to act as responsible citizens.

This booklet sets out a method that schools across Scotland can adopt in order to measure and take action on waste.



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# Stage one

## Conducting the initial audit

Please read all the facilitator's notes carefully before carrying out the activity

### Overview

The aim of the waste audit is to measure the weight and types of waste produced by one school in one day, and should be an integral part of a school waste reduction campaign. The waste is collected, sorted and weighed by pupils and teachers and other helpers. From the data collected, the school will be able to measure the effectiveness of the campaign. It should be carried out prior to the implementation of a school action plan to reduce waste and again after the school has implemented actions to reduce waste, in order to measure the reduction levels achieved.

**The waste audit activity takes place over a number of lessons and is in two stages:**

### Stage one – conducting the initial audit

Planning and discussion of initial waste audit

Measuring and recording the waste

Calculating and reporting

### Stage two – the action plan

Action plan

Follow-up waste audit

Evaluation

**The project should aim to bring about an actual reduction in the amount of waste generated by the school.**

# Conducting a waste audit: Facilitator's notes

**These instructions set out how to conduct a school waste audit and how this activity links to the 5-14 curriculum.**

Outlined is a three-lesson practical data collection and analysis activity to identify the main waste materials and waste hot spots within the school and to measure and record that data.

A well-planned waste audit project can be a hugely rewarding experience but is a big undertaking. Please take time to read the notes carefully to understand fully what is involved.

# Learning objectives and curriculum links

## Relating to Scottish Office Education Department, 5-14 National Guidelines Level C

By the end of this session the pupils should be able to:

- Identify which areas of the school generate waste and plan an audit of that waste.
- Collect evidence and sort school waste into categories of materials e.g. paper, card, plastic.
- Make careful measurements of their school's waste and record the data accurately.
- Present data collected and draw conclusions about their school's waste.

### Learning outcomes

Pupils will:

- Select and order a sequence of procedures.
- Suggest possible outcomes.
- Check plans for safety and hygiene.

### 5-14 Curriculum links

#### Environmental Studies, Science

Understanding Living Things and the Processes of Life

#### Maths

Number, Money and Measurement, Information Handling

#### Citizenship

Rules, Rights and Responsibilities in Society

## Relating to Scottish Office Education Department, 5-14 National Guidelines Level E

By the end of this session the pupils should be able to:

- Identify which areas of the school generate waste and plan an audit of that waste.
- Collect evidence and sort school waste into categories of materials e.g. paper, card, plastic.
- Make careful measurements of their school's waste and record the data accurately.
- Present data collected and draw conclusions about their school's waste.

### Learning outcomes

Pupils will:

- Decide on a sequence of procedures, checking for possible difficulties and adapting where required.
- Suggest suitable safety/hygiene procedures.
- Use appropriate apparatus to collect information.
- Undertake an investigation with attention to fair testing and safe practice.

### 5-14 Curriculum links

#### Environmental Studies, Science

Understanding Living Things and the Processes of Life

#### Maths

Number, Money and Measurement, Information Handling

#### Citizenship

Rules, Rights and Responsibilities in Society

# Equipment required to undertake The Standardised Waste Audit

## Worksheets

### 'Waste Worksheet 1

Planning a waste audit'

### 'Waste Worksheet 2

Measuring and recording waste'

OR

### 'Waste Worksheet 2A

Measuring and recording waste  
from a partial school waste audit'

### 'Waste Worksheet 3

Calculating a total day's waste'

### 'Waste Worksheet 4

Calculating a total year's waste'

## Sorting and weighing equipment

Spring balances, carrier bags, plastic sheets  
and magnets.

## Health and safety equipment

Gloves and aprons.

Some waste education services in Local Authorities  
or community groups are able to loan waste audit  
kits to schools. Alternatively contact Changeworks  
at [swesp@changeworks.org.uk](mailto:swesp@changeworks.org.uk)

## Involving the whole school and making it fun

Inviting the whole school to wear green for the  
day of the audit adds to the feeling of importance  
of what is taking place. It also adds an element  
of fun. Asking parents to join in raises community  
awareness and contributes to the 'buzz' of  
the activity.

Setting a scenario can make the audit more fun.  
Asking the children to become Waste Detectives  
and investigate the waste dilemma for example,  
adds to the enjoyment of the programme.

## Notes on health and safety

Ensure that those involved are aware  
of the health and safety risks in carrying  
out a waste audit, and plan to minimise  
risk. A standard waste audit letter outlining  
the school's responsibilities and the  
activity leader's responsibilities has been  
provided. This should be read and signed  
by the teacher. If teachers feel that parents  
may be concerned about their children  
handling waste, a letter explaining the  
safety precautions taken during this activity  
should be sent out. Teachers may wish  
to ask for a consent form from parents  
before allowing pupils to take part.

- A waste audit checklist is supplied to  
ensure that teachers are fully aware  
of how to plan safely for this activity.
- Extra helpers will be needed for this  
activity. Ensure that you have one adult  
helper per group of pupils. The number  
of groups will vary depending on the  
number of areas from which waste has  
been collected. An adult helper in each  
group will ensure the activity is carried out  
safely and that accurate data is obtained.  
Brief all adult helpers thoroughly before  
the activity takes place.
- You may want to suggest that tissues  
are separated from the rubbish as it  
is collected.
- Ensure the waste audit risk assessment  
guidelines are followed.



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# Stage one



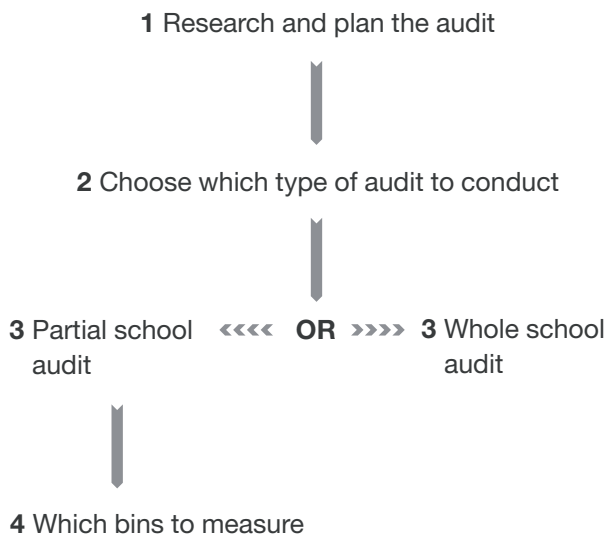
# Two approaches to the waste audit: whole school and partial school

Whilst there is a need for the standardisation of waste audit procedures, two options are described. These are the Whole School Waste Audit and the Partial School Waste Audit. The considerations for both types are listed below.

## Choosing which approach to adopt

Choosing which type of waste audit to conduct will be informed by the research carried out in Stage One – Planning and discussing the initial audit lesson.

The planning stage identifies the size of the task ahead including the amount of waste to be collected, sorted and measured and how many people this may have to involve. Once the information gathered from the research has been analysed, the decision on which type of audit to conduct will be easier. The decision making process follows this pattern:



## Whole school waste audits

Schools should attempt to measure one day's waste from each and every bin in the school. Doing this gives the clearest picture of what and how much waste is being produced, and is the preferable option for producing accuracy of measurements. Depending on the size of the school, one day's waste may amount to a lot of materials having to be collected, sorted and weighed. A whole school waste audit is a serious undertaking and reflects the school's commitment to tackling waste.

## Partial school waste audits

For large schools this may be a more practical approach. This involves dividing the school into areas as for the whole school waste audit but only measuring a percentage of the bins. Ideally, all parts of the school should be represented. The percentage of waste measured across the school can be the same or differ between areas. During the planning stage, you need to record the percentage of bins you are going to collect waste from for each area. To get a figure for the whole school waste a multiplication factor needs to be used and 'Waste Worksheet 2A' is used to make this calculation.

Examples of different sample situations are given in the table over the page.

## Partial school waste audit calculation

Area	Waste Collected	% of waste from area	Multiplication factor
Playground	Half of bins	50%	2
School offices	All of bins	100%	1
Maths department	All bins from half the classrooms	50%	2

Attempts should be made to make the bins collected representative of the area. Below 25% of the bins for any one area and the errors are likely to make extrapolation inappropriate.

## What type of audit to choose – benefits and considerations of whole school audits and partial school audits

	Whole School	Partial School
<b>Benefits</b>	<ul style="list-style-type: none"> <li>Complete picture of the composition of whole school waste in one day</li> <li>All waste produced in one day weighed</li> </ul>	<ul style="list-style-type: none"> <li>Not all bins need to be measured</li> <li>More manageable</li> <li>Less time required to collect, sort and measure waste</li> </ul>
<b>Considerations</b>	<ul style="list-style-type: none"> <li>Could be a lot of waste to collect, sort and measure</li> <li>Time available requires consideration</li> </ul>	<ul style="list-style-type: none"> <li>Incomplete picture of composition and weight of whole school waste stream</li> <li>May not be representative of whole school</li> <li>Figures need to be extrapolated leading to inaccuracies</li> </ul>

### A fair test

Whichever approach the school adopts, the audit should still be rigorous, fair and as scientific as possible. It is vital that the following rules are applied in order for the audit to generate the most accurate data.

- Read all the notes and plan carefully.
- Use the correct equipment and follow the guidance notes.
- Conduct audits on a 'typical' day with just one day's worth of waste.
- Repeat audits should be conducted on the same day of the week.
- Rubbish bins sorted and weighed should be the same in the initial as well as follow up audit.
- Data should be recorded clearly and accurately.

## The waste audit lessons

# Lesson 1

## Waste audit planning

### Discussion

Introduce the class to the aim of the waste audit. Explain that one day's waste from across the school is going to be collected, sorted and weighed. Data will be recorded and the findings shared with others. To do this effectively and safely, a plan will have to be drawn up.

There are many questions your class will need to consider before beginning the audit. Some of the likely questions are listed below. 'Waste Worksheet 1' will assist the pupils in asking relevant questions.

#### How much waste are we collecting?

For an effective waste audit, one day's waste from the whole school needs to be audited. Depending on the size of school this can amount to a lot of materials, and those working on the activity must be prepared. How to collect and store this waste is explained below.

#### Why are we planning a waste audit?

Possible answers might include: to reduce waste disposal costs; to protect the environment by sending less waste to landfill; to identify materials we could recycle or reuse; and to make money from recycling.

#### When should we do it?

The time of year and the day of the week you do the audit may make a difference to your results. It might also be a good idea to time the audits so it ties in with a school litter survey.

#### Where should we do it?

When undertaking the survey you will need to identify where waste is most likely to collect every day. Classroom bins, playground litter bins and lunch hall bins are obvious collection points. Are there any other areas where rubbish collects in the school?

#### What equipment do we need?

You will need protective gloves and aprons for handling rubbish. Weighing the rubbish will require

a spring balance or similar equipment. Some recycling centres value the recycling properties of aluminium over steel, and in this case a magnet will come in handy if you plan to separate aluminium cans from steel cans (the steel cans will stick to the magnet, the aluminium cans won't).

#### Who will do the audit?

How many people will be needed for the audit? What would be the best way to divide up responsibilities? It is a good idea to involve as many people as possible in the audit, including cleaners and janitors/caretakers.

Involving parents really helps raise awareness in the community and can lead to reduced waste at home. It also makes the management of the audit on the day much easier. Offering tea and biscuits for those coming along adds an extra incentive for them to volunteer!

#### What do we do about it?

Decide a strategy for sorting the waste into different categories and for dealing with each type. Ask pupils to consider the main types of waste the school produces and make a note of all the possible categories. Discuss with pupils what the best way to cut down on each type of waste might be (considering the three rules – reduce, reuse, recycle). Discuss what recycling facilities are available in the local area. You can then adjust the categories you have worked out to suit your minimisation strategy.

## Between planning and the audit:

# Collecting and storing the waste

- Pupils can predict which area they think will create the most waste and which material will be wasted the most.
  - Pupils should collect one day's waste from either the whole school or, if conducting a partial school waste audit, from the rooms and bins discussed and recorded during the planning exercise. The bins chosen for measuring should be representative of each area and all the different areas of the school should be represented.
  - It is important to keep the waste from each area in a separate labelled bag so that particular areas generating a large amount of waste can be identified. It is a good idea to allocate areas to pupil groups and make them responsible for doing this.
  - Areas such as the medical room, dinner hall and sometimes the playground, may contain waste materials that pose a health hazard. Alternative methods of collecting data from these exist. Simply weighing and recording the weight of the whole bag instead of emptying it and sorting it is advised. Allocate groups responsible for this data collection. These need to be carried out at the appropriate time – see details below.
  - Pupils should label each bag clearly with 'DAY' e.g. Tuesday and 'AREA' e.g. Primary 6a or Office. **Key tip – make sure the labels are towards the bottom of the bag, as often the labels get covered up in the process of tying the bag if they are placed close to the top. Make sure they stick.**
  - Collect dinner waste from ONE day only. If possible ask dinner staff to keep packaging in one bag and food scraps in another – see below.
  - Liaise with ground staff to collect playground waste if appropriate. Ensure playground waste cannot be interfered with from outside sources.
  - If the school already recycles paper, arrange for ONE day's collection of recycling bins from all areas. Clearly label and keep separate from other waste collected.
- ### Kitchen waste:
- If possible, request that the kitchen staff keep the perishable waste and packaging waste separate during the project.
  - Allocate a pupil group to weigh and record the weight and volume of the perishable kitchen waste at the end of lunch break. The waste can then be thrown straight into the bin.
  - If kept separate, the packaging waste can be saved and sorted into material types during the sorting and weighing audit. If it is not separated, then it must be weighed with the perishable waste, as above.
- ### Playground waste:
- Assess the potential risk of sorting the playground waste, considering the possible content of hazardous waste (dog faeces, needles etc.) and perishables that may start to decay before the waste is sorted.
  - Playground waste will probably contain a high percentage of crisp and snack packets. By not sorting the playground waste this significant waste source will be missed. Discuss with the pupils and staff alternate means of measuring this waste.
  - If possible, request that during break, pupils put any perishable waste and snack packaging into 'special' separate bins. Allocate a pupil group responsible for this. They must weigh and record the weight and volume of the perishable waste at the end of each break. This waste can then be thrown straight into the bin. If kept separate, the packaging waste can be saved and sorted into material types during the sorting and weighing audit. If it is not separated, then it must be weighed with the perishable waste.
  - In addition or alternatively, pupils can carry out a tally survey of break time snacks. Discuss with the pupils how to collect sample results and assist them in the design of a survey sheet.

## The Waste Audit Lessons

# Lesson 2 plan overview: Sorting, measuring and recording

## Learning objectives

Pupils should be able to:

- Collect evidence and sort school waste into categories of materials e.g. paper, card, plastic etc.
- Make careful measurements of their school waste and record the data accurately.

## Outcomes

Pupils will:

- Use appropriate apparatus to collect information.
- Undertake an investigation with attention to fair testing and safe practice.

## Curriculum links

### Environmental Studies/Science

Understanding Living Things  
and Processes of Life

### Maths

Number, Money, Measurement  
Measure using standard units  
Read scales estimating between graduations

## Activities

- Waste collection and measuring.
- Collect and sort school waste into material categories.
- Weigh school waste and record the data.

## Resources

Gloves, plastic sheets, spring balances, carrier bags, 'Waste Worksheet 2', aprons and magnets.

## The waste audit lessons

# Lesson 2

## Sorting, measuring and recording

### 1 Types of waste

Show everyone what material types the waste is to be sorted into. Using pictures stuck to the wall will help.

### 2 Prepare the sorting area

To sort the collected waste, place the waste from each area on to a protective plastic sheet and split the pupils into groups, one group for each area/sheet.

### 3 Sorting the waste

The pupils then physically sort the waste into the different material types. The waste from the main bin bags can be sorted into smaller standard supermarket carrier bags.

### 4 Weighing

Using the spring balances provided, pupils should then weigh the bags of each material and record their results on 'Waste Worksheet 2' for a whole school waste audit or 'Waste Worksheet 2A' for a partial school waste audit.

### 5 Tidying up

The bags of rubbish should then be collected and disposed of.

### 6 Extra check

For an extra check, time and space permitting, you can get all the area waste placed into material labelled bags to do an overall weigh – this can act as a useful check and is possibly a more accurate measure to use for evaluation purposes.

### Top tips

- Pupils should stand/squat or kneel in a circle around the rubbish they are sorting.
  - No waste is allowed outside this circle.
  - No walking through the circle is allowed.
  - Periodically waste may need to be swept from the edges of the circle, back to the middle.
  - Milk cartons may still have milk in them. If cartons are dumped on the sheet milk can flow on to the floor. Where possible collect milk cartons in a separate bag and weigh in the bag.
- Pupils should stay on their sheet, putting their hand up if they want help.
- Each pupil should choose a material they are going to collect and each have a carrier bag to put it in.
- Keep a 'tidy area' on the edge of the sheet outside the pupils' circle to line up full bags and keep pencils and worksheets clean and safe.
- All the waste should be sorted before moving on to the next stage.

**Safety:** Pupils must wear gloves for the full duration of this activity and must be made aware of the potential hazards of throwing waste or misbehaving during this activity.

## The waste audit lessons

# Lesson 3

## Calculations in the classroom

(Note: the class teacher can do this)

### Whole school waste audit

Use 'Waste Worksheet 3: Calculating a total day's waste' and 'Waste Worksheet 4: Calculating a total year's waste' to collate all the results.

- 1 Using their 'Waste Worksheet 2' each group should add up their data to get a total for the waste collected from their area.
- 2 On 'Waste Worksheet 3' each group should be asked to record the weight and type of each material in their area.
- 3 Each group should then be given a copy of the completed sheet.
- 4 Allocate one material to each group and ask them to calculate the total weight of that material found in the school waste audit.
- 5 Every pupil can then record the material totals in the table on 'Waste Worksheet 4'.
- 6 The table can then be used to calculate:
  - The material weight for one week and for one school year.
  - The total weight of the whole school waste in one year.
- 7 The data can be analysed in a number of different ways and related to the predictions made earlier, as outlined in the extension activities. Pupils can then draw conclusions about their school waste.

### Partial school waste audit

If you are conducting a partial school waste audit, follow the instructions for the whole school audit (left) but use 'Waste Worksheet 2A: Measuring and recording waste from a partial school waste audit' instead of 'Waste Worksheet 2'.

It is important to note that figures for waste collected from each area need to be adjusted by using the appropriate multiplication factor to get the total weight of waste from that area. Examples are given on page 7 and 'Waste Worksheet 2A'.

### Making it public

Once you have calculated your figures it's important that everybody knows about it. Ask the class to think of ways to raise awareness – for example, keep reusing paper and using the recycling bins. Pupils could design posters, stickers and leaflets to get the message across, and give an assembly about the issue. For decisions related to financial or budget matters (for example, using more electronic storage to cut back on paper buying), pupils could make presentations to the head teacher, school board or Parent Teachers Association, for example.

Share the information with parents as well and see if waste reduces at home.

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# Stage two



# Stage two

## The action plan

### Introduction

The action plan will set out the ways in which the school waste will be reduced. The pupils and teachers involved will discuss measures that can be taken and research how practical these are. Those plans will be set out in the Action Plan Worksheets and form the basis of the school waste strategy. It will then be up to the school to implement the strategy and reduce its waste.

At the initial planning meeting, it should be mentioned that a repeat waste audit would be required after the implementation of the action plan in order to evaluate the success of the project.

### Learning objectives

By the end of this activity pupils will:

- Know and understand the words reduce, reuse and recycle.
- Suggest ways to follow the three R's (reduce, reuse, recycle) in school as a group.
- Record the group's ideas in note form and use these to organise ideas into an action plan.
- Understand the need to advertise their ideas within school and discuss the appropriate means to do this.
- Present ideas to the school.

Implementation of the action plan may lead to the following:

- Draft and write letters for a real purpose.
- Construct a persuasive argument.
- Design an advertisement.
- Take responsibility for planning and looking after the school environment.
- Make real choices and decisions.
- Take part in the school's decision making process.

# The action plan lessons

Before this lesson the class should have completed 'Waste Worksheet 3' and 'Waste Worksheet 4'.

## Action plan lesson 1 Discussing action

### As a class:

- 1 Discuss the results – what they have found out from the waste audit. Write on the board the main materials that the school throws away and which areas they have come from (use 'Waste Worksheet 3'). Write up any findings.

### In groups:

- 2 Identify the main materials and split the class into groups accordingly. Give each group a material type and 'Action Plan Worksheet 1'. This may mean that some groups have the same material.
- 3 The group writes its material type at the top of the page (e.g. paper) and lists the main waste items made of that material (e.g. envelopes etc.).
- 4 Under 'Action to take in school' the group thinks of how they are going to reduce, reuse or recycle that piece of rubbish (write the three R's on the board and explain they have to be able to do one or all to each waste item).
- 5 Under 'Benefits' (why the action is good) list how doing the action benefits the school, community, environment etc.

### As a class:

- 7 Write Reduce, Reuse and Recycle as headings on the board. Each group reports back their main waste items and the action they will take. Ask the group which of the three R's their action goes under. Repeat one at a time.
- 8 Discuss each of the aims as a class and decide which are feasible to carry out straight away and which are not possible because of a lack of time

or resources. You will need to have agreed the final aims beforehand with the head teacher and class teacher.

Before the next lesson the teacher should allocate each aim to a different group of pupils.

## Action plan lesson 2 The plan

In groups pupils should discuss the action that the school needs to do to complete their aim and fill in 'Action Plan Worksheet 2', working through each question at a time.

Possible answers to the questions could be:

**Question:** What equipment will you need?

**Answer:** Equipment could be recycling bins or reuse trays.

**Question:** Who would you need to talk to in school?

**Answer:** This may mean talking to janitors, parents, teachers or pupils.

**Question:** Who else would need to be involved outside?

**Answer:** A local recycling company or the local authority.

**Question:** How will you get everyone to participate?

**Answer:** Promotion through poster campaign, assemblies, use of drama or special event day.

The pupils present the worksheets to the teacher to approve. Those actions can then be the basis of their waste project.

## Implementation of the school waste action plan

The implementation of the action plan will depend on the targets outlined and the timescale over which the school wishes to implement the ideas. If possible the whole school should feel they are taking responsibility for the waste issues in school. Once devised the action plan can be presented to the school council, governors or a waste action group set up by the school that includes staff and pupils from different year groups.

## The second audit

Once the actions have been implemented then another audit should be carried out following the same procedures as before. Conducting the second audit later in the same school term allows for results to be shared whilst the audit is still fresh in the participants' minds. However, enough time should be allowed for procedures and systems to have bedded in before carrying out the second audit. In conducting a fair test and in order to compare results effectively, the second audit must measure waste collected from the same areas and bins and on the same day of the week.

The same worksheets can be used and results should be shared with the whole school to highlight the success of the project.

## If figures increase

On occasion it may happen that some bins have more waste than before the waste reduction campaign took place. It may take just one or two bins to have increased in waste to disrupt the whole waste audit figures. This could happen for reasons such as:

- Procedures for the second audit were different from the initial audit.
- A bin/bins may not have been emptied for several days before the second audit.
- A classroom may have had a 'clear out'.
- Certain times of the year produce more waste e.g. Christmas.

If there is a clear anomaly in one of the figures and the reason for the increased waste is due to an explainable reason then this figure can be adjusted down from overall calculations.

## Monitoring progress

It is possible to find out whether or not your waste minimisation activities have been successful by conducting new waste audits at regular intervals, for example, every quarter or every year. Record the results, display them prominently in the school and discuss them with your class.

**The project is now over and the school has reduced its waste and become more sustainable. Well done!**



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# Appendices

<b>Worksheets</b>	<b>17</b>
<b>Letter to parents</b>	<b>25</b>
<b>Useful web links</b>	<b>26</b>

## Waste Worksheet 1

# Planning a waste audit

- You are going to plan a waste audit by carrying out a fair test.

For this task you will need

A pencil

You will need to consider which waste bins you are going to measure, when you are going to measure it and how you are going to measure it. You will need to share your results so think about who your audience is as well.

### What are you going to measure?

Decide which bins to measure, classroom, corridor, office, other. Where are they kept?

### When are the bins emptied?

Make sure you know when you are going to collect the rubbish and where you are going to keep it.

### Where are you going to do the audit?

Make sure you have enough space.

### Who is going to help you?

Involve as many people as possible.

### How are you going to measure and record the data and how are you going to report your findings?

## Waste Worksheet 2

**Measuring and recording waste**

Our name(s): \_\_\_\_\_ Today's date: \_\_\_\_\_

For this activity you will need

Gloves, plastic sheets, plastic carrier bags, spring balances, school rubbish, pencil and a brush, shovel and mop for cleaning up.

Area of the school where the rubbish bag came from \_\_\_\_\_

Date rubbish collected \_\_\_\_\_

Material type	Weight (grams)
Office paper	
Mixed paper	
Cardboard	
Cans	
Plastic	
Glass	
Foil	
Organic	
Other	
<b>TOTAL</b>	

## Waste Worksheet 2A

# Measuring and recording waste from a partial school waste audit

Our name(s): \_\_\_\_\_ Today's date: \_\_\_\_\_

For this activity you will need

Gloves, plastic sheets, plastic carrier bags, spring balances, school rubbish, pencil and a brush, shovel and mop for cleaning up.

Area of the school where the rubbish bag came from \_\_\_\_\_

Date rubbish collected \_\_\_\_\_

What percentage of the waste has been collected from this area? \_\_\_\_\_

Examples: All the bins from half the classrooms in this department = 50%

A third of the bins from the area = 33%

% of bins sampled	100%	50%	33%	25%
<b>Multiplication factor</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

To get the Total Weight for all waste in the area, multiply your results for collected waste by the correct multiplication factor from the table below.

Material type	Weight (grams) Collected waste	Total weight (grams) All waste in area
Office paper		
Mixed paper		
Cardboard		
Cans		
Plastic		
Glass		
Foil		
Organic		
Other		
<b>TOTAL</b>		



## Waste Worksheet 4

## Calculating a total year's waste

For this activity you will need

Results from 'Waste Worksheet 3',  
pencil and calculator

To take action on waste, you need to know the total school waste for one year and the type and amount of materials that make up the waste.

## How to do this:

- 1 Use the information from 'Waste Worksheet 3' to fill in the total weight for each material in column B.
- 2 Using a calculator, calculate the total weight for one school week.
- 3 Now calculate the total weight for one year (remember how many weeks are in the school year).
- 4 Can you calculate the material percentage of the total?
- 5 Can you show your results in a bar graph?

A	B	C	D	E
Material type	Material totals (kgs)	Weight for one week (kgs)	Weight for one year (kgs)	Percentage of total
Paper Office				
Paper Mixed				
Cardboard				
Cans				
Plastic				
Glass				
Foil				
Organic				
Other				
<b>TOTAL (kgs)</b>				

# Action Plan Worksheet 1

## Planning action

Waste item		Action to take in school			Benefits (why the action is good)
		Reduce	Reuse	Recycle	

<b>Group names</b>	<input style="width: 100%; height: 40px;" type="text"/>
<b>Material</b>	<input style="width: 100%; height: 40px;" type="text"/> <small>(Paper, cardboard, cans, plastic, glass, foil, organic, other)</small>

## Action Plan Worksheet 2

# Our action

**Our name(s):** \_\_\_\_\_

**Our aim:** \_\_\_\_\_

**Our action:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### What equipment will you need?

Make a list of the equipment you need as well as the cost if you need to buy it.

### Who would you need to talk to in school?

Make a list of the name of each person or group and what you need to discuss with them.

### Who else would need to be involved outside school?

Make a list of the name of each person or group and what you need to discuss with them.

### How will you get everyone to participate?

Write down the methods you will use.

Continues over

**Method – list the steps you need to take including who will carry out these steps. Put them in a logical order.**

You may not need all the spaces but if you need more use the rest of the page.

**Action Plan**

Action	Target	How	Who	When
e.g. Recycle paper	100% of all white office paper	Recycling boxes in all rooms	Joe Bloggs to organise	By 31st March

## Letter to parents

Dear Parent/Guardian,

Your child's class is taking part in an exciting project aimed at promoting active citizenship and environmental awareness. Called 'The Standardised Waste Audit' pupils will be collecting, sorting and weighing one day's waste from around the school to determine what can be reduced, reused or recycled.

At the end of the activity we will know how much waste the school is producing, who is producing it and what type of waste is being produced. This information will then be used by the school to draw up an action plan for reducing its waste production.

The purpose of this letter is to reassure you that while your child will be handling school waste during the sorting and weighing parts of this exercise, every precaution will be taken to ensure that the activity is as safe as it possibly can be. The majority of school waste is paper, however the following precautions will be taken:

- We will provide protective gloves for all those taking part
- No bins in which there is likely to be hazardous waste or anything potentially dangerous will be audited
- Hygiene will be a priority during and after the activity
- We will provide ground sheets so any material with the potential to cause slips or falls will not be left on the floor
- High supervision rates will ensure that children follow all safety instructions carefully
- The class will be given a Health and Safety talk at the start of the exercise to reinforce the safety rules

If you would like to be involved in this activity and help out on the day your participation would be much appreciated.

If you have any concerns about anything in this letter, please contact the class teacher in the first instance.

Yours faithfully,

Head Teacher

# Useful web links

Nursery **N**Primary **P**Secondary **S**

Organisation	Website	Who's it for?
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## Information

<b>Scottish Environment Protection Agency</b>	<a href="http://www.sepa.org.uk">www.sepa.org.uk</a>	Teachers
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Providing information on SEPA's role as Scotland's environmental regulator and adviser.

<b>Eco Schools Scotland</b>	<a href="http://www.ecoschoolsscotland.org.uk">www.ecoschoolsscotland.org.uk</a>	Teachers, Pupils
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Find out everything you need to know about the Eco Schools programme in Scotland.

## Waste

<b>Changeworks</b>	<a href="http://www.changeworks.org.uk">www.changeworks.org.uk</a>	Teachers, Pupils
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Waste information and educational resources for teachers and pupils. SWESP (Scottish Waste Education Support Programme) resources for Local Authorities.

<b>Waste Watch</b>	<a href="http://www.wastewatch.org.uk">www.wastewatch.org.uk</a>	Pupils <b>PS</b>
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Leading UK organisation promoting action on waste reduction, reuse and recycling.

<b>Recycle Now</b>	<a href="http://www.recyclenow.com">www.recyclenow.com</a>	Pupils <b>PS</b> Teachers <b>PS</b>
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Lots of information on the three Rs, child friendly and adult information. Excellent recycled products for sale.

<b>The Recycling Consortium</b>	<a href="http://www.recyclingconsortium.org.uk">www.recyclingconsortium.org.uk</a>	Pupils <b>PS</b> Teachers <b>PS</b>
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Excellent information for both teachers and pupils.

<b>Shanks plc</b>	<a href="http://www.shanks.co.uk/shanks">www.shanks.co.uk/shanks</a>	Pupils <b>P</b>
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Visit 'Education' and then 'recycling game' to sort the rubbish on the conveyor belt.

<b>Recycle Zone</b>	<a href="http://www.recyclezone.org.uk">www.recyclezone.org.uk</a>	Pupils <b>P</b>
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Interactive fun site for children.

<b>Recycle More</b>	<a href="http://www.recycle-more.co.uk">www.recycle-more.co.uk</a>	Pupils <b>PS</b>
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Lots of information on recycling in the UK. Activities are separated into ages, 5-11 and 11-16.

<b>Ollie Recycles</b>	<a href="http://www.ollierecycles.com/uk">www.ollierecycles.com/uk</a>	Pupils <b>P</b>
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Aimed at children with information about the three Rs. Full of games, puzzles and information on school projects.

<b>Waste Aware Scotland</b>	<a href="http://www.wascot.org.uk">www.wascot.org.uk</a>	Pupils <b>S</b> Teachers <b>PS</b>
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Scotland's campaigning group, with lots of information on what waste is and what we can do about it.

<b>Waste Online</b>	<a href="http://www.wasteonline.org.uk">www.wasteonline.org.uk</a>	Teachers <b>PS</b>
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Good selection of fact sheets.

<b>WWF's Global Footprint Education Project</b>	<a href="http://www.scotlandsfootprint.org">www.scotlandsfootprint.org</a>	Teachers <b>PS</b>
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Downloadable teaching materials are available. Unit 6 covers waste.

### Composting

<b>The Compost Resource Page</b>	<a href="http://www.oldgrowth.org/compost">www.oldgrowth.org/compost</a>	Teachers <b>NPS</b>
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A hub of information on all things to do with composting.

<b>The Adventures of Herman the Worm</b>	<a href="http://www.urbanext.uiuc.edu/worms">www.urbanext.uiuc.edu/worms</a>	Pupils <b>P</b>
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The autobiography of Squirmin' Herman the worm.

### Glass recycling

<b>Glass Forever</b>	<a href="http://www.glassforever.co.uk">www.glassforever.co.uk</a>	Pupils <b>PS(1-2)</b> Teachers <b>P</b>
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Information on glass packaging and how to recycle glass.

<b>British Glass</b>	<a href="http://www.recyclingglass.co.uk">www.recyclingglass.co.uk</a>	Pupils <b>P</b> Teachers <b>P</b>
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Site with teacher's notes and child friendly facts and games.

### Steel Can Recycling

<b>Steel Can Recycling Information Bureau</b>	<a href="http://www.scrib.org">www.scrib.org</a>	Pupils <b>P</b> Teachers <b>PS</b>
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Full of lots of information on steel recycling. Excellent education zone with games and competitions.

### Aluminium Can Recycling

<b>Aluminium Packaging Recycling Organisation (Alupro)</b>	<a href="http://www.alupro.org.uk">www.alupro.org.uk</a>	Pupils <b>S</b> Teachers <b>PS</b>
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Downloadable worksheets for Primary teachers. Lots of information about aluminium recycling.

<b>Think Cans</b>	<a href="http://www.thinkcans.com">www.thinkcans.com</a>	Pupils <b>P</b> Teachers <b>PS</b>
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Interactive website with games for the pupils and good teaching activities and information.

### Enterprise

<b>Recycool</b>	<a href="http://www.recycool.org">www.recycool.org</a>	Pupils <b>P</b> Teachers <b>NPS</b>
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Organisation promoting mobile phone and ink cartridge recycling competition with cash incentive.

### Activities

<b>Bright New Scotland</b>	<a href="http://www.brightnewscotland.org.uk">www.brightnewscotland.org.uk</a>	Teachers <b>NPS</b>
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Excellent website with background information, activities, resources, and links on all Eco Schools topics including litter and waste.

<b>The Northmoor Trust Wild Waste Show</b>	<a href="http://www.northmoortrust.co.uk">www.northmoortrust.co.uk</a>	Teachers <b>NP</b>
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Downloadable pack with lots of ideas for younger children, including songs.

### Recycled products

<b>Remarkables</b>	<a href="http://www.remarkables.co.uk">www.remarkables.co.uk</a>	Teachers <b>NPS</b>
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Sell funky goods made from recycled materials, excellent source for recycled pencils, pens, rulers etc.



Scottish  
Waste Education  
Support Programme **SWESP**

# Scottish Waste Education Support Programme

# SWESP



For more information please contact:

## SWESP

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