

Whole Day Lesson Plan – Year 3 to 12

School Waste Audit

Before undertaking this day, it is important that you, the teacher, are familiar with the instructions in the **Kimbriki Waste Audit Guide**, available on the Kimbriki Resource Hive. This document will guide you through everything you need to know about conducting a waste audit. This Lesson Plan and the **School Waste Audit Presentation** are supplementary to the **Kimbriki Waste Audit Guide**. Used if you wish to turn a waste audit into a whole day program.

Example Timetable		
0830	Set up tarps/ school waste/ sorting containers/ weigh station and recording table/ projector/ camera to take photographs of the day's process and progress	<i>A sheltered covered area for Audit School Waste Audit PowerPoint presentation set up on screen</i>
0920	As students assemble in hall get them to sit in their class groups. Now would be a good time for each class teacher to allocate jobs to their students. See the Waste Audit Instructions for information on each job and their role.	<i>Each class will need:</i> - 2-3 weigher/recorders. - 4-6 Bin monitors, - 2-3 Disposer supervisors - Remainder will be sorters.
0930	INTRODUCTION Slides 1-6 – What is Waste? Who decides? Waste is a decision/verb	<i>Container of dry school waste- use from slide 3. Tip onto Tarp as an example of the waste produced at school</i>
0945	Slide 7 - Choose a few students one by one to pick out a piece of school waste from the example pile and ask the question to all	<i>Inspire curiosity.</i>
0950	Slide 8 – 4 R's – state what they are as they come up and get kids to repeat. Who recycles at home? Slide 9 – Beach Garbage Picture – Would you like to hang out here? This stuff is waste. People have made a decision. Slide 10 – What problems do these items cause at school – discuss in your group and report back to whole group. How will we find out what goes in our bins? – we'll collect scientific evidence through an audit and a survey to provide a picture of what is actually going into our bins.	<i>Rethink, Reduce, Reuse, Recycle.</i>
1015	Let's find out what we are actually deciding is Waste in our schools – School Bin Audit – slide 11 – scientific evidence Slide 12 – Explain the different containers and what goes in each. Slide 13 – Explain special roles of Weighers/Recorders and Disposer Supervisors (See Waste Audit Instructions) Slide 14 – Explain the data that we will be collecting – weight (kg) and volume (litres) and not to push the material down in the collection containers Volume = L – what is that? Area/Space it takes up. How to calculate? (max container capacity (eg. 20L) multiplied by how full the bucket is, <u>as a decimal</u> (50% full = 0.5) Weight = Kg – Most disposal facilities charge by weight. You must subtract the weight of the empty bucket to arrive at the right number. To simplify things, this calculation can be done on all weights at the end, before the totals are calculated.	<i>Show weighing and recording sheet</i> <i>Show containers with signage</i> <ul style="list-style-type: none"> ○ Avoid – rubbish/garbage/landfill eg. soft plastics, ○ Mixed Containers – yellow bin plastic/glass/metal containers. ○ Paper & Cardboard – blue bin, clean paper, cardboard and magazines. ○ Food Scraps – All food waste including meat, bread, dairy and soiled paper. ○ Garden Vegetation – Any plant material that is not food scraps.
1030	RECESS	<i>Set up for School Waste Audit cordoned off from other students</i>

Example Timetable

1100	<p>Welcome back.</p> <p>What do you think we will collect the most of? (Prediction)</p> <p>Take students to the waste audit location.</p> <p>Remind students of jobs as allocated earlier</p> <p>Hand out gloves and other equipment</p> <p>Use the Kimbriki Waste Audit Guide to complete waste audit.</p> <p>When complete – tidy up area</p>	<p>Teacher to supervise and help weighing and recording station.</p> <p>For primary school, fluro vests and safety glasses can make this extra exciting.</p> <p>Wash buckets out with hose at end.</p>
1215	If time collate all results and display and discuss before lunch.	
1240	<p>Lunch</p> <p>Leave Spaces Tidy</p>	<p>Pack up all Waste Audit equipment & wash and remove</p> <p>In classroom or library, set up maps on clipboards as below and board with an enlarged map.</p>
1340	<p>Slide 15 - Litter Audit</p> <p>Where do you think you will find litter at our school?</p> <p>Have a walk around the school in groups of 6 and record on your map where the bins are located and where you can see litter</p> <p>Slide 16 – Map of School</p> <p>Discuss areas and allocate groups to areas</p> <p>Tell the students to mark on their map where the bins are and also use a graded X to indicate the amount of litter in their area. They could also annotate the type of rubbish found.</p>	<p>Split students so there is 1 group per school area. Each group receives</p> <ul style="list-style-type: none"> - Clipboard and pencil - Glove & bag - Map <p>Divide school into the areas that each group will focus on.</p> <p>Discuss graded X for litter amounts. (Graded X = Large X for 10 or more pieces, small x for 1 piece etc.).</p>
1350	<p>Conduct Litter Audit Survey of School</p> <p>Gloves and Bags to collect any litter found in your area handed out to students. Remind students to mark where the bins are on the map and count number of litter pieces.</p>	<p>Teachers to supervise.</p> <p>This shouldn't take too long.</p>
1405	Regroup in the Library and share results on the enlarged version of Map	One spokesperson per group
1420	<p>We have investigated waste at our school today. We need to think about all this information that we have collected and what we can do with it</p> <p>Show all results</p> <p>Can you see any patterns here? Any surprises?</p>	Butchers paper to scribe ideas.
	<p>Slide 17 – Next Steps</p> <p>What are 3 important things you could do to improve this situation at school? Relate back to 4 R's</p> <p>Get a whole group consensus on the 3 that the students would like to action next.</p> <p>Discuss the other options for getting involved in the community in clean ups and citizen science projects</p>	Create a Plan of Action
1450	<p>Tidy and Pack up all materials and leave areas as found</p> <p>Ensure all waste goes to correct bins or compost bins</p>	<p>Teachers Exhausted!!!</p> <p>Students Enlightened!!!</p>

Whole Day Lesson Plan –

School Waste Audit Equipment List

Morning Session - Presentation

- School Waste Audit Presentation** from Kimbriki Resource Hive
- 1 container of school waste (Slide 3)
- 1 tarp
- Example containers, signs and weighing sheet for demonstration.

Middle Session - Waste Audit

- All school waste collected from the day before, including staff areas and canteen.
- At least 1 set of digital scales
- 1 **Waste Audit Weighing Sheet** per class (Kimbriki Resource Hive)
- 1 tarp per class
- 5 identical containers per class (with known volume ie. 20L)
- 5 signs for containers per class (3 of each type) (Kimbriki Resource Hive)
 - Avoid – rubbish/garbage
 - Mixed Containers – Yellow bin containers recycling
 - Paper & Cardboard – blue bin paper and cardboard
 - Food Scraps
 - Garden Vegetation
- Relevant bins to put waste after the audit is complete.
- Camera for your own records.
- Tables for weighing and recording (one table per set of scales)
- Gloves & Tongs to sort waste for those that don't want to touch with gloves
- Access to hose and cloths to clean containers
- 1 x **Waste Audit Collation Data Sheet** sheet (Kimbriki Resource Hive)
- (Optional) Return and Earn container – to count 10c containers into after they have been accounted for in the waste audit as mixed containers.

Last session – School Litter Audit

- 1 x enlarged version of school map (or presentation screen with digital copy)
- A4 maps of school and enough pencils on clipboards
- Butchers paper
- Coloured pens or pencils

Notes