

SPEAK

like a scientist

Observation and measurement

Average – A number that shows a typical value in a set of data – can be mean, median or mode.

Mean – An average calculated by adding together all the values in a data set and dividing them by the number of values in the set.

Median – An average calculated by selecting the middle value in a data set.

Mode – An average calculated by selecting the number that appears most often in the data set.

Range – The difference between the biggest and smallest numbers.

Quantitative data – Data that is described in numbers.

Qualitative data – Data that is described in words.

Continuous variable – A variable that has values that can be any number.

Discrete variable – A variable that can only have whole number values.

Categoric variable – A variable that has values that are words rather than numbers.

Line graph – A way of presenting results when there are two variables that are numbers - at least one variable should be continuous.

Line of best fit – A smooth line on a graph that goes through the middle of as many points as possible. Around half of any points that aren't on the line are above it and the other half below it.

Bar chart – A way of presenting data where the lengths of the bars represent the values of the variables. Used when one of the variables fits into discrete categories.

Pie chart – A way of presenting data in which a circle is split into sectors to show the proportions of a total made up of different parts. Used when one variable is discrete or categoric data.

Concluding and evaluating

Conclusion – An explanation of how or why something happens.

Evaluate – Consider the quality of the data and suggest improvements to the method.

Valid – An experiment is valid when it measures what it is expected to measure.

Bias – A preference for or against an idea or data being affected by errors in method or equipment.

