Science Key Performance Indicators: KS3	
Excelling	Students will be able to use a range of scientific techniques with confidence and make judgements about the best technique to be used to produce the best quality data. They will be highly critical of the data that an investigative strategy is likely to produce and will amend their strategy accordingly to ultimately produce reliable data. They will be able to consider issues of accuracy and precision in their choices of technique and their analysis of data. Students will be able to describe with confidence the extent to which results support a prediction, and evaluate the success of an investigation. Students will be able to explain observations using more complex scientific ideas, analyse similarities and differences in data from different sources and use competing ideas to develop complex models. They will be able to apply complex ideas in a variety of unfamiliar situations and suggest and justify outcomes. Students are also competent at evaluating in a variety of scientific contexts.
Secure	Students will be able to use a range of scientific techniques with confidence and make judgements about the best technique to produce the best quality data. They will be critical of an investigative strategy and will recognise how to amend a strategy to produce reliable data. They will be able to consider issues of accuracy and precision in their analysis of data. Students will be able to describe with confidence the extent to which results support a prediction. Students will be able to explain observations using more complex scientific ideas and incorporate ideas from more than one source into more complex models. They will be able to predict outcomes in a variety of unfamiliar situations, using models to justify their ideas.
Developing	Students will be able to use a range of scientific techniques with confidence and will be able to select an appropriate technique to produce useful data. They will be critical of the data they produce and will be able to explain whether or not a set of data or an investigative strategy will produce reliable data. They will be able to suggest improvements to produce better quality data. Students will be able to describe with confidence whether results support or refute a simple prediction and take into account

	anomalous results. Students will be able to explain their observations using key scientific ideas and make a judgement about the extent to which data supports a conclusion. Students will be able to recall scientific ideas and apply these in new situations. They will begin to be able to generalise and use simple models to explain ideas and observations.
Foundation	Students will be able to use simple practical scientific techniques to investigate a prediction, produce results and be able to say whether the results support or refute the prediction. Students will have a basic understanding of the key ideas of Science and be able to use this with some success to explain their observations. They will be able to spot simple patterns in data and recognise obvious anomalies. Students will be able to recall important scientific facts such as key practical equipment, units for measurements, common chemical symbols or parts of cells.

Students are assessed across broad themes of learning spanning the 3 strands of science. These core themes are referred to as 'Big Ideas' and are listed below:

PHYSICS	CHEMISTRY	BIOLOGY
Forces	Matter	Organisms
Electromagnets	Reactions	Ecosystems
Energy	Earth	Genes
Waves		

An individual set of criteria for each topic is available for students.