

Electrical appliances

Mathematics learning objectives

Framework:

- **HD:** Answer a question by collecting and recording data in lists and tables; represent the data as block graphs or pictograms to show results; use ICT to organise and present data.
- **HD:** Use lists, tables and diagrams to sort objects; explain choices using appropriate language, including 'not'.

NC: Ma2, 5a-b

Science learning objectives (NC)

- **Sc4, 1a:** About everyday appliances that use electricity.

Vocabulary

Count, list, sort, table, tally

Children's task

Provide A3 copies of activity sheets 'Electrical appliances table' and 'Electrical appliances'. Ask the children to look at the pictures, and write each item that uses electricity into the correct field on the table. Children may want to write items in more than one row because they have it in two or more rooms, for example, a lamp. Ask: *Are there items which do not use electricity to make them work?* There is space provided for children to add more rooms, such as a garage, study and so on. They tally each item as they place it onto their sheet.

Differentiation

More confident: Challenge the children to think of more items that use electrical power to add to their table.
Less confident: Suggest that the children take each picture in turn, decide whether it works with electricity, write its name onto the table if appropriate, then tick the picture. This will help them to be more methodical in their work.

Review

Ask the children to count up their tallies for each room. Discuss how it is easier to count in fives. Now ask questions, such as:

- *Who has more than three electrical appliances in the bedroom? How many more?*
 - *What is the largest number in any bathroom?*
- Each time, enter the data for the largest number in the block graph tool in the slideshow. Look at the completed block graph and ask, for example:
- *How many more items are there in the... than in the...?*
 - *Which room has most/least items?*
 - *What is the number difference between most and least? How did you work that out?*

Display the interactive block graph: 'Electrical store' or the activity sheet. Ask questions, such as:

- *How many more kettles are there than cookers?*
- *How many fewer DVD players are there than televisions?*
- *How many items are there in total in the store?*

If using the interactive, edit the graph and ask the similar questions again.

Now try this...

Children can collect data for outdoor electrical appliances for homework, then produce block graphs.

Resources

CD-ROM slideshow:

- Activity sheets: 'Electrical store' (also p7), 'Electrical appliances table', 'Electrical appliances', 'Electrical store block graph' (also p7) and 'School appliances table'
- Image: 'Kitchen'
- Block graph tool
- Interactive block graph: 'Electrical store'

Introduction

Discuss what things children use at home that need electricity to make them work. Discuss how some things use batteries that can be recharged; others need mains electricity; and that there are other things that do not need any power. Display the image 'Kitchen' from the CD-ROM, if necessary, to prompt discussion. Ask questions such as:

- *What do you have at home that works with batteries?*
- *What do you use that needs mains electricity to work?*
- *Think of some other things that use electrical power.*

If the children have not been introduced to tallying, explain this system. For each item that works with electricity draw a stroke on the board. Put the 'bar gate' across for the fifth item, and so on. Show the children how to count in fives, then add on ones. Display the activity sheet 'Electrical store' and discuss the tally chart.



CD-ROM follow-up material

In small groups, use activity sheet 'School appliances table' to collect data; then create a block graph using the block graph tool in the Kids Zone of the CD-ROM. Display the completed tables with printouts of the block graphs.

Electrical store

- Look at the tally chart and block graph below.
- Jamie collected information from the local electrical store. The tally chart and block graph show the amount of each item Jamie found.

Name of item	Tallies	Total
kettles	### ///	9
cookers	//	2
fridges	### ///	8
freezers	### //	7
televisions	### ### ###	15
DVD players	### ### //	12

Electrical store block graph

