



# Strengthen Activities

## MISCONCEPTION

Children may misread the scales on a bar chart, assuming that each square always stands for one.

### STRENGTHENING UNDERSTANDING

1. Give children a blank set of axes (10 intervals on the horizontal and vertical axes). Ask children to make up a context for their graph, for example, children's favourite ice cream flavour. Tell them that the most popular flavour has a frequency of 9. Ask: *What would be a sensible interval size? What if the most popular flavour has a frequency of 30? Using the same set of axes, how would you need to change the interval size? What if it changes again to 47?* Ensure children understand that the interval size is determined by the data – you do not want an interval size that doesn't fit on the page, or so big that the graph is too small to be meaningful.
2. Give children some example graphs with different interval sizes. Ask them what they notice and why certain intervals sizes have been chosen.

### ASSESSMENT CHECKPOINT

Can children add another element to their charts from Q5 on Practice Book p77: Wood: Y3: 425, Y4: 450, Y5: 350, Y6: 250?

### RESOURCES

Blank graph and various prepared graphs, Practice book

## MISCONCEPTION

Children may assume that each symbol in a pictogram has a value of 1.

### STRENGTHENING UNDERSTANDING

1. Give children a blank pictogram frame and ask to make up a context for the pictogram, for example, number of different coloured cars in a traffic survey. Decide on a symbol used to represent each car. Ask: *If there was a maximum of 5 cars in any given colour, what could each of your symbols be worth? How would it change if the maximum number changed to 15? What could each symbol be worth now? How would you show what each symbol is worth in your pictogram? Why does the value of the symbols need to change?*
2. Give children other examples and plenty of opportunities to reason their choice. Ask: *What is important in a pictogram to ensure that you can work out the correct data?* (The key) Give children a selection of prepared pictograms to interpret.

### ASSESSMENT CHECKPOINT

Can children complete Q1a and b on Practice book p75 accurately?

### RESOURCES

Blank pictogram frame and various prepared pictograms, Practice book

## MISCONCEPTION

Children may think they can only read data from the marked points on the horizontal axis, especially with continuous data on a line graph.

### STRENGTHENING UNDERSTANDING

1. Use the line graph in Lesson 3, on Textbook p112. Discuss the context of temperature. Ask: *Does the temperature just jump from one measurement to another throughout the day, or does it change gradually over time?* Ensure children understand that data, like temperature, is represented in a line graph to show the continuous nature of it and how it differs from discrete data like favourite ice cream flavours. Ask children to come up with other data that would be continuous, for example, their height over time, distance travelled in a day, temperature of water in a kettle, etc.
2. Use the line graph to give children plenty of practice at interpreting line graphs between points. Ask: *What was the temperature at 10:30 am? At what times in the day was the temperature 11°C? What was the increase in temperature from 11:30 am to 12:00 pm?*

### ASSESSMENT CHECKPOINT

Can children use the chart on Textbook p112 to say what the temperature was at 12:30 pm?

### RESOURCES

Textbook