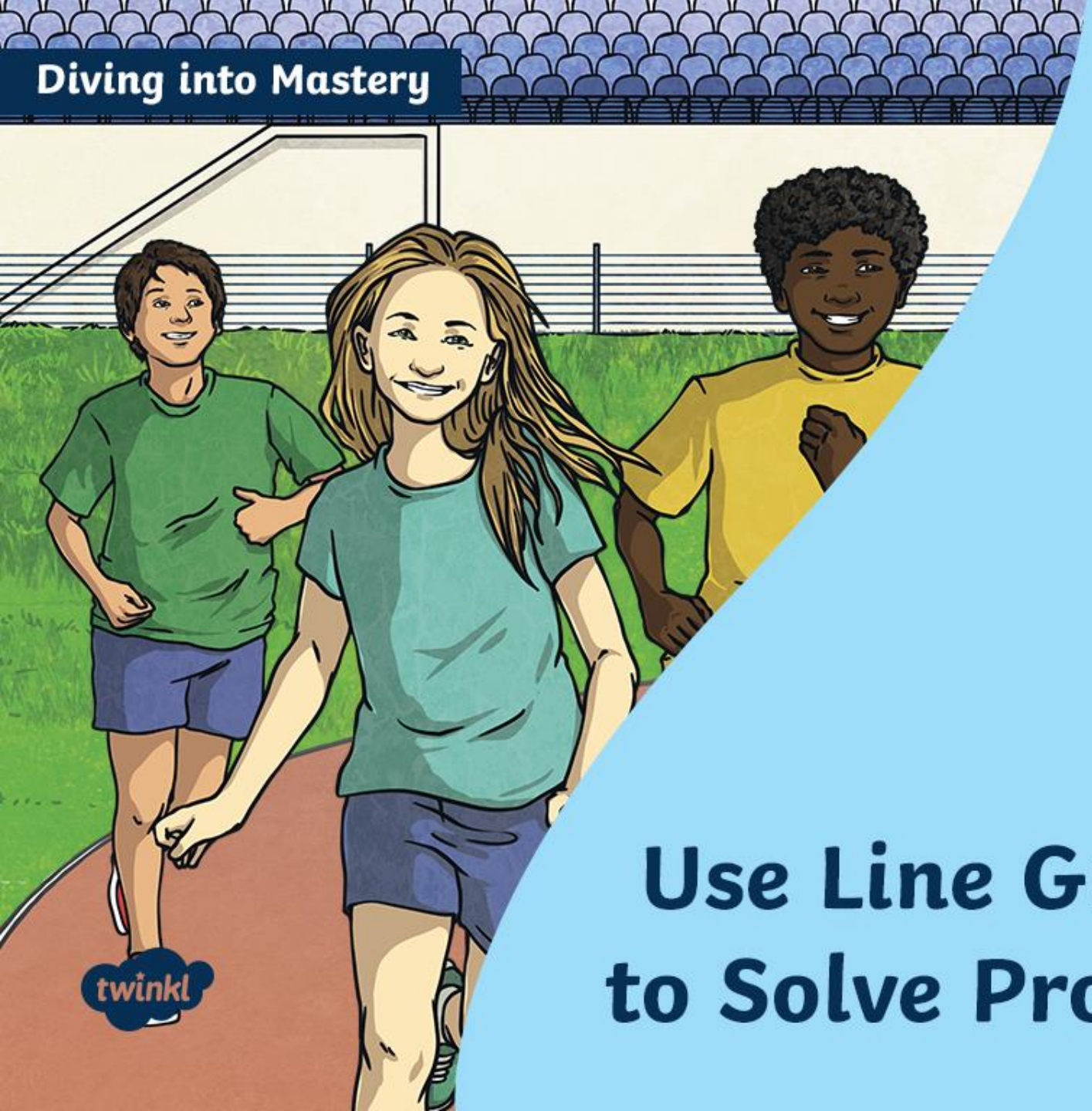
Diving into Mastery



Use Line Graphs to Solve Problems

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

Diving

Deeper

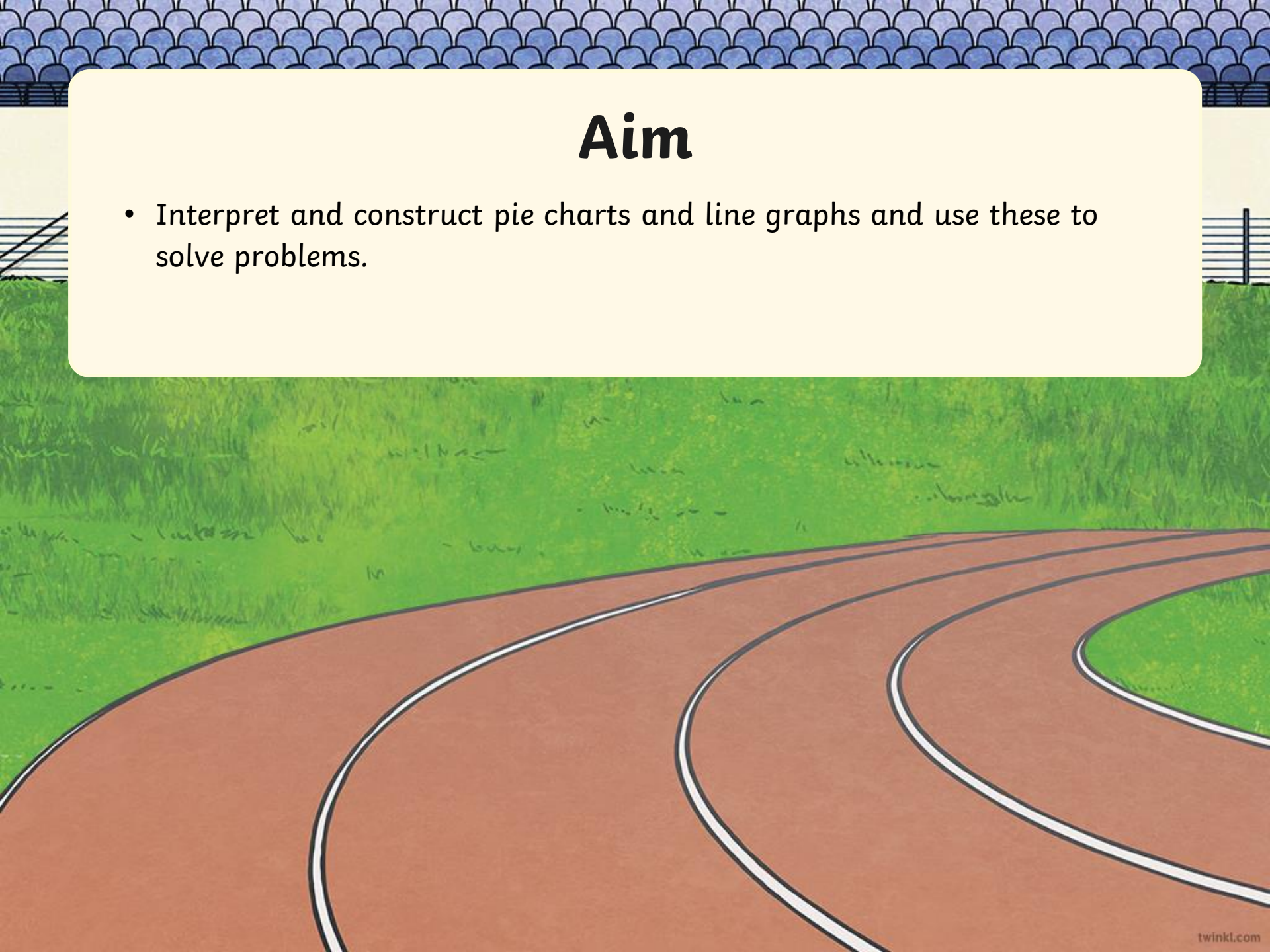
Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

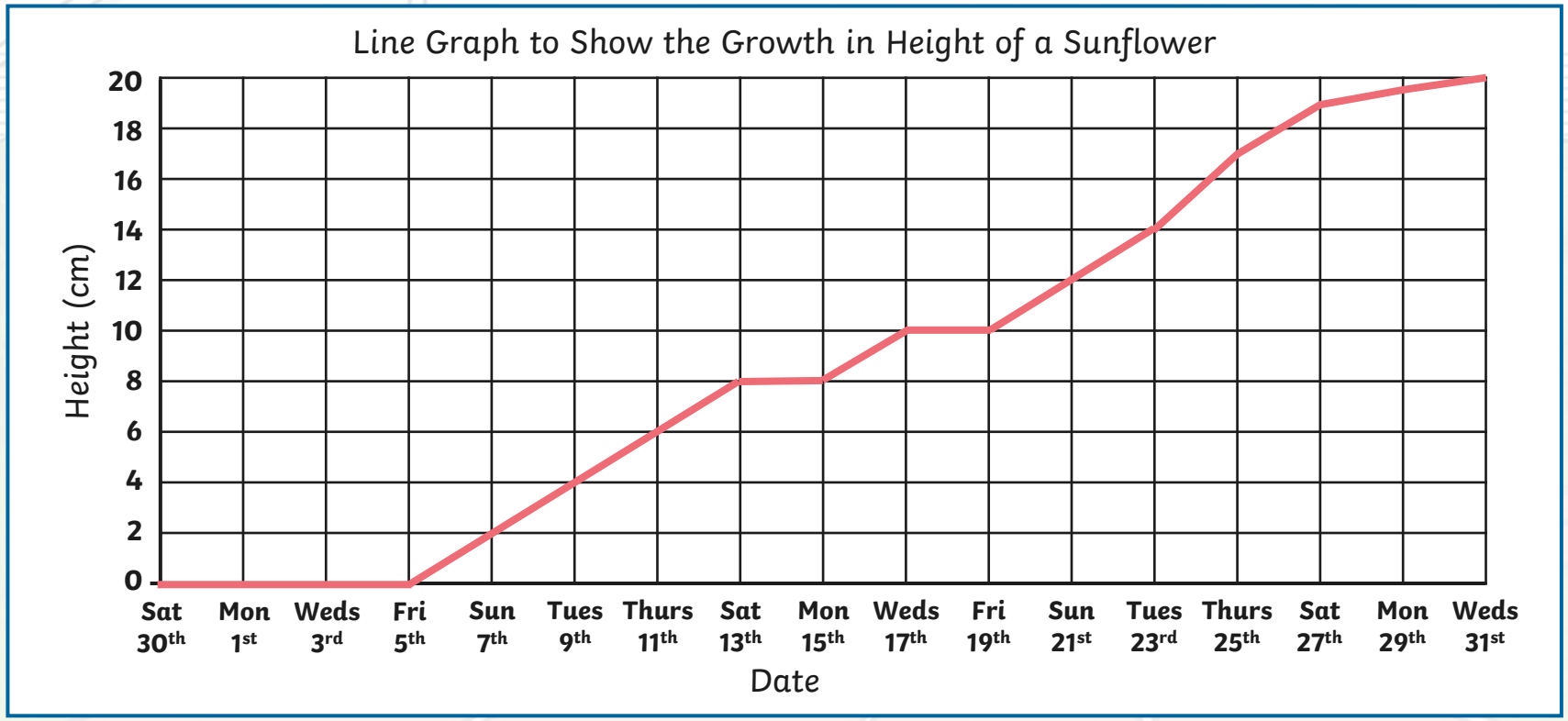
Aim

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



Use Line Graphs to Solve Problems

Diving

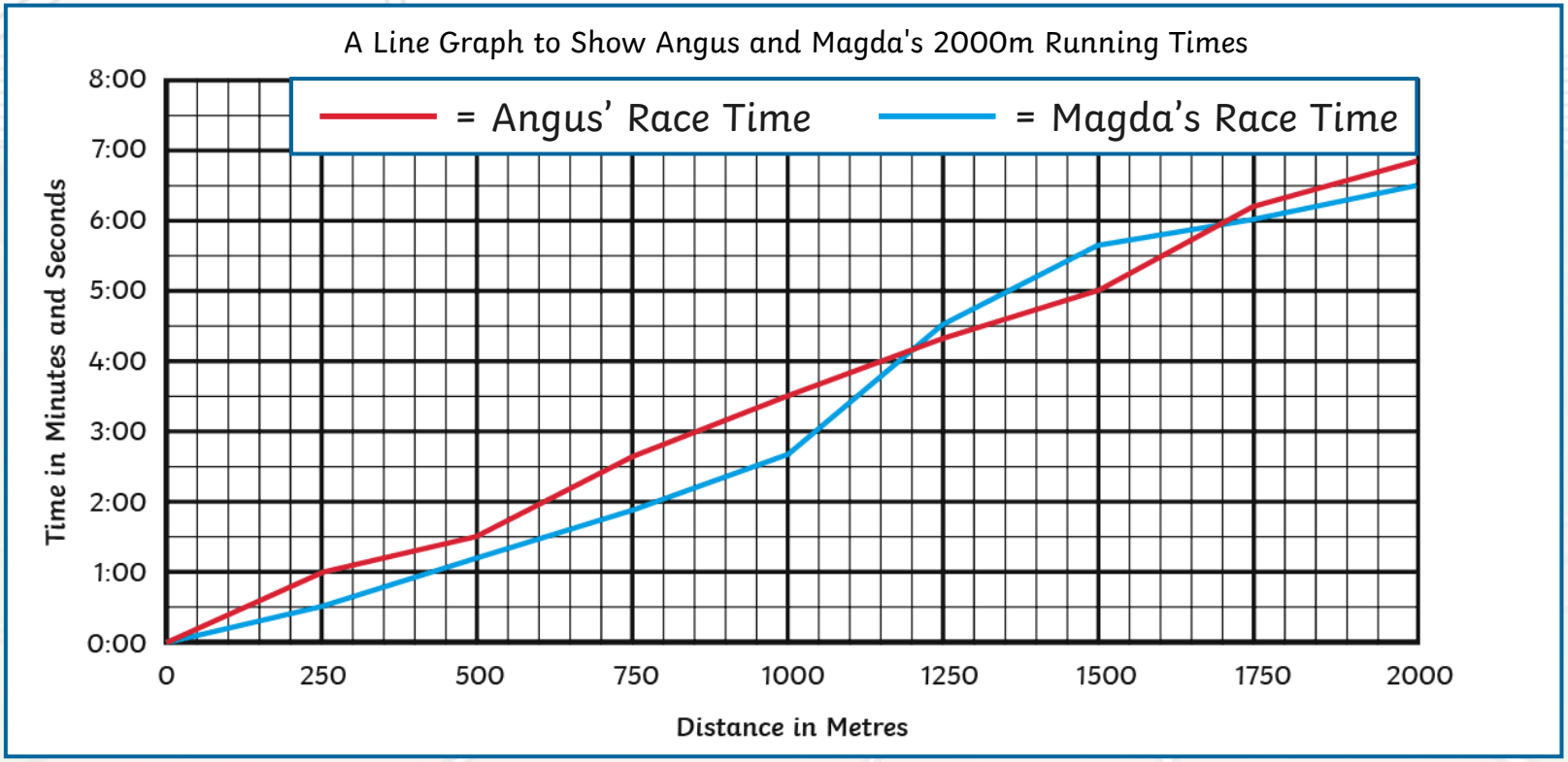


How many days did it take for the sunflower to grow to 20cm from when the first shoot appeared?

26 days

Use Line Graphs to Solve Problems

Deeper

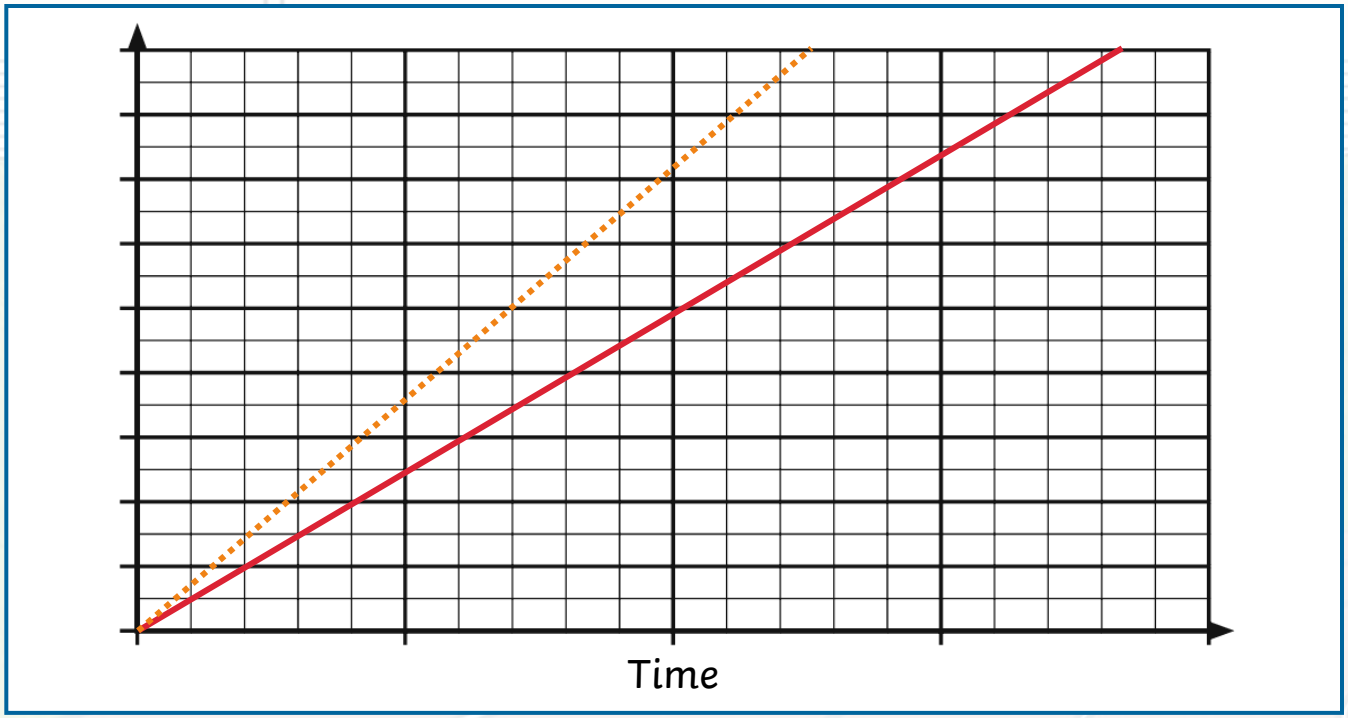


After two minutes, Magda had run 200m further than Angus.

Decide if each statement about the line graph is true or false. If it is false, explain the reason why.

Use Line Graphs to Solve Problems

Deepest

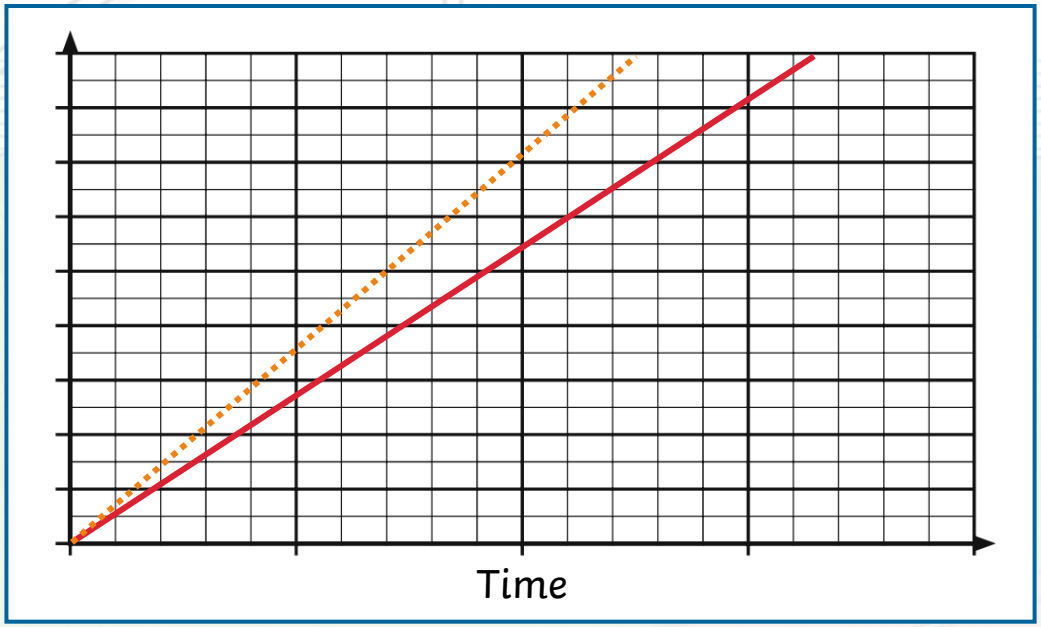


Some children described a line graph before the title and the label of the y-axis were removed.

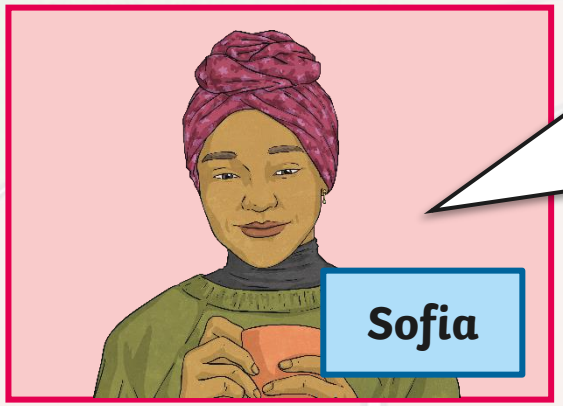
Give reasons to explain why you think each child's description either matches or does not match the line graph.

Use Line Graphs to Solve Problems

Deepest



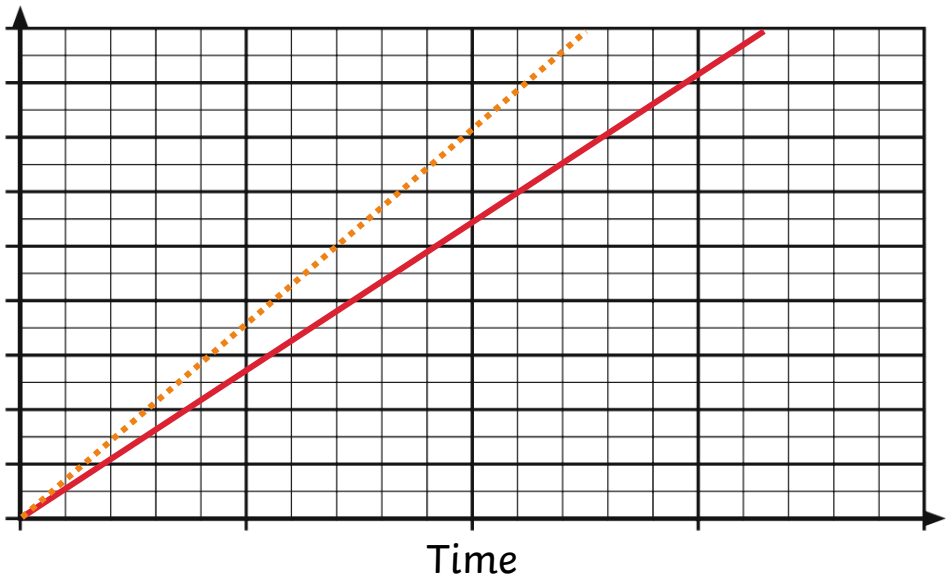
Sofia's description does not match the line graph because you would expect the temperature to decrease (not increase) as the drinks were allowed to cool.



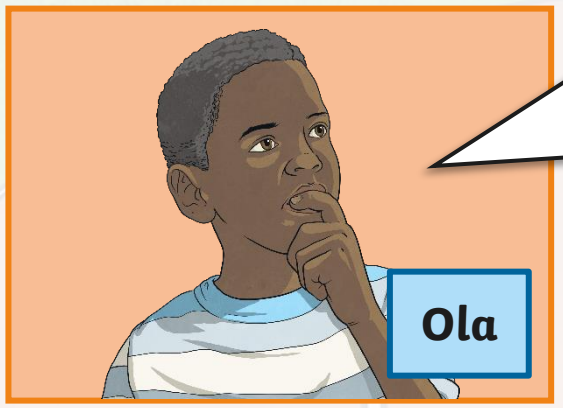
My line graph shows the temperatures of a mug of hot chocolate and a cup of tea that I made. The y-axis is labelled 'Temperature'. I made both drinks from boiling the water in a kettle. Then, I allowed them both to cool for 30 minutes.

Use Line Graphs to Solve Problems

Deepest



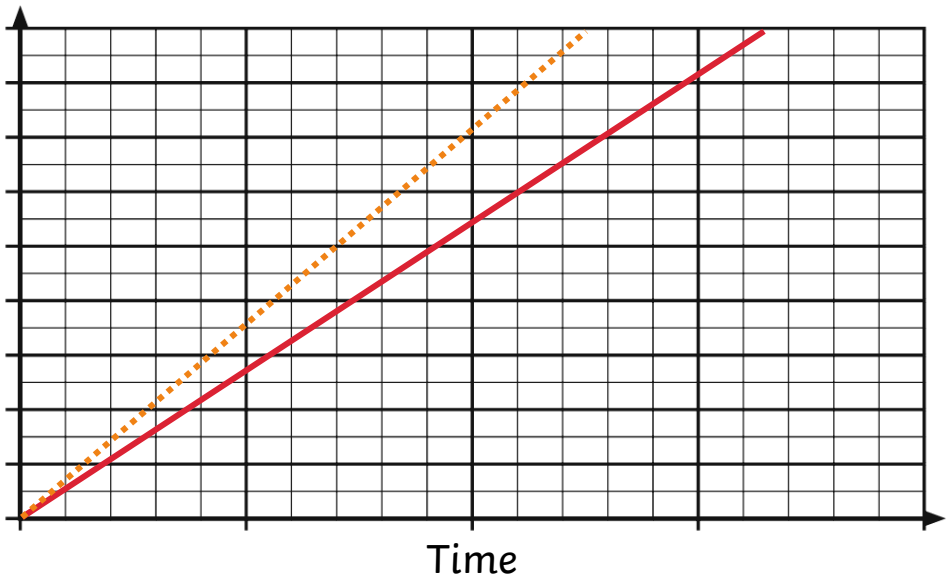
Ola's description could match this line graph as one of the lines shows that one of the balloons climbed more quickly and reached a greater height before the other one.



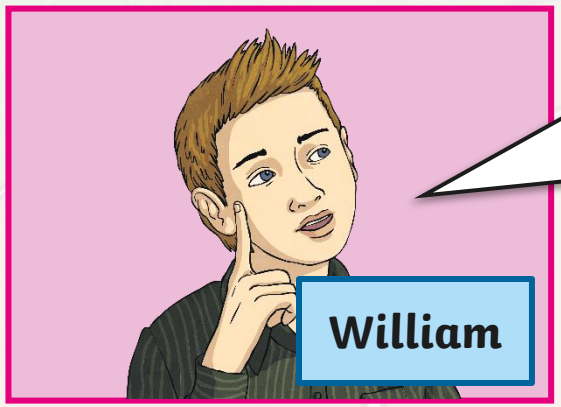
My line graph shows the journey of two hot-air balloons. The y-axis is labelled 'Height'.
Both balloons took off at the same time. One of the balloons climbed higher into the air more quickly than the other.

Use Line Graphs to Solve Problems

Deepest



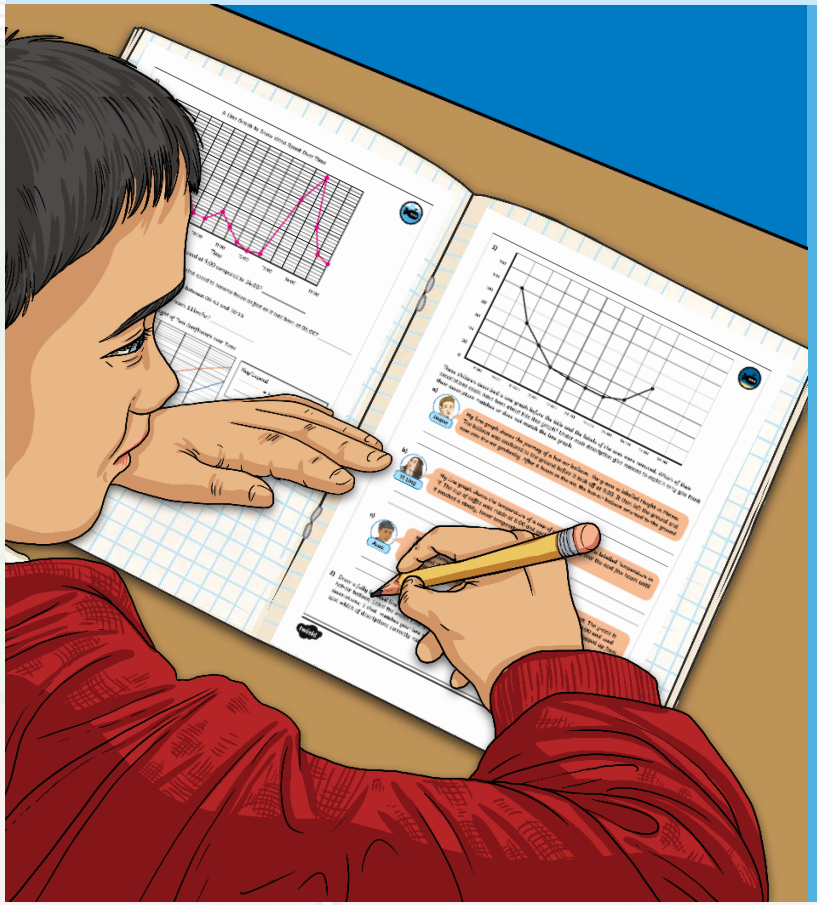
William's description does not match the line graph. If one of the cyclists had stopped for a rest, it would mean that, for that period of time, the distance would not have increased but the time would have. This would result in a flat line for a section of the graph.

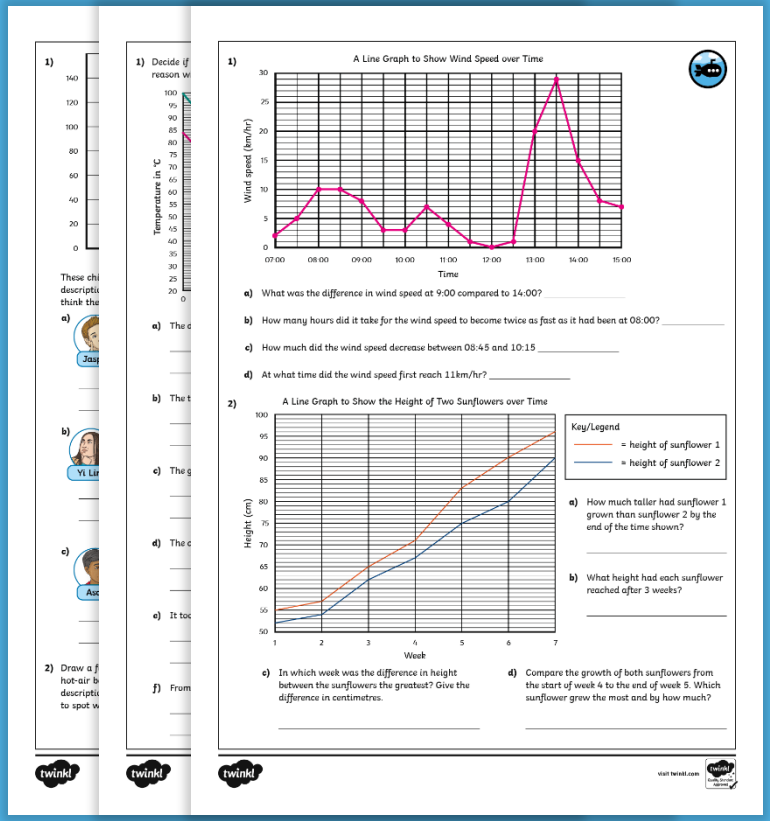


My line graph shows the race between two cyclists. The y-axis is labelled 'Distance'.
Both cyclists rode off at the same time.
One of the cyclists stopped for a five-minute rest.

Use Line Graphs to Solve Problems

Dive in by completing your own activity!



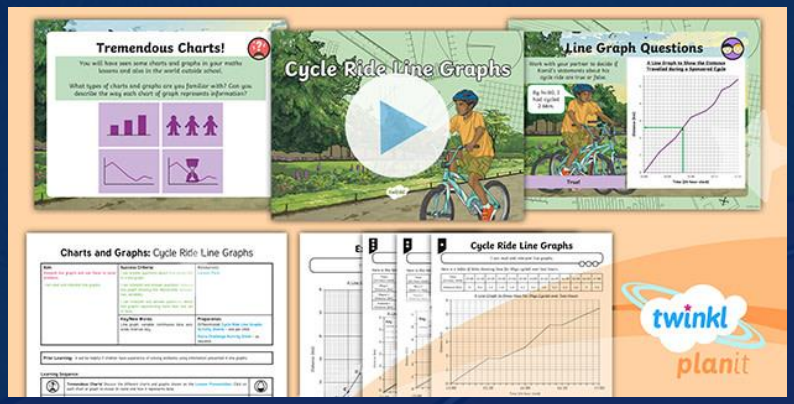


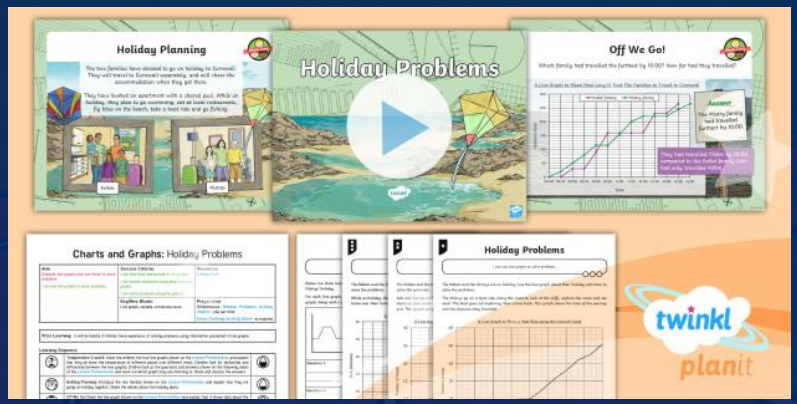
Need Planning to Complement this Resource?

National Curriculum Aim

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

For more planning resources to support this aim, click here.





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