

## KS3 Science Progression Grid – Student speak

Science	Experimental Skills and Investigation	Results	Graphs	Calculation	Application
Beginning	I can say what I recorded (dependent) or what I changed (independent) in my experiment.	I can add what I measured (dependant) or what I changed (independent) to a table and add the unit that they are measured in.	I can place the plots on a scatter graph when the axes are drawn for me	When I'm told how to carry out a calculation, such as a mean, I can use my calculator to get an answer. I can state how to convert between simple units such as cm and m.	I can answer questions which ask me to add/ label/ give/state
Developing	I can say what I recorded (dependant) and what I changed (independent) in my experiment. I can say which piece of equipment I used to measure one of the variables.	I can draw a results table and put what I recorded (dependant) and what I changed (independent) in the headings along with the unit that they are measured in.	I can accurately place the plots on a scatter graph when the axes are drawn for me	When I'm told how to complete a calculation, such as a mean, I can use my calculator to get the correct answer. I know how to convert between simple units such as cm and m.	I can answer questions which ask me to complete/ identify/ describe
Secure	I can identify the dependent, independent and at least one control variable. I can name the measuring/ specialist equipment I used to measure each variable	I can draw a results table and put the dependant and independent variables with their units in the headings. My table allows me to collect all of my data and I record it all in the correct units.	I can draw and plot a scatter graph and add a line/ curve of best fit, there might be some errors in my scales or some of my data might not fit on the graph but the trend can still be seen.	I know how to calculate a mean to get the correct answer. I can use and re-arrange a formula given to me when all of the values are in the correct units to get the correct answer. I can interpret the data in a table to state the trend or state a conclusion.	I can answer questions which ask me to compare/ describe/ draw/ justify/give reasons/ plot
Confident	I can identify the dependant, independent and all of the control variables using scientific terms/ language I can name the measuring/ specialist equipment used to measure each variable.	I can draw a results table which I can use to collect all of my data and has space for any data processing that I may need to do. I use scientific terms/ language for my headings and ensure that they all have a unit.	I can draw and plot a scatter graph and add a line/curve of best fit which shows the trend, there are no errors in my scales and all of my data can be plotted on the graph.	When I calculate a mean I take anomalies into account. I can use and re-arrange a formula given to me when some of the values are not in the correct units to get an answer which I try to round. I can use data to support the trend or conclusion in a data set.	I can answer questions which ask me to estimate/ explain/ suggest
Exceptional	I can describe my experiment in a clear, logical format and in enough detail so that someone else could follow it to collect reproducible data.	I can draw a results table which I can use to collect all of my data and has space for any data processing that I may need to do I ensure all of my data is rounded to a consistent level of precision. I use scientific terms/ language for my headings and ensure that they all have a unit.	I can plot an accurate, fully labelled, scatter graph, and with guidance I can make sure that the line/curve of best fit is in the most appropriate place	I can use and re-arrange a formula given to me when some of the values are not in the correct units to get the correct answer. I ensure that when I carry out a calculation my value is rounded correctly, and if appropriate I give my answer in standard form.	I can answer questions which ask me to predict/ sketch/ explain/ compare and contrast/ suggest
Beyond	I can explain why each of my control variables must be kept the same in order to be able to collect reproducible data.	I can draw a results table which I can use to collect all of my data and has space for any data processing that I may need to do I ensure all of my data is rounded to a consistent and appropriate level of precision. I use scientific terms/ language for my headings and ensure that they all have a unit.	Independently, I can add range bars to an appropriate line/curve of best fit on an accurately plotted fully labelled scatter graph.	I can identify the formula needed to complete a calculation and use and re-arrange it to obtain the correct value, converting between units if necessary. I ensure that when I carry out a calculation my value is given to an appropriate level of precision and if appropriate I give my answer in standard form.	I can answer questions which ask me to deduce/ devise/ discuss/ evaluate