Upper Key Stage Two Working Scientifically Overview	
Drawing Conclusions, Noticing Patterns and Presenting Findings *Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations.* Children can: a notice patterns; b draw conclusions based on their data and observations; c use their scientific knowledge and understanding to explain their findings; d read, spell and pronounce scientific vocabulary correctly; e identify patterns that might be found in the natural environment; f look for different causal relationships in their data; g discuss the degree of trust they can have in a set of results; h independently report and present their conclusions to others in oral and written forms.	**Identifying, Classifying, Recording and Presenting Data** *Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.* Children can: a independently group, classify and describe living things and materials; b use and develop keys and other information records to identify, classify and describe living things and materials; c decide how to record data from a choice of familiar approaches; d record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar graphs and line graphs.
Observing and Measuring Changes *Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.* Children can: a choose the most appropriate equipment to make measurements and explain how to use it accurately; b take measurements using a range of scientific equipment with increasing accuracy and precision; c make careful and focused observations; d know the importance of taking repeat readings and take repeat readings where appropriate.	**Using Scientific Evidence and Secondary Sources of Information** *Identifying scientific evidence that has been used to support or refute ideas or arguments.* Children can: a use primary and secondary sources evidence to justify ideas; b identify evidence that refutes or supports their ideas; c recognise where secondary sources will be most useful to research ideas and begin to separate opinion from fact; d use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas; e talk about how scientific ideas have developed over time.

Asking Questions and Carrying Out Fair and Comparative Tests

Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Using test results to make predictions to set up further comparative and fair tests.

Children can:
a with growing independence, raise their own relevant questions about the world around them in response to a range of scientific experiences;
b with increasing independence, make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions;
c explore and talk about their ideas, raising different kinds of scientific questions;
d ask their own questions about scientific phenomena;
e select and plan the most appropriate type of scientific enquiry to use to answer scientific questions;
f make their own decisions about what observations to make, what measurements to use and how long to make them for, and whether to repeat them;
g plan, set up and carry out comparative and fair tests to answer questions, including recognising and controlling variables where necessary;
h use their test results to identify when further tests and observations may be needed;
i use test results to make predictions for further tests.