

	PLAN		DO		REVIEW	
	Ask questions + plan enquiry	Set up enquiry	Observe and measure	Record	Interpret	Evaluate
Nursery Autumn 2	Who lives in the water? Who lives on the land? (Grouping and Sorting)	Give children a selection of animals both land and sea. Ask children to sort the animals into the water tray or onto the land.	Adult records what children say and where they place objects (pupil voice) Children choose creatures to put into the Venn diagram and stick in.	Talking – Pupil Voice	Talking – Pupil Voice	Talking – Pupil Voice
Nursery Spring 2	Which material would make a comfortable cushion for Fred? (Properties of materials)	Give the children a selection of materials. Ask the children to decide which material has the best properties to make a cushion.	Adult record what children say and which material the child chooses (pupil voice)	Talking – Pupil Voice	Talking – Pupil Voice	Talking – Pupil Voice
Nursery Summer 2	How does a caterpillar become a butterfly? (Lifecycles)	Based on observation of real caterpillars. Children recall what happens in the lifecycle of a butterfly. This is reinforced with pictures and objects as well as real-life experience.	Observe caterpillars / chrysalis / butterflies.	Talking – Pupil Voice	Talking – Pupil Voice	Talking – Pupil Voice
Reception Autumn 2	Which animal made the footprint? <i>Based on the book The Gruffalo</i> (Animals)	Children use their knowledge of the Gruffalo story and the animals in the story. They observe a footprint made in the sand by an animal. The children have picture clues using animals from the story to work	Observe footprints in the sand. Match to animal toys footprints	Talking – Pupil Voice	Talking – Pupil Voice	Talking – Pupil Voice

		out which animal could have made the footprint.				
Reception Space and Materials Spr1	Which material will keep baby bear dry? <i>Based on the book Whatever Next</i> (Materials)	Children use their knowledge of the story of Whatever Next to predict and test different materials that Baby Bear's clothes could be made from so he doesn't get wet.	Observe changes to materials when added to water	Talking – Pupil Voice	Talking – Pupil Voice	Talking – Pupil Voice
Reception Life Cycle of a Butterfly Sum2	How does a caterpillar become a butterfly? <i>Based on the book The Very Hungry Caterpillar</i> Life cycle of a frog <i>Based on the book The Teeny Tiny Tadpole</i> (Lifecycles)	Based on observation of real caterpillars. Children recall what happens in the lifecycle of a butterfly. This is reinforced with pictures and objects as well as real-life experience. Extension for previous nursery children. Think about the lifecycle of a frog. Children learn about this through observation of tadpoles.	Observe caterpillars / chrysalis / butterflies. Observe frog spawn / tadpoles / froglets / frogs	Talking – Pupil Voice	Talking – Pupil Voice	Talking – Pupil Voice

KS1 (age 5-7) Develop close obs	Ask simple Qs 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.	Use their observations and ideas to suggest answers to questions. Identify and classify. Use appropriate scientific language to communicate ideas	
Year 1	<p>Materials 1.Waterproof/not waterproof 2.Absorbent/ not absorbent 3.Sink/float</p> <p>Humans and other animals Child led questions to aid classification of animals.</p> <p>Plants What conditions do plants need to grow? (Seed germination)</p>	<p>Materials 1.Which materials are waterproof and why? 2.Which materials are absorbent and why? 3.Which materials sink and why?</p> <p>Plants Conditions for growth.</p>	<p>Materials A selection of different materials.</p> <p>Humans and other animals Child led questions to aid classification of animals.</p> <p>Plants Conditions for growth.</p>	<p>Materials Data sheet</p> <p>Humans and other animals</p> <p>Plants Conditions for growth.</p>	<p>Materials Chn to write short conclusion/summary.</p> <p>Plants Conditions for growth.</p>	<p>Materials Next steps questions.</p> <p>Humans and other animals Child led questions to aid classification of animals.</p> <p>Plants Conditions for growth.</p>
Year 2	<p>Properties of Materials</p> <p>Animals-Habitats (local, polar, dessert, ocean,woodland, microhabitats)</p> <p>Animals- life cycles</p>	<p>1-Waterproof materials 2-Explore flexibility of materials 3- Create a raft for a toy-testing suitability of materials</p> <p>Light and electricity 1-create a circuit 2-test opaque, transparent, translucent materials</p> <p>Plants-growth. Testing different conditions to germinate a seed/plant to grow</p>	<p>Properties of materials</p> <p>Light and electricity</p> <p>Habitats-animals in local area-microhabitats /bird habitats</p> <p>Animals- life cycles</p> <p>Plants-growth</p>	<p>Properties of materials</p> <p>Light and electricity</p> <p>Animals-Habitats</p> <p>Plants-growth</p>	<p>Properties of materials</p> <p>Light and electricity</p> <p>Animal-Habitats</p> <p>Animals- life cycles</p> <p>Plants-growth</p>	<p>Properties of materials</p> <p>Light and electricity</p> <p>Animal-Habitats</p> <p>Animals- life cycles</p> <p>Plants-growth</p>

	Plants-growth					
LOWER KS2 (age 7-9) Develop 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.
Year 3	Introduction to magnets Fascinating forces Exercise – Measure Heart Rate Plants – Conditions for growth Plants – Water transportation Introducing types of rocks. Reflection Opaque, transparent, translucent Shadows	Magnets and materials Friction/distance variables Exercise – Measure Heart Rate Plants – Conditions for growth Exploring light Testing permeability- soils Reflection Opaque, transparent, translucent	Exploring magnets Magnets and materials Friction/distance variables Fascinating forces Exercise – Measure Heart Rate Plants – Conditions for growth Opaque, transparent, translucent Plants – Water transportation Soil sample observations Exploring light Testing permeability- soils Reflection	Exploring magnets Magnets and materials Friction/distance variables Exercise – Measure Heart Rate Plants – Conditions for growth Sorting rocks into criteria Reflection Opaque, transparent, translucent	Exploring magnets Magnets and materials Friction/distance variables Exercise – Measure Heart Rate Plants – Conditions for growth Plants – Water transportation Exploring light Testing permeability- soils Shadows	Exploring magnets Magnets and materials Friction/distance variables Fascinating forces Exercise – Measure Heart Rate Humans – different skeletons Plants – Conditions for growth Opaque, transparent, translucent Plants – Water Transportation Exploring light
Year 4	States of matter	States of matter	States of matter	States of matter	Liquid viscosity	Liquid viscosity

	Liquid viscosity Change of state Water cycle Electricity Electrical circuits Testing circuits Switches Brightness of a bulb Sound Magnets Soluble materials Dissolving Teeth Digestive system Living things and their habitats	Liquid viscosity Using a thermometer Change of state Electrical circuits Testing circuits Switches Brightness of a bulb Sound Magnets Soluble materials Dissolving Teeth Digestive system	Liquid viscosity Using a thermometer Change of state Electrical circuits Testing circuits Switches Brightness of a bulb Sound Magnets Soluble materials Dissolving Teeth Digestive system	Liquid viscosity Using a thermometer Change of state Electrical circuits Testing circuits Switches Brightness of a bulb Sound Magnets Soluble materials Dissolving Teeth Digestive system	Using a thermometer Change of state Water cycle Electrical circuits Testing circuits Switches Brightness of a bulb Sound Magnets Soluble materials Dissolving Teeth Digestive system Living things and their habitats	Using a thermometer Change of state Water cycle Electricity Electrical circuits Testing circuits Switches Brightness of a bulb Sound Magnets Soluble materials Dissolving Teeth Digestive system Living things and their habitats
UPPER KS2 (AGE 9-11) Develop independence	Plan different types* of scientific enquiries to answer their own questions, 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, inc conclusions and causal relationships, in oral and written forms such as displays and other presentations, using appropriate scientific language.	Explain degree of trust in results. Identify and evaluate scientific evidence (their own and others') that has been used to support or refute ideas or arguments.
Year 5	Absorbent materials Investigating properties of materials Thermal Insulators Recovering a substance from a solution	Parachute experiment Investigating properties of materials Thermal Insulators Dissolving materials	Streamlined shapes Parachute experiment Investigating properties of materials Thermal Insulators Recovering a substance from a solution Using force meters	Investigating properties of materials Parachute experiment Conductors and Insulators Botanical illustrations of plants Dissolving materials	Researching the solar system Researching Rafsan Chowdhury Researching Mae Jemison Researching Dr Paula Kahumbu Recovering a substance from a solution	Rate of evaporation Parachute experiment Thermal Insulators Dissolving materials

Year 6						
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