




Year 4 statistics

Prior Knowledge

- Interpret and construct simple pictograms, tally charts, block diagrams and tables (Y2/3)
- Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity (Y2)
- Ask and answer questions about totalling and comparing categorical data (Y2)
- Interpret and present data using bar charts, pictograms and tables (Y3)
- Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables (Y3)

statistics		Working Towards	Within	Expected	Above
	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs				
	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs				
Highlights: _____					



Glossary

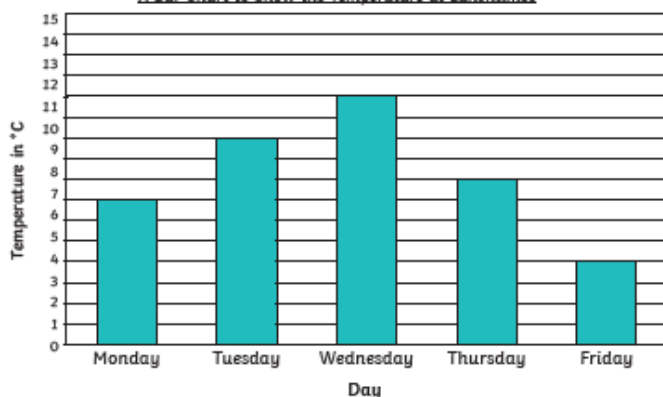
vocabulary	word class	definition
category	noun	a class or division of people or things regarded as having particular shared characteristics
quantity	noun	the amount or number of a material
comparing	verb	estimate, measure, or note the similarity or dissimilarity between
interpret	verb	explain the meaning of
discrete	adjective	<i>individually separate and distinct</i>
continuous	adjective	<i>of which the graph is a smooth unbroken curve</i>

Time Graph

Time graphs show the changing of data over time.

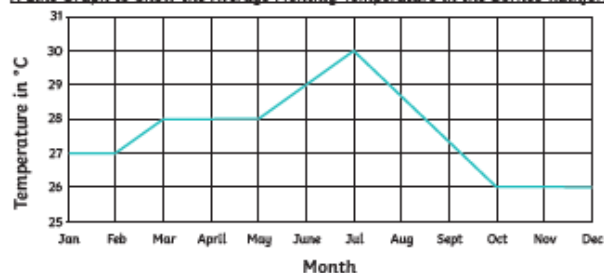
Here is a bar chart which shows the change in temperature over five days.

A Bar Chart to Show the Temperature at Lunchtimes

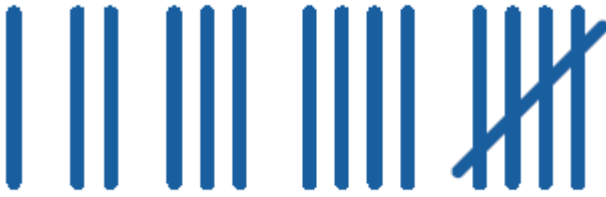


Here is a line graph which shows the change in temperature over twelve months.

A Line Graph to Show the Average Monthly Temperature in the Borneo Rainforest



Tally marks look like this:



The fifth mark goes across diagonally, like a gate.

Pictograms use pictures or symbols to represent data. Each picture or symbol can represent one item or more than one. The key shows what each symbol represents.

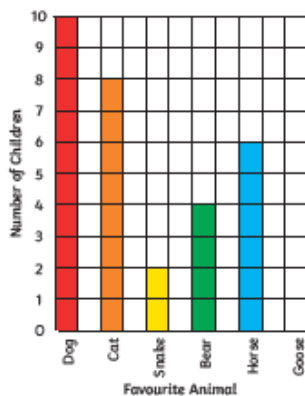
Bar Chart

A bar chart is used to clearly display results and information.

Types of items are shown on the x-axis, which is horizontal.

The number of items are shown on the y-axis, which is vertical.

One block represents one item. It is quicker to compare results using a block diagram than a table or tally chart.



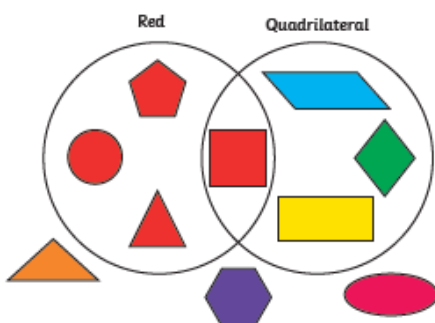
Venn Diagram

A Venn diagram is a diagram used to sort objects based on different criteria.

A Venn diagram is made up of two or more overlapping circles.

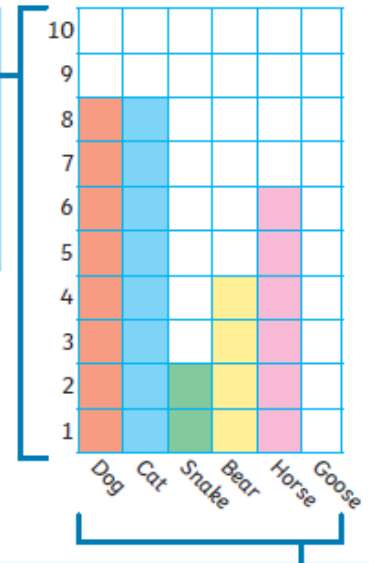
Objects placed in the section where the circles cross over meet both criteria.

Objects outside of the circles don't meet either set of criteria.



A block diagram represents data using blocks. One block represents one item.

In this block diagram, the y-axis, which is vertical, shows the number of items.



In this block diagram, the x-axis, which is horizontal, shows the types of items.

The blocks can go vertically or horizontally.

Carroll Diagram

A Carroll diagram is a table used for sorting objects based on whether they do or do not meet two given criteria.

Carroll diagrams were invented by Lewis Carroll, the author of 'Alice in Wonderland'.

	Red	Not Red
Quadrilateral		
Not a Quadrilateral		

Table

A table is used to record information and collect results.

The information can then be used to make pictograms or block diagrams to display results clearly.



A table needs to have headings to show what you are measuring or recording.

Favourite Animal	Number of Children
Dog	10
Cat	8
Snake	2
Bear	4
Horse	6
Goose	0



Future Learning

Year 6

-  Interpret and construct pie charts and line graphs and use these to solve problems
-  Calculate and interpret the mean as an average