Year 9 foundation topic 3

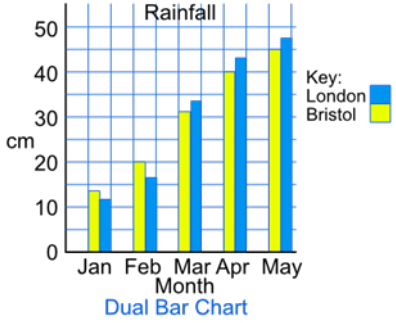
Tables & Charts

What careers would use these skills?

Statistician, economist, software engineer, scientist, business analyst, financial analyst, market research, actuary, cost estimator, medical trials.

Comparative bar charts

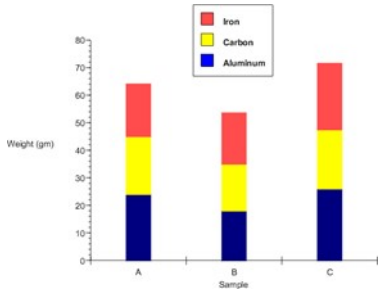
Comparative/Dual Bar Charts show data side by side.



Dual Bar Chart

Composite bar charts

Compound/Composite Bar Charts show data stacked on top of each other.



Stem and leaf

A data display that shows groups of data arranged by place value. Leaves should be in order. Must have a key.

STEM	LEAF
0	7
1	0 5 5 5 7 9
2	0 2 2 6 7
3	0 2 4 6 8

Key : 6 | 1 = 61 hours

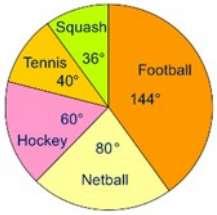
A		B
LEAF	STEM	LEAF
8 8 7 5	0	7
9 7 4 1 0	1	0 5 5 5 7 9
2 2 2 1	2	0 2 2 6 7
8 6 4 2 0	3	0 2 4 6 8

Key : 6 | 1 = 61 hours

A back to back stem and leaf compares two sets of data.

Pie charts

Used for showing how data breaks down into its constituent parts. When drawing a pie chart, divide 360° by the total frequency. This will tell you how many degrees to use for the frequency of each category.



Scatter graph and correlation

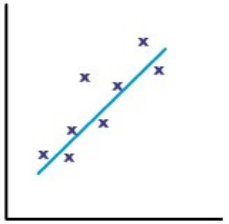
A graph in which values of two variables are plotted along two axes to compare them and see if there is any connection between them.

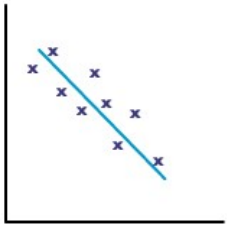
Correlation between two sets of data means they are connected in some way.

Positive correlation: as one value increases, the other value increases.

Negative correlation: as one value increases, the other value decreases.

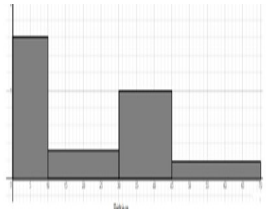
Drawing a line of best fit on the data can help to make predictions.





Histograms

A visual way to display frequency data using bars, the bars can be unequal in width. Histograms show frequency density on the y-axis, not frequency. The area of the bar is proportional to the frequency of that class interval.



Height(cm)	Frequency	Frequency Density (FD)
$0 < h \leq 10$	8	$8 \div 5 = 1.6$
$10 < h \leq 30$	6	$6 \div 20 = 0.3$
$30 < h \leq 45$	15	$15 \div 15 = 1$
$45 < h \leq 70$	5	$5 \div 25 = 0.2$

FD = frequency / class width

Two way tables

A table that organises data around two categories. Fill out the information step by step using the information given. Make sure all the totals add up for all columns and rows.

	Left Handed	Right Handed	Total
Boys	10	*48*	58
Girls	*6*	*36*	*42*
Total	*16*	84	100

Time series

A line graph that uses points connected by straight lines to show how data changes in values.

This can be used for time series data, which is a series of data points spaced over uniform time intervals in time order .