



Southam Primary School – Science Skills and Knowledge Progression



Being scientific skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5 and 6
Questioning	<p>Asks own questions from immediate environment</p> <p>Responds and joins in with the questions that others ask</p>	<p>Whole class questions related to direct experiences, e.g. is it dark at bedtime yet?</p> <p>Begin to compare with whole class supported questions e.g. how is Autumn different to Summer?</p> <p>Begin to collect and celebrate any curiosity and support children in formulating into a question that can be explored or investigated independently or part of a group task.</p> <p>Posing simple why questions that relate to everyday life. E.g. why do we need to wash our hands?</p>	<p>Continue to celebrate curiosity and support forming questions that can be investigated. Create a 'wonderwall' to share and develop ideas.</p> <p>Pose class questions that begin to create numerical data. E.g. how many ways can I....</p>	<p>Encourage children to create own questions to investigate, formulating with peer support, class discussion.</p> <p>Exploring research to answer why questions</p> <p>What would happen if... questions</p>	<p>Encourage children to create own questions to investigate, formulating with peer support, class discussion.</p> <p>Pose generalised questions, can animals survive in the dark/does a rabbit need sunshine?</p>	<p>Children generate own questions to investigate: class discussions lead to peer supported formulation of questions.</p> <p>Pupils decide what kind of data they will need to collect and how this might be done.</p>
Observing	<p>Attending to stimuli in environment</p> <p>Making comments about the world around them</p> <p>Welly walks</p>	<p>Creating lists in shared writing</p> <p>Simple comparison e.g. seasons</p> <p>Looking at pictures of/animal toys</p>	<p>Making observations of simple objects e.g. seeds</p> <p>Adding speech bubbles to photos of activities</p> <p>Sentences with numerical data e.g. How many seeds germinated or measure height of seedling.</p> <p>Living eggs and or caterpillars/butterflies</p>	<p>Careful description of phenomena in demonstrations related carefully to questioning focus</p> <p>Making direct comparisons</p> <p>Observe changes over time</p>	<p>Relating observations to form and function e.g. teeth</p> <p>Using keys to refine observation and name organisms</p> <p>Make comparisons e.g. longer instruments and shorter instruments and difference in pitch</p>	<p>Making observations with IT e.g. data logger: lux levels</p> <p>Create own list of observations, e.g. collect data from island simulation exercise</p> <p>Consequences of making changes to equipment, e.g. comparing range of light bulbs in a reading</p>

			Observe effects during demonstrations e.g. glitter germs	Begin to use tests to create numerical data, e.g. measure pH	Use of electrical equipment to make observations Making observations with IT, e.g. data logging equipment: decibels	lamp, change number of cells in a circuit
Identifying	Naming everyday objects, materials and organisms in the environment.	Selecting appropriate clothing for seasons Sorting activities Naming and labelling organisms	Sorting by more than one criteria Naming similar examples e.g. types of bean Using leaves and keys to identify trees		Using keys and decision trees Classify teeth from form	
Recording	Collecting and taking pictures	Photos of sorting activities, e.g. sorting into hoops Complete and add to a picture or diagram Sorting by a list of features. E.g. has gills/feathers/live young etc. Venn diagrams Simple sorting tables with 2 columns	Life cycles Documenting changes with numerical data, e.g. height of seedling Beginning to collect data, e.g. how many woodlice are found in different areas	Drawing changes over time Collecting numerical data in repeated tests to look for patterns		
Comparing	Comparing sizes, changes related to growth or decay	Compare on simple tables with two items	Simple comparisons	Comparative tests	Identify similarities and differences or changes related to ideas and processes	
Vocabulary	Naming organisms, materials, simple explanations	Read and spell at level consistent with literacy attainment	Use growing reading and spelling knowledge	Use growing reading and spelling knowledge	Read and spell scientific vocabulary correctly	Read, spell and pronounce scientific vocabulary correctly