Science
Working scientifically

Teacher note:

- Mapping working scientifically is not a perfect science as each lesson can involve more than strand. This is just one example of how you could track and assess working scientifically across the science curriculum.
- For each lesson, a lead skill has been identified that pupils can apply and develop.
- The revisit modules do not have a mapping of working scientifically as the decision on what to make the lead skill will be focused on securing those skills that your pupils may not yet have secured.
- The proportionality of skills is not prescribed by the National Curriculum, so this mapping reflects a balance between all the skills.

Year 1 Working scientifically	Autumn			Spring
	Seasonal changes & weather	Introduce plants (trees)	Animals, including humans	Everyday materials
Asking simple questions and recognising that they can be answered in different ways **Strong Start Cycle 2 Spring**				L6
Observing closely, using simple equipment **Strong Start Cycle 1 Autumn**	L1 L3	L1 L4	L4	
Performing simple tests **Strong Start Cycle 1 Spring**		L3	L5 L6	L4
Identifying and classifying **Strong Start Cycle 2 Autumn**		L1	L1 L3	L1 L3
Using their observations and ideas to suggest answers to questions **Strong Start Cycle 2 Summer**	L2	L5	L2	L5
Gathering and recording data to help in answering questions **Strong Start Cycle 1 Summer**	L2	L2		L2
Researching from secondary sources				

Year 2 Working scientifically	Autumn		Spring	Summer
	Living things and their habitats	Animals, including humans	Uses of everyday materials	Plants
Asking simple questions and recognising that they can be answered in different ways **Strong Start Cycle 2 Spring**	L2	L1		L3
Observing closely, using simple equipment **Strong Start Cycle 1 Autumn**	L1 L3 L4			L5
Performing simple tests **Strong Start Cycle 1 Spring**		L3	L3 L5 L6	L1 L2 L4
Identifying and classifying **Strong Start Cycle 2 Autumn**		L6	L4	
Using their observations and ideas to suggest answers to questions **Strong Start Cycle 2 Summer**		L4 L5	L1 L2	
Gathering and recording data to help in answering questions **Strong Start Cycle 1 Summer**	L4	L3	L4	L1
Researching from secondary sources	L5	L2	L6	

Year 3 Working scientifically	Autumn		Spring		Summer
	Rocks	Animals, including humans	Forces and magnets	Plants	Light
Asking relevant questions and using different types of scientific enquiries to answer them **Strong Start Cycle 2 Autumn**	L2	L3			L2
Setting up simple practical enquiries, comparative and fair tests **Strong Start Cycle 1 Autumn**	L1 L4	L2	L3	L2	L1
Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **Strong Start Cycle 2 Summer**	L5	L2	L3	L4	L3
Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **Strong Start Cycle 2 Spring**			L3		L3
Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables **Strong Start Cycle 1 Spring**	L6 L7		L2	L5	
Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions			L1	L3	L1
Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions **Strong Start Cycle 1 Summer**			L4		L3
Identifying differences, similarities or changes related to simple scientific ideas and processes	L3		L6		
Using straightforward scientific evidence to answer questions or to support their findings.				L1	
Researching from secondary sources	L6 L7	L1	L5	L6	

Year 4 Working scientifically	Autumn		Spring	Summer	
	Living things and their habitats	States of matter	Animals, including humans	Electricity	Sound
Asking relevant questions and using different types of scientific enquiries to answer them **Strong Start Cycle 2 Autumn**			Teeth and eating L1		L2
Setting up simple practical enquiries, comparative and fair tests **Strong Start Cycle 1 Autumn**	L3	L1 L3		L2 L3	L3
Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers **Strong Start Cycle 2 Summer**		L1 L4	Teeth and eating L2 Teeth and eating L3	L3	
Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions **Strong Start Cycle 2 Spring**	L3			L3	
Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables **Strong Start Cycle 1 Spring**		L5 L6			L1
Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	L3		Teeth and eating L2 Food chains L2		
Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions **Strong Start Cycle 1 Summer**		L3 L4		L3	
Identifying differences, similarities or changes related to simple scientific ideas and processes	L4 L5	L2 L6	Teeth and eating L3 Food chains L1		

Year 4 Working scientifically (cont'd)	Autumn		Spring	Summer	
	Living things and their habitats	States of matter	Animals, including humans	Electricity	Sound
Using straightforward scientific evidence to answer questions or to support their findings.	L1 L6		Digestion Q2 L1 Food chains L2		
Researching from secondary sources	L2 L6		Digestion L1 Digestion Q2 L2	L1	

Year 5 Working scientifically	Autumn		Spring		Summer
	Properties and changes of materials	Animals, including humans	Forces	Earth and space	Living things and their habitats
Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **Strong Start Cycle 1 Autumn**	L1 L2		L2		L6
Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **Strong Start Cycle 1 Spring**		L1	L2 L5		L6
Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **Strong start Cycle 2 Summer**	L3 L4	L1	L1 L5	L4	L3
Using test results to make predictions to set up further comparative and fair tests **Strong Start Cycle 2 Spring**			L2 L3		
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 **Strong Start Cycle 1 Summer (conclusions)** **Cycle 2 Autumn (trust in data)**	L6	L3	L2 L3	L6	L1 L4
Identifying scientific evidence that has been used to support or refute ideas or arguments	L5		L6	L1 L3 L5	L5
Researching from secondary sources		L2	L4	L2	L2

Year 6 Working scientifically	Autumn		Spring		Summer	
	Electricity	Animals, incl. humans (cardiovascular system)	Animals, incl. humans (water transportation)	Light	Living things and their habitats	Evolution and inheritance
Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary **Strong Start Cycle 1 Autumn**	L1 L2	L8		L1 L4	L5	L6
Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate **Strong Start Cycle 1 Spring**		L4 L5	L3	L4		L2 L6
Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs **Strong start Cycle 2 Summer**	L2	L2 L4 L5	L1 L3	L3 L4 L6	L1 L3 L4	L2 L6
Using test results to make predictions to set up further comparative and fair tests **Strong Start Cycle 2 Spring**	L3			L4		L6
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 **Strong Start Cycle 1 Summer (conclusions)** **Cycle 2 Autumn (trust in data)**	L3	L8 L9	L3	L2 L4	L3	L1 L3
Identifying scientific evidence that has been used to support or refute ideas or arguments		L3 L6			L2	L5
Researching from secondary sources		L1	L2	L5		L4