

Unit 1E Representing information graphically: pictograms

ABOUT THE UNIT

In this unit children learn how to use ICT to represent information graphically. They learn how to create pictograms and how to answer simple questions on the data shown in their pictograms.

Children will use a graphing package to create their work and will learn how to enter data correctly and how to use icons.

Children will apply what they have learnt in this unit when classifying objects in science or mathematics; undertaking investigations in mathematics, science and geography.

WHERE THE UNIT FITS IN

This unit builds on Unit 1D 'Labelling and classifying', which shows that objects can be sorted using a range of criteria and that there are standard classifications of objects that are used by people such as scientists or geographers. The unit assumes that children:

- can collect data
- understand that data can be presented graphically.

TECHNICAL VOCABULARY

- pictogram
- icons
- collect
- sort
- classify

RESOURCES

- pictures showing modes of transport
- a picture of a street scene
- graphing package for creating pictograms
- a collection of shapes

EXPECTATIONS

at the end of this unit

most children will:

use a graphing package to select appropriate icons, recognise quantities and create a pictogram

some children will not have made so much progress and will:

enter information into a graphing package

some children will have progressed further and will:

use a graphing package to select appropriate icons; recognise quantities and create a pictogram; make comparisons, such as 'twice as many'

LEARNING OBJECTIVES

POSSIBLE TEACHING ACTIVITIES

LEARNING OUTCOMES

POINTS TO NOTE

SETTING THE SCENE

CHILDREN SHOULD LEARN

- **key idea:** that data can be collected and presented as pictograms
- **key idea:** that data represented graphically can be easier to understand than textual data
- **technique:** to use pictograms to answer simple questions

- ◆ Collect pictures showing modes of transport. Ask the class to select the pictures that show how they travel to school. Arrange the pictures on the wall to build up a pictogram.
- ◆ Show the class a picture of a street scene. Ask them how many people they can see travelling by bicycle, car, bus, or walking. Use the pictures of modes of transport to produce a pictogram. Discuss how pictograms show information at a glance. Ask the class to use the pictogram to answer questions, *eg what is the most/least common way of travelling?*

CHILDREN

- recognise that there is a connection between data collected, sorted and classified, and a pictogram
- recognise that data can be represented by pictograms and that the longer the column in a pictogram the higher the number
- use a pictogram to help answer simple questions

At this stage, each picture represents one item.
A child might suggest that the least popular way of travelling is one that nobody uses. This could produce a worthwhile discussion.
The picture should show clearly all the people in vehicles. Stress to the class that they are counting people not vehicles.
If the class are confident using pictograms, they could compare a pictogram showing the number of vehicles with a pictogram showing how people are travelling (there may be more buses than cars, but more people might be travelling by bus than by car).

SHORT FOCUSED TASKS

- **key idea:** that ICT can be used to create pictograms

- ◆ Ask each child to choose his/her favourite colour from the colours of the spectrum. Demonstrate to the class how to enter data and show them the icons which will produce a pictogram of data entered.
- ◆ Ask each child to enter their favourite colour and to choose the icons that will create a pictogram. Print the pictogram and ask the class to answer simple questions about the pictogram, *eg which colours are the most/least popular?*

- enter data into a graphing package to create a pictogram and use it to find answers to simple questions

Encourage children to compare the use of a computer to create a pictogram with manual methods.

INTEGRATED TASK

- to use ICT to classify information and present findings

- ◆ Prepare a collection of shapes. Ask the children to group the shapes according to number of sides. Ask them to use a graphing package to select appropriate icons to represent their data. Ask them to create a pictogram to represent the data they have collected and to present what they have learnt from their pictogram.

- sort objects using one criterion
- use a graphing package to produce a pictogram of their data
- present verbally what they have learnt from their pictograms

Encourage children to check that they have entered data correctly and provide support when they are making corrections.
More able children could be encouraged to use their pictograms to answer more complicated questions, *eg are there more things with three sides than six sides; how many more?*



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