

Line graphs

Notes and guidance

In Year 5, children focused on drawing, reading and interpreting simple line graphs. In this small step, they revisit that learning and progress to looking at more complex graphs, including ones with more than one line.

Children start by looking at simple line graphs and the information that can be gathered from them. They should recognise that they can only read off approximate values for data that lies between two marked points, which is why a dashed line is used. They then draw line graphs using given information. When doing this, it is important to discuss what each axis will represent, drawing children's attention to the fact that time is usually shown on the horizontal axis. When they are drawing line graphs, support children in choosing appropriate scales based on the numbers given.

Children also answer problems involving line graphs. They should be able to infer what has happened in a given situation based on the information provided in the line graph.

Things to look out for

- When drawing their own line graphs, children may need support to choose appropriate scales.
- When there is more than one line on a graph, children may use the wrong line.

Key questions

- How do you read information from a line graph?
- What does each axis represent?
- What is the smallest value in the data? What is the greatest?
- What intervals would be appropriate for this line graph?
- What does this line graph tell you?
- What does the direction of the line tell you about what happened?
- How can two sets of data be recorded on the same line graph?

Possible sentence stems

- The horizontal axis shows _____
The vertical axis shows _____
- At _____, the graph reads _____
At _____, the graph reads _____
The difference between the two points is _____

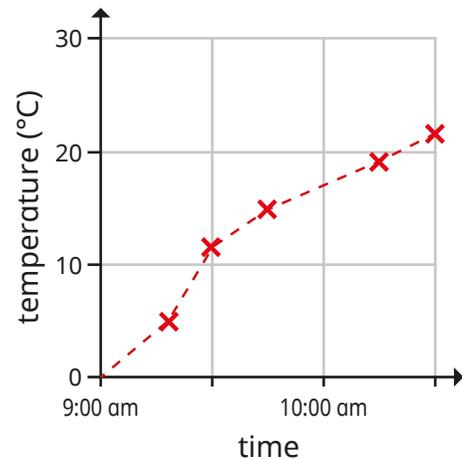
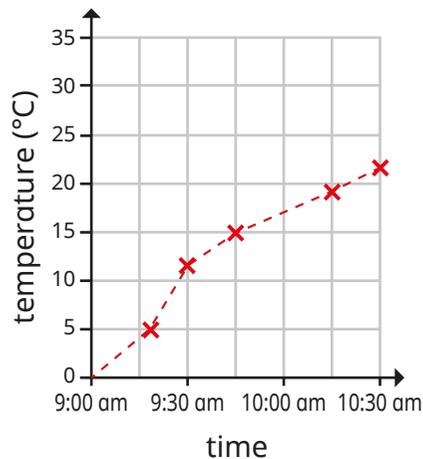
National Curriculum links

- Interpret and construct pie charts and line graphs and use these to solve problems

Line graphs

Key learning

- Discuss with a partner what is the same and what is different about the line graphs.



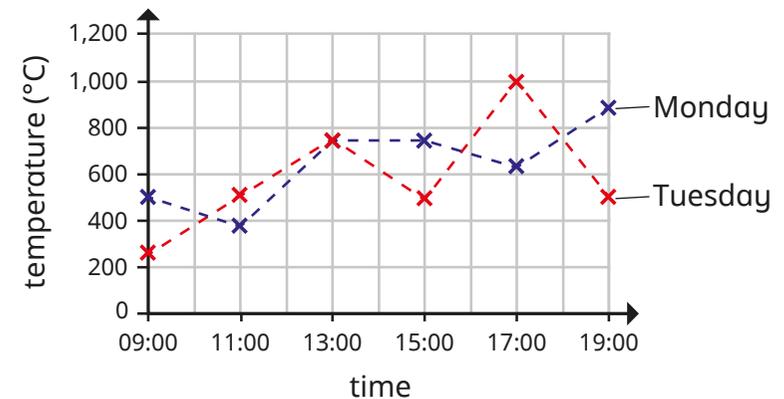
- ▶ What is the temperature at 9:45 am?
- ▶ At what time was the temperature approximately 12 °C?

- The table shows the height a rocket reached between 0 and 60 seconds.

Time (seconds)	0	10	20	30	40	50	60
Height (metres)	0	8	15	25	37	50	70

Draw a line graph to represent the information.

- The graph shows water consumption over two days. The water consumption was recorded every 2 hours.



- ▶ At what times was the recorded amount of water consumed on Monday and Tuesday the same?
- ▶ Was more water consumed at 5:00 pm on Monday or Tuesday?

Approximately how much more?

- The table shows the populations in the UK and Australia from 1995 to 2020

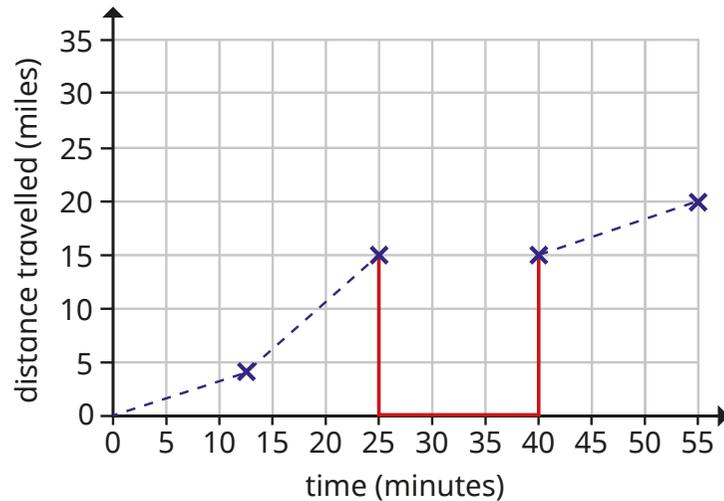
	1995	2000	2005	2010	2015	2020
UK	58,000,000	58,900,000	60,300,000	63,300,000	65,400,000	67,900,000
Australia	18,000,000	19,000,000	20,200,000	22,100,000	23,800,000	25,500,000

Draw a line graph to represent the information.

Line graphs

Reasoning and problem solving

This graph shows the distance travelled by a car.
The car stops between 25 and 40 minutes.
Tiny has added the red line to show the car stopped.

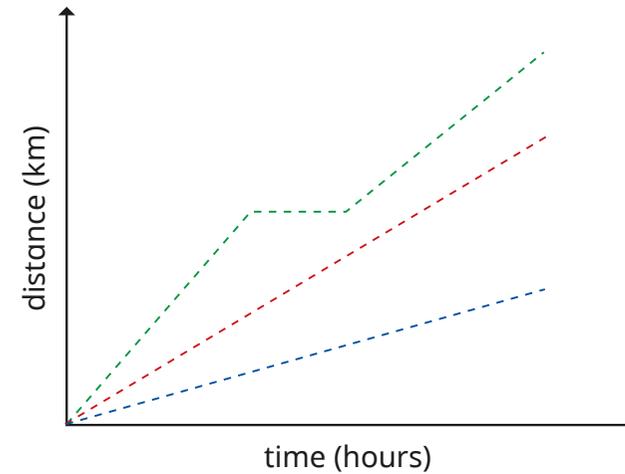


Do you agree with Tiny?
Explain your answer.



No

The graph shows some of Dr Lee's journeys.



What is the same and what is different about the journeys?

What might have happened during the green journey?



multiple possible answers, e.g.

All the journeys took the same length of time.

During the green journey, Dr Lee might have stopped for a rest.