

Skills Progression in Science - Working Scientifically

Year 3	Year 4	Year 5	Year 6
Using ideas to predict and hypothesise			
<ul style="list-style-type: none"> Children can ask questions linked to a wider topic. Children can make predictions based on their prior knowledge and experience. Children can begin to use scientific vocabulary to explain their prediction. 	<ul style="list-style-type: none"> Children can ask a range of questions linked to a topic. Children can explain their prediction using relevant vocabulary and experiences. Children can suggest new questions linked to previous investigations. 	<ul style="list-style-type: none"> Children can ask a range of questions and begin to identify the type of enquiry that will help to answer the question. Children can draw upon existing scientific knowledge and experiences to make and explain their prediction. 	<ul style="list-style-type: none"> Children can ask a range of questions, recognising that some can be answered through research and others cannot. Children can use investigation results, scientific knowledge and experiences to ask further questions and explain predictions.
Planning experiments			
<ul style="list-style-type: none"> Children can begin to decide what to change and what to measure/observe using a planning mindmap. Children can decide how often to take a measurement and begin to use a range of scientific equipment with support. Children can make careful observations. Children can use a table to record data. 	<ul style="list-style-type: none"> Children can use a planning mindmap to plan a fair enquiry with some support, deciding what to change, measure/observe and keep the same. Children can measure accurately using standard units, using a range of scientific equipment. Children can make systematic and careful observations. Children can prepare own tables to record data. 	<ul style="list-style-type: none"> Children can plan different types of fair scientific enquiries to answer questions, recognising and controlling variables where necessary. Children can take measurements using a range of scientific equipment, with increasing accuracy and precision and recognise when it is appropriate/necessary to take repeat measurements. Children can begin to record data and results of increasing complexity. 	<ul style="list-style-type: none"> Children can plan different types of fair scientific enquiries to answer questions, explaining which variables to control. Children can choose suitable sources to use when researching. Children can take measurements using a range of scientific equipment, with increasing accuracy and precision and recognise when it is appropriate/necessary to take repeat measurements. Children can record data and results of increasing complexity, selecting appropriate table/graph layouts.
Conclusions			
<ul style="list-style-type: none"> Children can make relevant observations linked to their question. Children can present their findings verbally and using labelled diagrams. Children can draw simple conclusions from an investigation. Children can begin to spot patterns, comparing up to two variables. Children can begin to suggest practical improvements to the investigation. 	<ul style="list-style-type: none"> Children can compare objects based on a range of observable features. Children can use simple scientific language and evidence to answer their questions. Children can present data in a variety of ways including diagrams, bar charts and tables. Children can draw simple conclusions from an investigation and explain patterns. Children can begin to suggest limitations to an investigation. 	<ul style="list-style-type: none"> Children can answer their questions and draw conclusions using appropriate scientific language. Children can present data using scientific diagrams and labels, classification keys, tables scatter graphs and bar and line graphs. Children can use their findings to suggest new questions. 	<ul style="list-style-type: none"> Children can answer their questions and draw conclusions using scientific evidence gained from a range of sources. Children can present data using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs. Children can explain their degree of trust in their results using scientific evidence to support ideas.