



What should I already know?

- How to solve comparison, sum and difference problems using information presented in a line graph
- How to complete, read and interpret information in tables, including timetables.

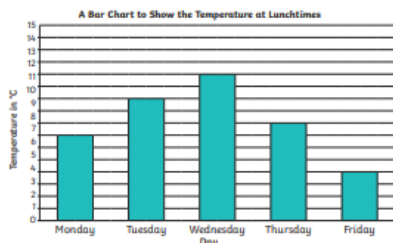
What will I know by the end of the unit?

- How to read and interpret line graphs
- How to draw line graphs
- How to use line graphs to solve problem
- Read and interpret pie charts
- How to interpret Pie charts with percentages
- How to draw pie charts
- How to calculate the mean and use the mean as an average for a set of data

Key Information/Diagrams

Bar Chart

A bar chart has a horizontal axis and a vertical axis. Bars show the data value of each category. There must be a gap between each bar. The scale of the bar chart is chosen based on the data range.



Mean Average

The mean is the average of a set of data.

To find the mean or average, add up all of the values to find the total. Divide the total by the number of values that you added together. This will give you the mean.

12	15	10	8	15
----	----	----	---	----

$$12 + 15 + 10 + 8 + 15 = 60$$

$$60 \div 5 = 12$$

The mean of this data is 12.

Frequency Table

Eye Colour	Tally	Frequency
brown	##	6
blue	##	8
green		3
grey		4
hazel	##	5

Tally marks are used to help count things. Each vertical line represents one unit. The fifth tally mark goes down across the first four to make it easier to count.

The frequency column is completed after all the data has been collected.

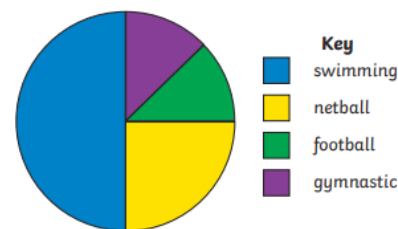


Pie Charts

Pie charts represent discrete data.

A circle is divided into segments, where each segment represents a data category. The size of each segment matches its proportion of the total amount.

A pie chart to show children's favourite sports



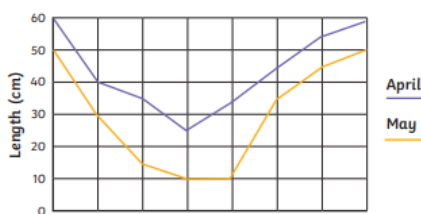
24 children were asked in total.
 Swimming = $\frac{1}{2}$ so $\frac{1}{2}$ of 24 = 12 children
 Netball = $\frac{1}{4}$ so $\frac{1}{4}$ of 24 = 6 children
 Football = $\frac{1}{8}$ so $\frac{1}{8}$ of 24 = 3 children
 Gymnastics = $\frac{1}{8}$ so $\frac{1}{8}$ of 24 = 3 children

Line Graph

Line graphs are used to show changes to a measurement over time.

Data shown in a line graph is continuous. Sets of points are joined together to make the line.

A line graph to show the length of shadows over time



Interpreting Data

Information can be shown in tables, charts or graphs.

Interpreting data simply means understanding or working out what is being shown by a table, graph or chart and being able to answer questions about that information.



--

Vocabulary

Bar Chart	Pie Chart	Line graph	Comparison
Pictogram	Discrete Data	sum	Interpret
Frequency Table	Continuous data	difference	Mean Average
Tally Chart			

Investigate/Homework tasks

- Homework will be set by your teacher using google classroom
- You should complete at least 30 minutes of maths tasks using the website and log in provided by your teacher. Please attend help sessions if you do not have access to the internet at home
- Additional work you could complete:
 - Find out more about the meaning of the vocabulary list using <http://www.amathsdictionaryforkids.com/>
- To challenge yourself: Answer the key questions to deepen your knowledge

Key Questions

<p>Where might you see a line graph used in real life?</p> <p>What is the relationship between the diameter and the radius? If you know one of these, how can you calculate the other?</p> <p>If you know 5 % of a number, how can you work out the whole number?</p> <p>If you know what 5 % is, what else do you know?</p>	<p>How many degrees are there around a point? How will this help us construct a pie chart?</p> <p>If the total frequency is _____, how will we work out the number of degrees representing each sector?</p> <p>If 180° represents 15 pupils. How many people took part in the survey? Explain why.</p> <p>Do you think calculating the mean age of the family is a good indicator of their actual age? Why? (<i>Explore why this isn't helpful</i>).</p> <p>When will the mean be useful in real life?</p>
--	--