LS Science Investigation Vocabulary

Word	Definition
Accuracy	How close your measurements are to the true value.
Anomaly	A measurement that's obviously wrong because it doesn't fit the pattern. Ideally you should repeat this investigation to get a replacement measurement, but if you can't, just circle it on the graph and leave it out of any calculations.
Average	Add all the values in a category together and divide by the number of numbers. Also called a **mean.**
Axis	The horizontal (x axis) and vertical (y axis) of a graph. These should always be labelled with the variable and the units.
Categorical variable	A variable that's organised into groups or types that don't really have a numerical value.
Conclusion	What you think the results show, what you think happened and why it happened.
Continuous variable	A variable that has any numerical value, not just whole numbers, but decimals as well.
Control variable	A variable that is kept the same all the way through so that the only thing affecting the dependent variable is the independent variable.
Dependent variable	The thing you measure in an investigation, that changes *because* the independent variable has changed. It's always put on the y axis of a graph and usually the values don't go up in equal amounts.
Discrete variable	A variable that can only have whole number values, not decimals or fractions.
Evaluation	How well you think you did the experiment, based on how close your data points were to each other.
Independent variable	The thing that you change – you will choose the values, and you expect that because of this changing, the dependent variable will also change. It is always put on the x axis of the graph and the far-left column of a table. You can often spot it in a table because it goes up in regular amounts.
Line of best fit	A straight line or a smooth curve that shows the relationship between the dependent and independent variables on a graph. It doesn't have to touch all the points but goes through the middle of them – try to keep an equal number of points on either side of the line.
Precision	The number of decimal places to which you can take a measurement.
Prediction	What you think will happen – 'I think as my independent variable increases; my dependent variable will increase'.

Word	**Definition**
Range	The highest and lowest results for a set of repeats.
Relationship	The link between independent and dependent variables. What happens when the independent variable increases? Does the dependent variable increase or decrease? Is it a linear relationship (straight line) or a curving relationship?
Reliable	An investigation is reliable if the results have been repeated many times and all come out close together.
Repeatable	Same investigator can get the same results using same equipment and method.
Repeats	Taking more than one measurement for the same value of an independent variable – you should then calculate a mean.
Reproducible	If other investigators can get the same result (trend or specific) using same method and equipment.
Scale	The values shown on a graph or an instrument. A thermometer has a scale marked in increments of $1^{o}C$, a graph may have a scale marked in increments of $5cm^{3}$, depending on what is needed. Always choose the biggest scale that will fit onto your graph fully.
Sensitivity	The change an instrument can detect. A balance that can detect a difference of 0.1g is more sensitive than one that can only detect a change of 1g.
Unit	A measure of quantity. The unit of time is the second (s), the unit of distance can be millimetre (mm) or kilometre (km), depending on what you need. You should include units in the heading of a table and the axes of a graph.
Valid	An experiment is valid if it is focused on gathering the right data. This usually means keeping any variables except for the independent and the dependent constant throughout the whole experiment.

