

Interpreting line graphs

Key learning

Answer questions and draw conclusions from line graphs; collect, select and organise data, using ICT to present line graphs, and identify further questions to ask.

Check that your child can:

- interpret the units on the scales used on line graphs and explain what the graph shows;
- use line graphs to display information;
- answer questions and ask their own questions about a line graph.

“Let’s talk about maths”

Use opportunities that give practical experience of reading graphs in everyday life, such as:

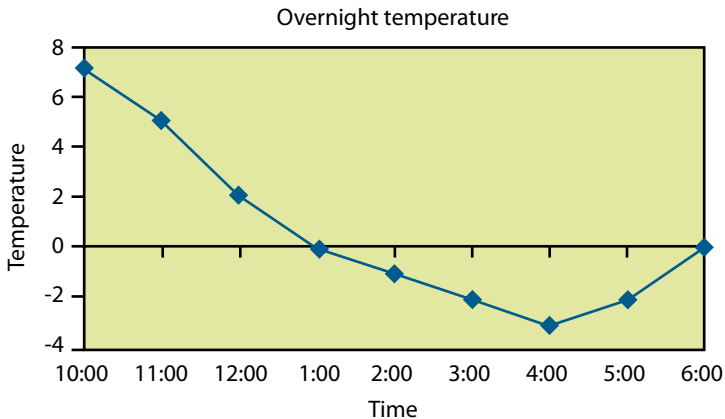
- looking at temperature charts when planning a holiday;
- interpreting information in graphs that illustrate newspaper articles.

Notes for parents/carers

There are many opportunities to look at and interpret graphs in newspapers, on TV and on the Internet. Ask your child questions about any you find, to help them interpret and explain graphs like the one below.

Activities to do with your child

- Look at this 'Overnight temperature' graph for a desert area.



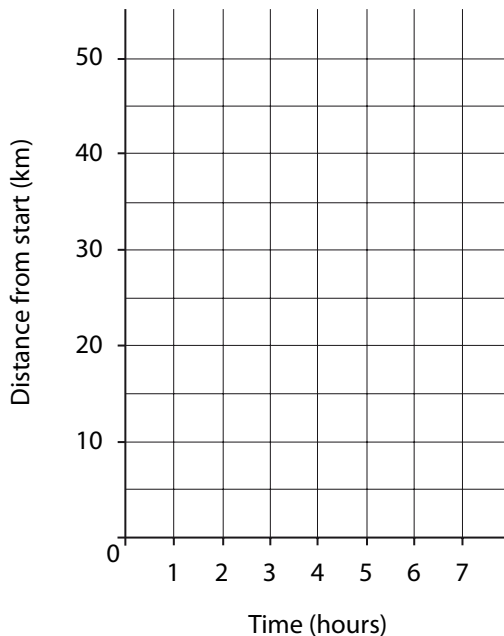
It shows the outside temperatures in °C. Ask questions such as those below.

- What were the highest and lowest temperatures? When did these occur?
- When was the temperature at freezing point (0 °C)?
- How far did the temperature fall from 11:00 pm to 3:00 am?
- How long did the temperature stay below zero?
- Roughly what temperature was it at 11:30 pm?
- Use the Internet to research temperatures in different parts of the world.
- Collect the temperatures of a cooling liquid or melting ice cubes over a period of time. Create your own graphs and questions.

Cycle journey

Use the data in the table to produce a line graph of the total distance travelled over the seven-hour cycle journey.

Time (hours)	0	1	2	3	4	5	6	7
Distance (km)	0	8	15	21	21	28	32	43



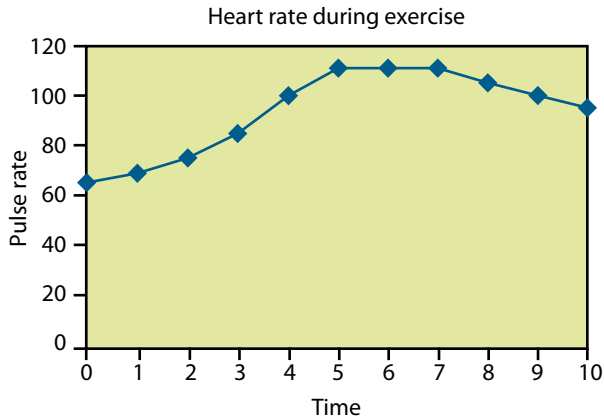
Ask questions such as:

- How far did the cyclist travel each hour?
- What might have happened three hours into the journey?

Together, create a short story to describe the cyclist's journey. Make up some more questions to ask about the graph.

Heart rate and pulse rate

Look together at the line graph below. Talk about what the points on the graph represent.



Agree they show pulse rates or heartbeats per minute, taken every minute. The points are joined up to show the changes in heart rate during the exercise.

Ask questions such as:

- How long did it take for the pulse rate to reach its highest level?
- What was the pulse rate at the start of the experiment?
- What was the pulse rate likely to have been after 2½ minutes?
- When do you think the person stopped exercising?
- When was the heart rate increasing most?
- Carry out your own exercise experiment together and draw a line graph showing your heart rates. How do they compare?