

Working Scientifically Skills Progression

	PLAN	DO			REVIEW	
	Ask questions & plan enquiries	Set up enquiry	Observe & Measure	Record	Interpret & Report	Evaluate
EYFS Make observations	Demonstrate a curiosity about the world around them.	With support, find things out with simple, adult led, tests.	Uses senses and simple equipment.	Talk to an adult about what has been found.	With support, explain why some things have occurred.	With support, talk about what they have found out.
KS1 Develop close observations	Ask simple questions and recognise that they can be answered in different ways*.	Perform simple tests.	Observe closely, using simple equipment.	Gather and record data to help in answering questions.	Identify and classify. <i>Use appropriate scientific language to communicate ideas.</i>	Use their observations and ideas to suggest answers to questions.
Lower KS2 Develop a systematic approach	Ask relevant questions and use different types* of scientific enquiries to answer them.	Set up simple practical enquiries, comparative and fair tests.	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Identify differences, similarities or changes related to simple scientific ideas and processes.	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Use straightforward scientific evidence to answer questions or to support their findings.
Upper KS2 Develop independence	Plan different types* of scientific enquiries to answer <i>their own questions</i> , including recognising and controlling variables where necessary.	Use test results to make predictions to set up further comparative and fair tests.	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	Report and present findings from enquiries, including conclusions and causal relationships, in oral and written forms such as displays and other presentations, <i>using appropriate scientific language.</i>	Explain degree of trust in results. Identify <i>and evaluate</i> scientific evidence (<i>their own and others'</i>) that has been used to support or refute ideas or arguments.

*Types of enquiry including: observing changes over time, noticing patterns, grouping and classifying, comparative and fair tests, using secondary sources.
Progression statements from 2014 National Curriculum, italics additions from 2018 TAF
Overview adapted from PSTT

Working Scientifically Skills Progression (including Teacher Assessment in Primary science (TAPs) plans for focused assessment)

	PLAN		DO		REVIEW	
	Ask questions & plan enquiries	Set up enquiry	Observe & Measure	Record	Interpret & Report	Evaluate
EYFS Make observations	Demonstrate a curiosity about the world around them.	With support, find things out with simple, adult led, tests.	Uses senses and simple equipment.	Talk to an adult about what has been found.	With support, explain why some things have occurred.	With support, talk about what they have found out.
R TAPs plan	Brown apples	Incy spider shelter	Frozen balloons	Scavenger sort	Butter	Taste test
KS1 Develop close observations	Ask simple questions and recognise that they can be answered in different ways*.	Perform simple tests.	Observe closely, using simple equipment.	Gather and record data to help in answering questions.	Identify and classify. <i>Use appropriate scientific language to communicate ideas.</i>	Use their observations and ideas to suggest answers to questions.
Yr1 TAPs plan	<u>Everyday materials</u> Reflection test	<u>Everyday materials</u> Floating and sinking	<u>Plants</u> Plant structure <u>Plants</u> Leaf look	<u>Seasonal changes</u> Seasonal change	<u>Animals including humans</u> Animal classification	<u>Animals including humans</u> Body parts
Yr2 TAPs plan	<u>Materials and their uses</u> Waterproof materials	<u>Living things and their habitats</u> Daisy footprints	<u>Plants</u> Plant growth	<u>Materials and their uses</u> Materials hunt <u>Living things and their habitats</u> Woodlice habitats	<u>Living things and their habitats</u> Living and non-living	<u>Animals including humans</u> Hand spans

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PLAN		DO			REVIEW	
Ask questions & plan enquiries		Set up enquiry	Observe & Measure	Record	Interpret & Report	Evaluate
Lower KS2 Develop a systematic approach	Ask relevant questions and use different types* of scientific enquiries to answer them.	Set up simple practical enquiries, comparative and fair tests.	Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.	Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.	Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Identify differences, similarities or changes related to simple scientific ideas and processes.	Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Use straightforward scientific evidence to answer questions or to support their findings.
	<u>Animals including humans</u> Investigating skeletons	<u>Forces and magnets</u> Magnet tests	<u>Plants</u> Measuring plants	<u>Forces and magnets</u> Cars ramps <u>Light</u> Making shadows	<u>Rocks</u> Rocks report	<u>Plants</u> Function of stem
	<u>Sound</u> Investigating pitch	<u>States of matter</u> Drying materials	<u>States of matter</u> Measuring temperature	<u>Living things and their habitats</u> Local survey	<u>Electricity</u> Does it conduct? <u>Sound</u> String telephones	<u>Animals including humans</u> Teeth (eggs) in liquid

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Upper KS2 Develop independence	Plan different types* of scientific enquiries to answer <i>their own questions</i> , including recognising and controlling variables where necessary.	Use test results to make predictions to set up further comparative and fair tests.	Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.	Report and present findings from enquiries, including conclusions and causal relationships, in oral and written forms such as displays and other presentations, <i>using appropriate scientific language</i> .	Explain degree of trust in results. Identify <i>and evaluate</i> scientific evidence (<i>their own and others'</i>) that has been used to support or refute ideas or arguments.
Yr5 TAPs plan	Properties and changes of materials Dissolving	Properties and changes of materials Insulation layers	Animals including humans Growth survey	Earth and space Space craters	Earth and space Solar system research	Forces Aqua dynamics
Yr6 TAPs plan	Electricity Bulb brightness	Animals including humans Heart rate poses	Electricity Conductive dough	Light Investigating shadows Living things and their habitats Outdoor keys	Living things and their habitats Invertebrate research	Evolution and inheritance Fossil habitats

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