



Valentines High School

KS4 Y9 +Y10 Combined Science Academic Learning Journey

Y9 Skills

- Identify the variables from information about an investigation
- Identify a pattern in data from a results table or bar chart
- Express a linear relationship between variables
- Comment on whether your findings fit with known scientific explanations
- Research other possible scientific explanations for your conclusion
- Suggest ways to reduce measurement errors
- Suggest other possible conclusions that could be drawn from your data
- Quote any secondary data you have which led to the same conclusion
- Mark out an equal scale showing what each square of graph paper represents
- Draw a straight line or a curve of best fit through the points

Y9 Knowledge

- Cell Biology
- Organisation
- Infection and response
- Bioenergetics
- Atomic structure and the periodic table
- Bonding, structure, and the properties of matter
- Quantitative chemistry
- Chemical changes
- Energy changes



#### Y10 Skills

- Analysis of results
- Interpreting observations and other data, including identifying patterns and trends
- Presenting reasoned explanations including relating data to hypotheses
- Evaluation of data
- Being objective, evaluating data in terms of accuracy, precision, repeatability and reproducibility
- Conclusion of patterns obtained
- Representing distributions of results and make estimations of uncertainty
- Display of correct data
- Presenting observations and other data using appropriate methods
- Translating data from one form to another

#### Y10 Knowledge

- Energy
- Electricity
- Particle model of matter
- Atomic structure
- Homeostasis and response
- Inheritance, variation and evolution
- Ecology
- The rate and extent of chemical change
- Organic chemistry
- Chemical analysis
- Chemistry of the atmosphere
- Using resources