



Skill	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Questioning	ask simple questions about the world around us respond to questions about how to find things out	ask how, why, what will happen if...	ask relevant questions linked to the topic ask a wider variety of questions				
Observing, measuring, pattern seeking	talk about what is the same and different observe more than 1 feature observe a change use non-standard measures	make observations and comparisons using their senses observe and describe changes over time say what I am looking for and what I am measuring begin to notice patterns talk about what they see begin to use standard measurements realise that their observations have a purpose to answer the original question use simple equipment	plan what measurements to take observe, describe and explain changes over time notice patterns explain how their observations link to their investigation use equipment effectively to support investigation use simple equipment to measure volume, time, distance use standard measurements				
Predicting	say what they think what might happen Example "I think the ice will turn into water"	think about what might happen before deciding what to do predict what might happen based on personal experiences "I think the tissue paper is not waterproof because it rips easily."	make a simple prediction about what will happen in an investigation with a good reason "I think the toast can not turn back into bread because you it is now cooked."	Make a prediction using because based on what I will be able to observe during the experiment. Example "I think the egg in the cola will crack because there is lots of sugar in cola."	Make a prediction using because and accurate scientific evidence learned from the topic. Example "I predict that the cotton wool will offer the best sound proofing because it is the thickest material and will block the soundwaves from reaching my ears."	Make a prediction using because and accurate scientific evidence learned from current and previous topics. Example "I predict that the paper clips will be easiest to remove from the mixture using a magnet, because I know they are made of metal and therefore magnetic. I predict the salt will need to be dissolved and the water filtered out of the mixture."	Make a prediction using because and accurate scientific evidence. I will also be able to use my knowledge to predict something that will not happen, supporting it with previously learnt science. Example: "I predict that the person who sits still will have a steady heart rate. I predict that the person who does 5 minutes of exercise will not have low heart rate, as I know exercise will increase the requirement of blood and oxygen to be pumped quickly around the body by the heart."
Investigating	make suggestions about what to do carry out given instructions show an awareness of treating things in the same way make own suggestions about how to find the answer	make their own suggestions about how to find things out suggest how to collect evidence to answer questions and begin to appreciate why this is important talk about what they want to find out talk about how they will find the answer plan what they want to do and record show an awareness of fair testing	suggest own ideas for an investigation sequence ideas in a sensible order talk about what information they need to gather	undertake an experiment keeping everything the same apart from what I am investigating.	create a control within my experiment to ensure a fair test, whilst testing one thing.	create a fair test and test more than one variable.	independently create a fair test, explaining which variables need to be controlled and why.



	talk about how they will find the answer	use simple tests to find information recognise hazards					
Recording and reporting	speech drawings labelled pictures lists teacher models recording in a table	talk about what they have seen/done labelled drawings drawings lists pictograms use a 2 column table to record results use measurements in tables with support	make own simple table of results use measurements in tables labelled drawings lists transfer information from a table to a bar chart explanation statements	use standard measurement to observe changes and record it. create simple scientific diagrams with labeling. use a bar graph to record my results.	accurately use standard measurements to record a series of observations. create scientific diagrams with appropriate scientific labeling. record data onto a line graph with given intervals.	take accurate measurements, beginning to repeat them to support with precision. begin to identify anomalies in my results. select appropriate intervals for lines and bar graphs.	take accurate and precise measurements, repeating them when needed. recognise anomalies in my measurements. choose how to best represent my results according to the type of data (e.g continuous or discrete).
Identifying, grouping and classifying	use appropriate Scientific vocabulary sort using given criteria begin to sort using own criteria sort and group using a Venn diagram with support	use appropriate Scientific vocabulary sort, group and classify using their own criteria use Venn diagrams to record sorting explain how they have sorted the objects	use appropriate Scientific vocabulary sort, group and classify using their own criteria using Carroll diagrams explain why an object belongs to a particular set				
Conclusions	describe and show what they did say what happened respond to questions from the adult	make comparisons between their results and observations rank results in order say if their prediction about what might happen was correct compare what did happen with what they thought would happen and give a simple reason suggest how an investigation could be improved with support	explain what they have found out give a cause and effect explanation begin to identify simple patterns explain why their prediction was/wasn't correct compare what did happen with what they thought would happen and give an explanation suggest how the investigation could be improved	explain simple patterns in my results.	use scientific knowledge to explain the patterns.	explain causal relationships from my results. begin to comment on the reliability of my results.	use scientific ideas to explain my results, accounting for any anomalies refute or agree with scientific arguments using evidence.
Research	knows that information can be gained from different sources	searches for information with support using internet, 'experts', books	searches for information independently using internet, 'experts', books				
Understanding	know that an activity relates to everyday life begin to recognise when things might be dangerous	appreciates that Science can be useful in our daily lives can describe, in familiar contexts, how science helps people do things can express personal feelings or opinions about scientific or technological phenomena beginning to understand that Science can sometimes be dangerous begin to identify potential hazards	can name some everyday things that Science has helped to develop can identify aspects of our lives, or of the work that people do, which are based on scientific ideas identify aspects of science used within particular jobs or roles identifies how Science can sometimes be dangerous identify potential hazards and overcome them with support				



Shirley Schools

Science Working Scientifically
(Disciplinary knowledge)

Long Term Skill Progression



Evaluating				explain why keeping everything the same has made my results accurate	beginning to describe how accurate my results are, comparing them to the control. can discuss other factors that could be controlled next time.	evaluate the accuracy of my results based on my fair testing. can make practical suggestions about how my working methods can be improved.	evaluate the accuracy of my results. can make reasoned suggestions on how to improve working methods.
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