

Diving into Mastery



Use Line Graphs to Solve Problems

twinkl

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.

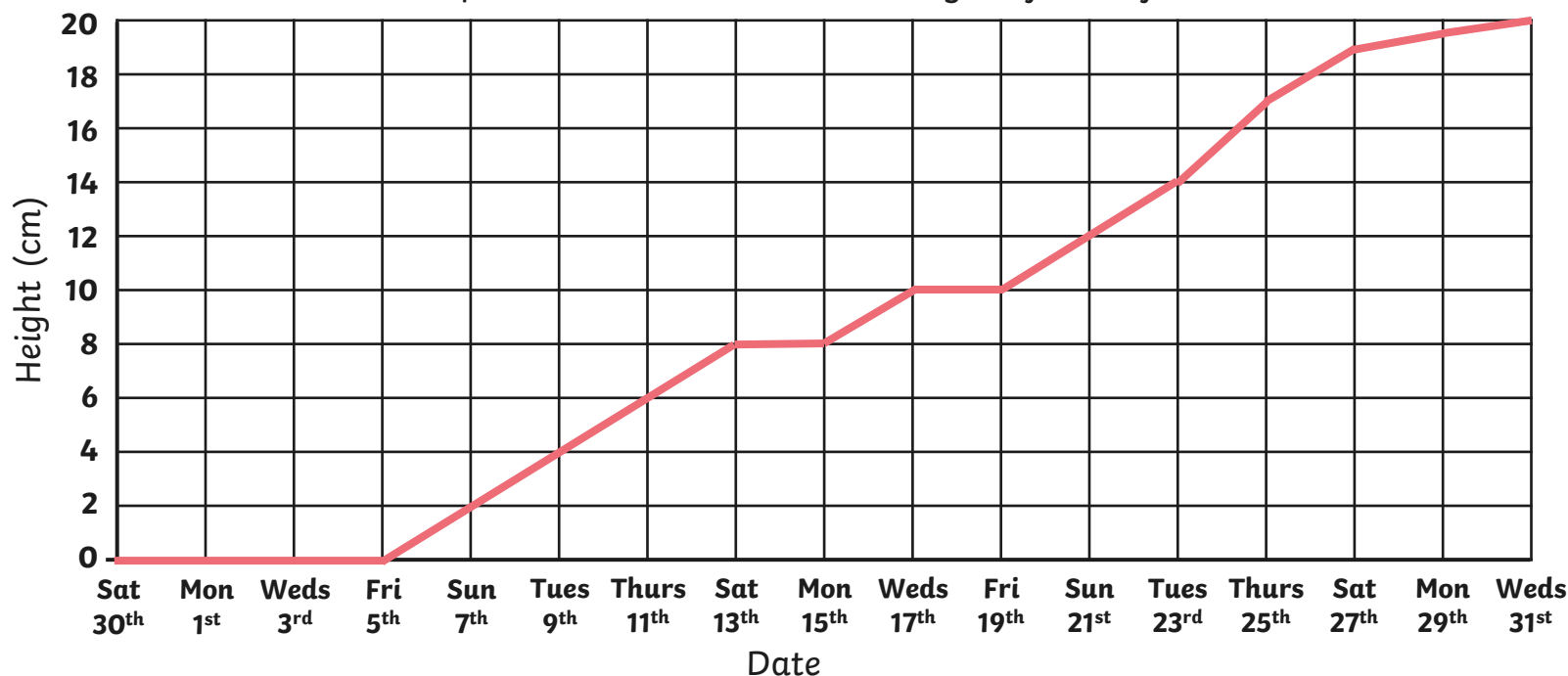
The background of the slide features a stylized illustration of a red running track with white lane markings, curving through a green grassy field. In the upper portion, rows of blue stadium seats are visible.

Aim

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



Line Graph to Show the Growth in Height of a Sunflower



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

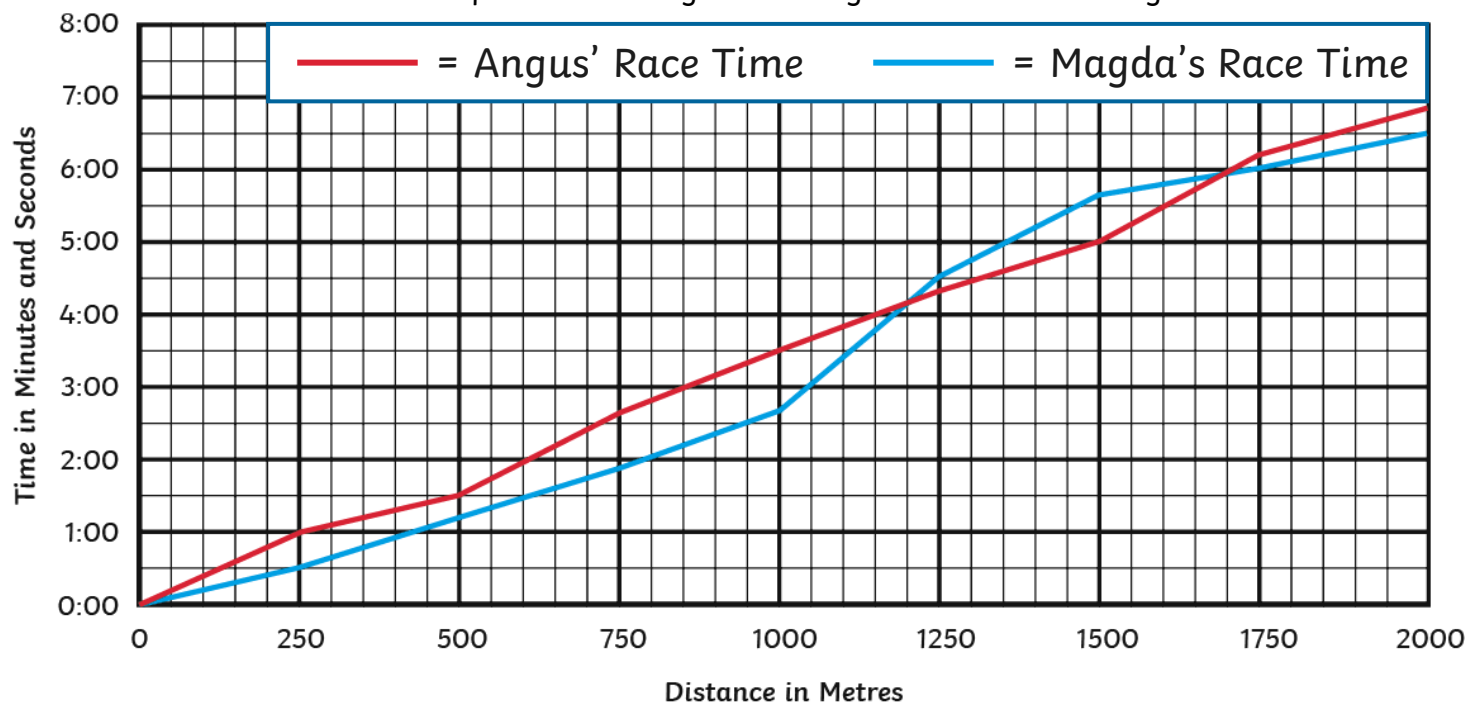


Use Line Graphs to Solve Problems

Deeper

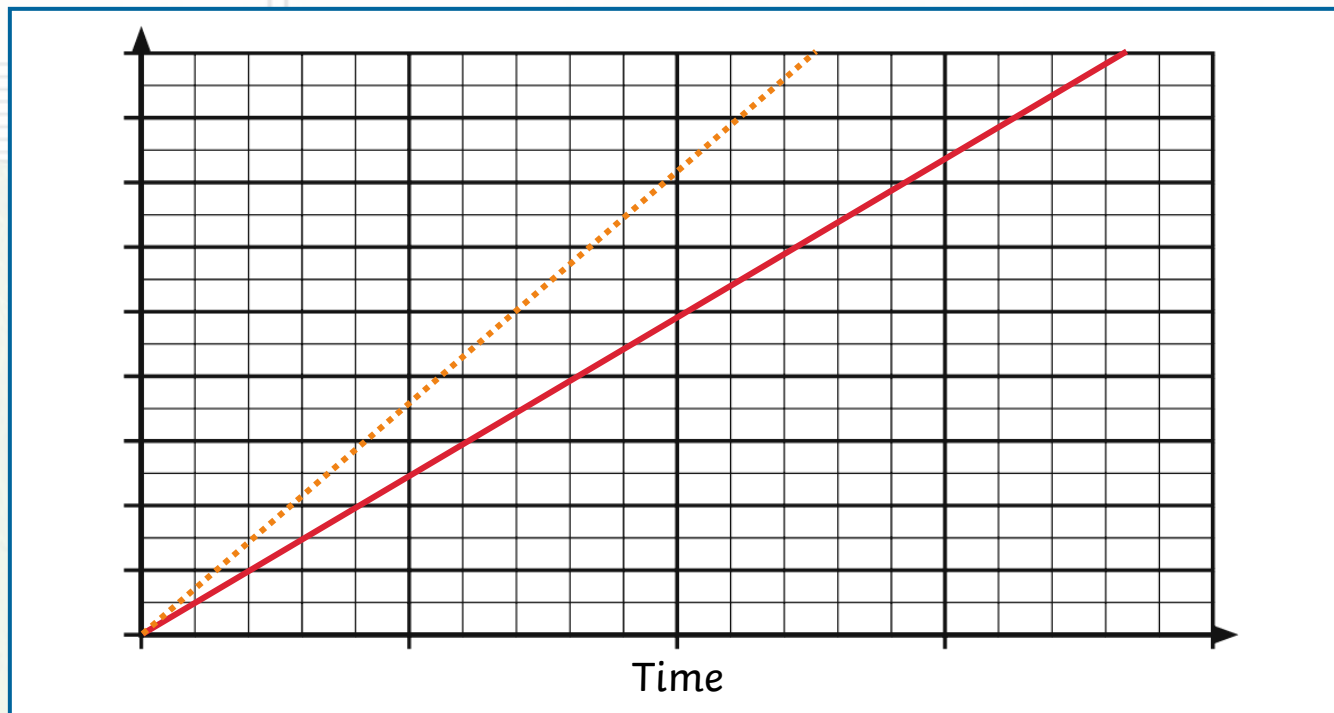


A Line Graph to Show Angus and Magda's 2000m Running Times



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.

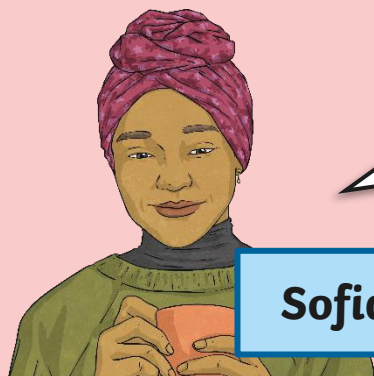
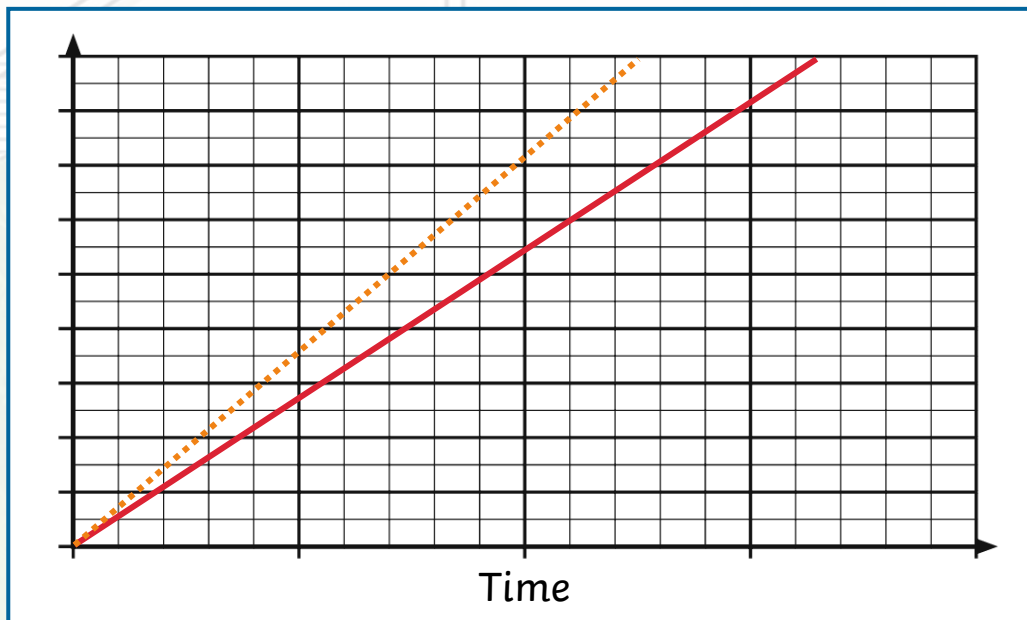


Some children described a line graph before the title and the label of the y-axis were removed.

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

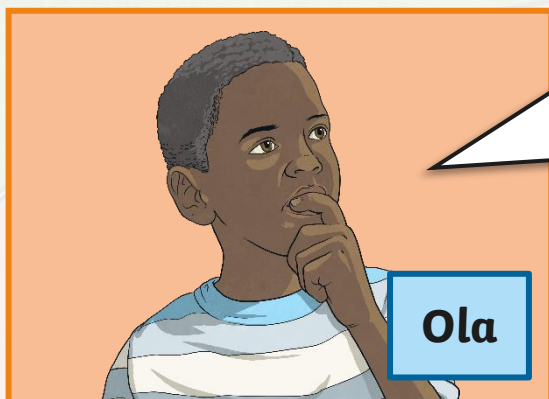
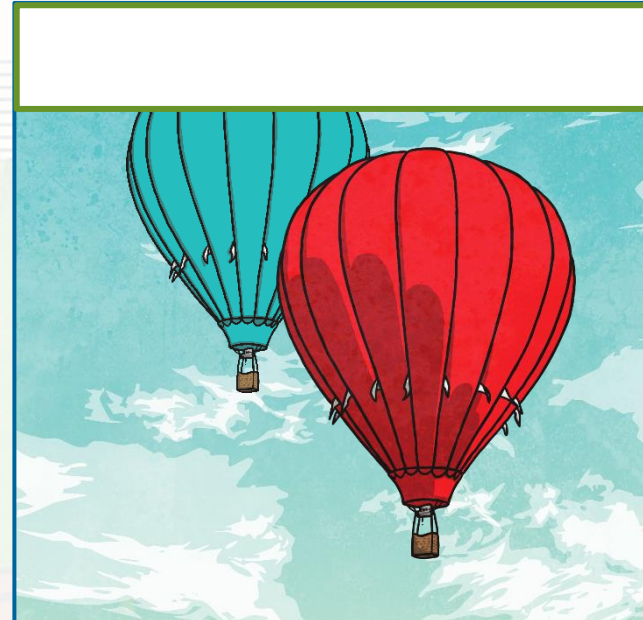
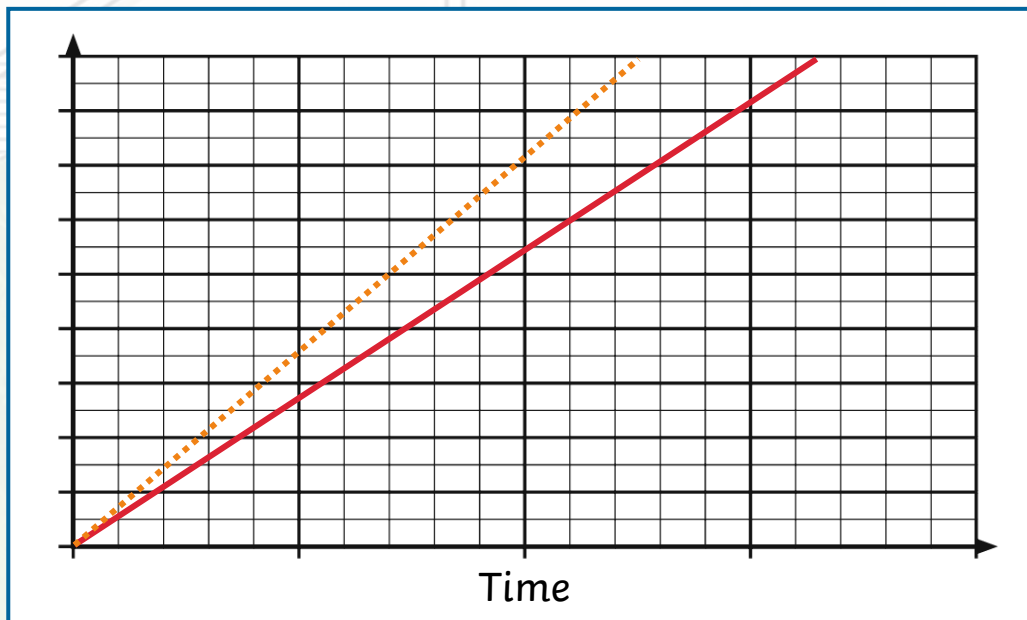
Use Line Graphs to Solve Problems

Deepest



Sofia

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.

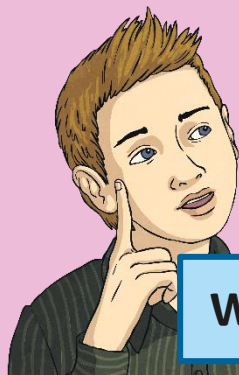
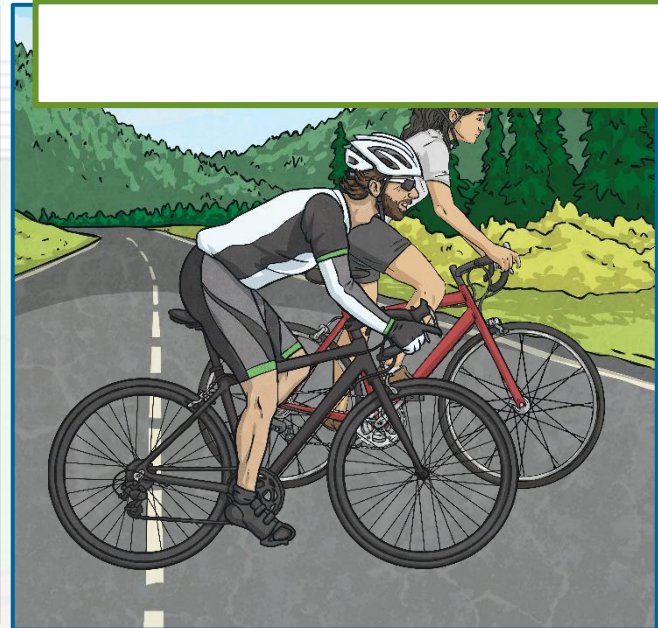
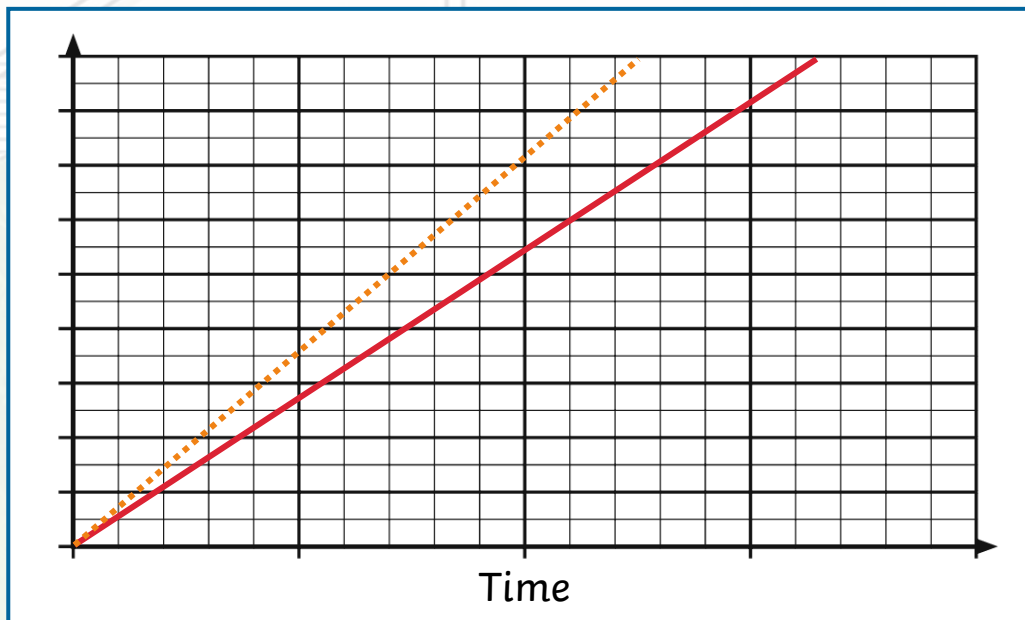


Ola

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

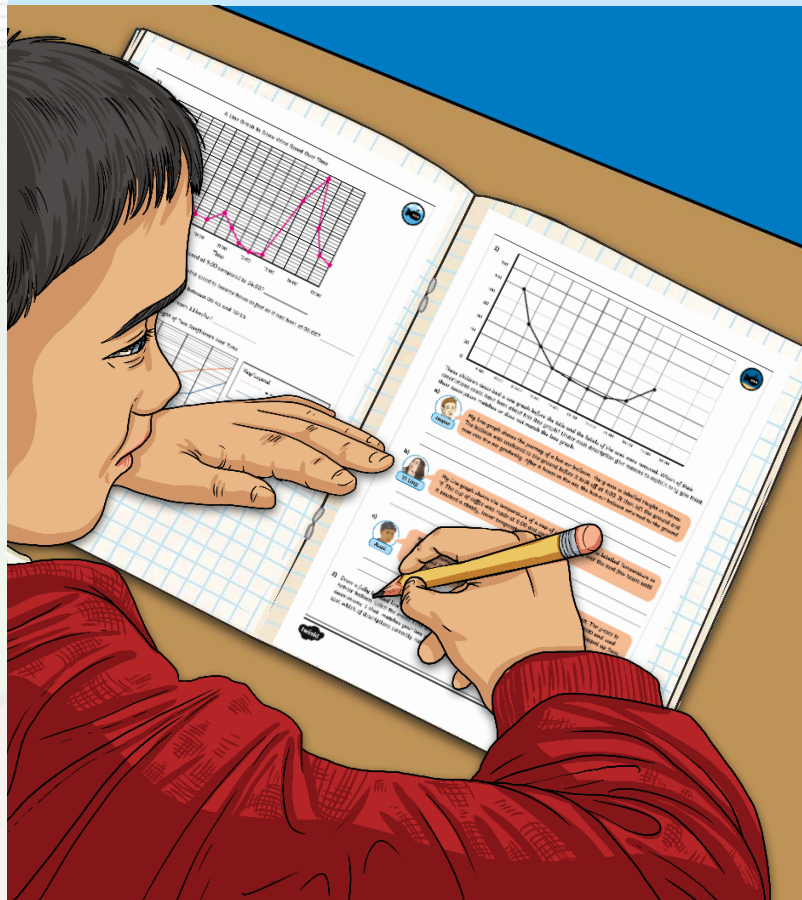


William

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!



1) Decide if reason W

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a) The c

b) The t

c) The g

d) The c

e) It to

2) Draw a j hot-air b descriptive to spot v

1) A Line Graph to Show Wind Speed over Time

Wind speed (km/hr)

Time

a) What was the difference in wind speed at 9:00 compared to 14:00?

b) How many hours did it take for the wind speed to become twice as fast as it had been at 08:00?

c) How much did the wind speed decrease between 08:45 and 10:15

d) At what time did the wind speed first reach 11 km/hr?

2) A Line Graph to Show the Height of Two Sunflowers over Time

Height (cm)

Week

Key/Legend

- = height of sunflower 1
- = height of sunflower 2

a) How much taller had sunflower 1 grown than sunflower 2 by the end of the time shown?

b) What height had each sunflower reached after 3 weeks?

c) In which week was the difference in height between the sunflowers the greatest? Give the difference in centimetres.

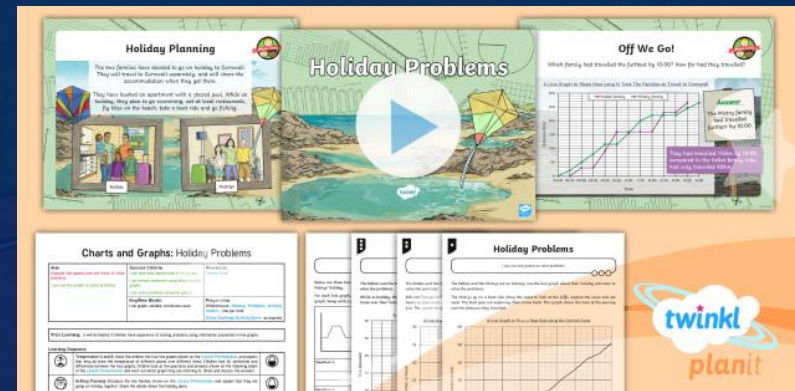
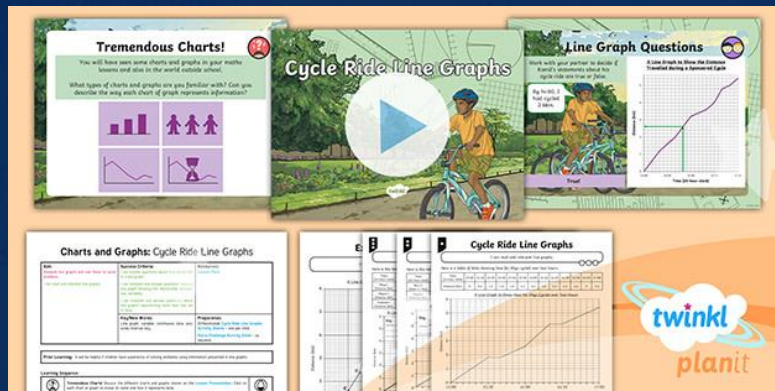
d) Compare the growth of both sunflowers from the start of week 4 to the end of week 5. Which sunflower grew the most and by how much?

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](#).



Twinkl PlanIt is our award-winning scheme of work with over 4000 resources.



