Year 4 Geography – Unit 8

TEACHER'S NOTES

Geography – Improving the environment – recycle (based on QCA Unit 8)

Learning Intentions

In this unit, pupils will use the school buildings, the grounds and the locality of the school to investigate environmental issues. They will be encouraged to produce ideas for improvements that could be made.

Pupils will be expected to:

- observe and question;
- collect and record evidence;
- carry out fieldwork.

Resources for further work

1 bag of rubbish from classroom bin; 1 bag of kilogram weights; sticky notes to annotate whiteboard; whiteboard pen; copies of templates provided in the templates chapter.

Glossary / Vocabulary

compost	Vegetable and other plant matter that has decayed and can be used to help other plants grow.
cumulative	Increasing by adding on to the previous value.
estimate	To guess the value, number or quantity of something.
investigate	To carry out a study into something; to examine the facts.
landfill	The burying of waste in the ground and covering it with soil.
measure	To use a tool to find out the size or amount of something, e.g. height, length, weight.
melt down	To melt something so that the material it is made from can be used again.
pulp	To crush into a soft, wet shapeless mass. Paper pulp can then be turned into recycled paper.
recycle	To reuse a material e.g. recycled paper.
reduce	To make smaller or less in amount or size.
tally	A record of a score or an amount, shown as a line.

Lesson notes (sections 1–5)

1. Rubbish research

Learning Objectives

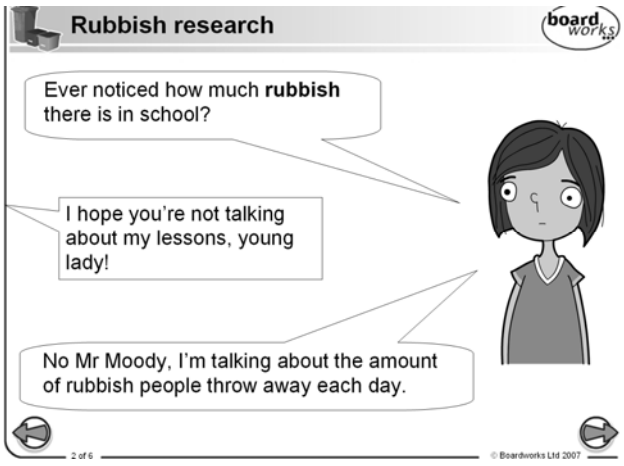
Pupils will learn:

- to ask and respond to geographical questions;
- to collect and record evidence to answer questions;
- fieldwork skills.

- Ask: “Why do we throw things away?” List pupils’ responses and compare them with those given. Ask: “How much rubbish do you think we throw away in this class in one week?” Encourage pupils to estimate the amount in “binfuls” and then to compare lifting a bag of classroom rubbish with a bag containing standard weights (kgs). Can the class agree on what they think the weight of the class rubbish bin is in kilos? They could vote on their answer and then multiply the amount by the number of binfuls of rubbish they think were generated in a week.

- Weighing rubbish bags: After Monday’s bag has been weighed, they could also estimate the results for the rest of the week, before continuing. Pupils could add their estimates and readings to the board using sticky notes. A template for this activity is available at the end of the presentation and could also be used to investigate how much rubbish is produced in the pupils’ own classroom over a single week.

- Encourage pupils to work out the difference between each estimate and result shown. Ask: “Which result do you think is the most surprising and why?” Pupils could also compare Katie’s estimates with their own. Did anyone correctly predict the data collected? Ask pupils to put the results in order from the largest amount to the smallest.



Notes

2. Garbage graph

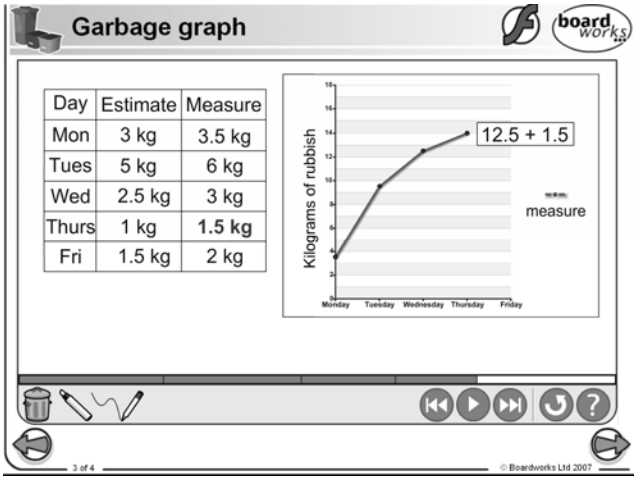
Learning Objectives

Pupils will learn:

- to recognise patterns;
- to use ICT to present findings;
- fieldwork skills.

- Line graph: Pupils could check dictionaries for other definitions of the term *cumulative*. Pupils could draw their own graphs using the information provided and the template given at the end of the presentation. If you wish, pupils could use a whiteboard pen to plot the information onto the axes shown. The table of results will expand if pressed. Pupils can check their results by pressing play to view the animation. Ask: "What title would you give to this graph?" Pupils could go on to draw line graphs for their own investigation.

- The class could vote on the answers to the true or false quiz. Pupils could make up their own true or false questions about the graph to challenge their friends.



Notes

3. Trash tally

Learning Objectives

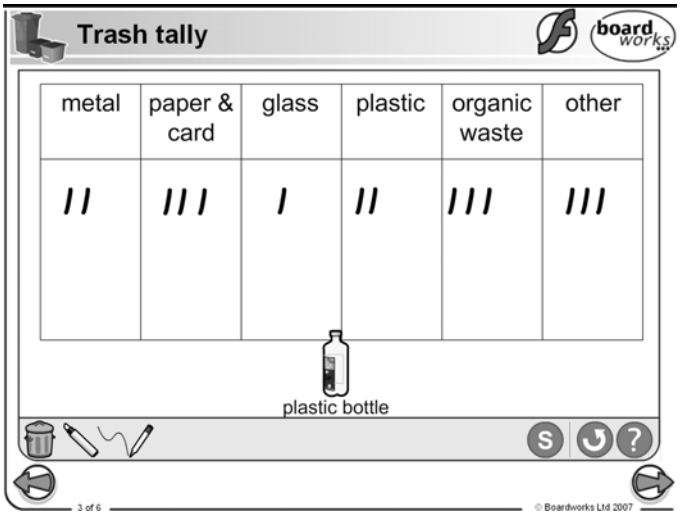
Pupils will learn:

- to ask and respond to geographical questions;
- to recognise patterns;
- to collect and record evidence to answer questions;
- to use ICT to present findings.

- Ask: “How many metal things were in the rubbish heap?” (6 items, shown by the tally marks: 𝍸 I) Ensure pupils are able to express the number 6 as a set of tally marks. Give practice with numbers between 1 and 20 to those who need it. Pupils could use copies of the tally chart (a template is provided in the templates chapter) to record their arrangement. Pupils could go on to produce a similar tally of the contents of their classroom rubbish bin. Pupils could work out the differences between the totals in the tally chart.

- Recycling options: The class could vote on how to deal with the different types of rubbish. When the task has been completed, ask: “Which type of rubbish could not be recycled?” (Land-fill).

- Pupils can use the information in the tally chart to work out how many items in total were thrown away in Mr Moody’s class and how many of these could have been recycled. They can then view the totals to check their figures.



Notes

4. Bin it!

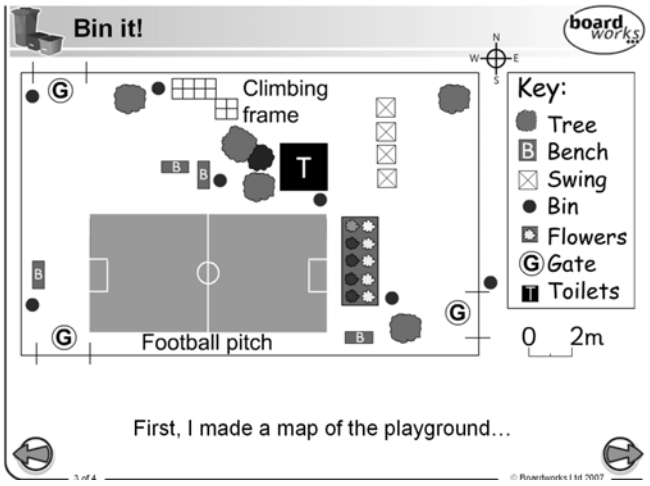
Learning Objectives

Pupils will learn:

- to ask and respond to geographical questions;
- to recognise patterns;
- to collect and record evidence to answer questions;
- to use ICT to present findings;
- fieldwork skills.

- Familiarise pupils with the school map by challenging individuals to describe routes from one landmark to another. (e.g. “Starting at the climbing frame I need to walk west to reach the gate, passing a tree and a bin on my right. To go out of the gate, I need to turn to face the north.”) Pupils could also measure distances using the scale on the map and calculate the area of the playground.

- Ask pupils to consider the use of bins: “Where are the bins being well used? Where are there problems? Why do you think these problems are happening?” The playground map is available as an expandable inset. A template is provided in the templates chapter to allow pupils to conduct a similar survey of their own playground. Rubbish needs to be handled with gloves. It’s advisable to put rubbish sacks into empty bins in preparation for this task.



Notes

5. Review

Learning Objectives

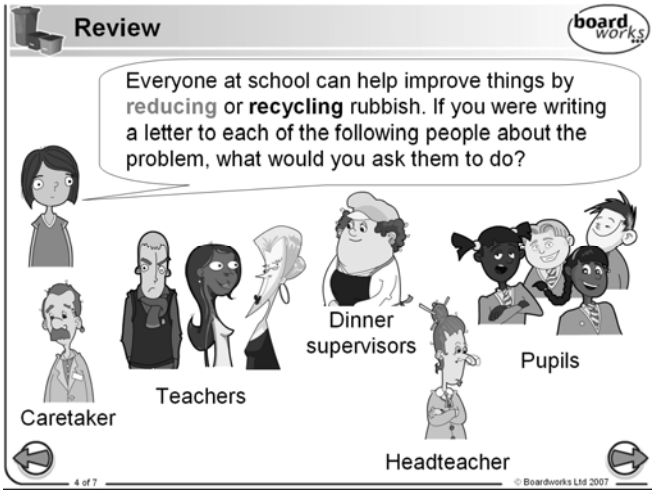
Pupils will learn:

- to ask and respond to geographical questions;
- to recognise patterns;
- how people affect the environment;
- how and why people seek to manage, sustain and improve their environment;
- fieldwork skills;
- to identify and explain the different views held by people about an environmental change.

- Encourage pupils to experiment with different arrangements and numbers of bins on the map of St Swithin's playground. Ask the class to refer to the database at the end of the previous chapter, 'Bin it!', to help them make decisions. Individual pupils should explain the reasoning for the distribution they choose (e.g. "The bin near the climbing frame is out of sight by the tree, so I'm moving it to somewhere it can be clearly seen.").

Extension task / homework

- As an extension task, pupils could write a letter to one of the characters, suggesting how they can help with reducing or recycling rubbish at St Swithin's school. A template for this task is provided in the templates chapter. Pupils could also use the template to suggest improvements to their own school.



Notes