Happisburgh CE VA Primary & Early Years School

Skills Curriculum

Science – Working Scientifically

Questioning					
Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Yr 6**
• Ask questions about what it seen, heard, felt, tasted etc. • Ask questions about the world us.	• Ask simple questions and recognise that they can be answered in different ways	• Ask open questions that lead to further exploration and experimentation.	• Ask relevant questions and use different types of scientific enquiry to answer them	• Ask subject specific questions and plan scientific enquiry in order to answer these	• Ask questions to extend enquiry and further understanding, allowing conclusions to be made and hypotheses to be explained.

Observation					
Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Yr 6**
• Use all the senses to describe objects, events • Observe changes over time • Describe observations verbally	• Make observations relevant to the task. • Observe objects / creatures using simple equipment e.g magnifiers, insect viewers. • Ask questions about what can be seen / heard / felt • Record observations through drawing and writing	• Make relevant observations in order to answer questions • Notice patterns and relationships in observations • Record observations through drawing, writing and diagrams • Describe observations using scientific language	• Making systematic and careful observations describing and explaining what can be seen. • Explain observations through drawing, writing, diagrams and charts	• Plan for and make accurate observations to complete a task. • Organise observations into categories and sort by relevance.	• Compare observations of objects / events and changes over time and draw conclusions. • Draw on previous knowledge to explain observations, making links where appropriate. • Identify observations which do not fit into the main pattern

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Measuring					
Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Yr 6**
• Use non-standard and standard measures to measure distance, weight, height etc	• Use standard measures to measure distance, weight, height etc • Explain why measurements are being taken.	• Take measurements of size, weight, time using appropriate equipment and standard measures	• Decide what measurements to take during an investigation. • Take measurements using standard units, using a range of equipment, including thermometers and data loggers. • Decide how long to take the measurements for.	• Make decisions about what to measure and how. • Take repeated measurements where necessary • Compare measurements and draw conclusions.	• Make accurate and precise measurements – N, g, kg, mm, cm, mins, seconds, cm² V, km/h, m per sec, m/ sec. • Record measurements and interpret results • Identify measurements which do not fit into the main pattern

Investigating					
Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Yr 6**
• Begin to discuss ideas about how to find things out. • Perform simple tests with support.	• Understand what a fair test is. • Contribute to discussions about fair testing when demonstrated by the teacher.	• Set up simple practical enquiries independently. • Recognise when a simple fair test is necessary and help to decide how to set it up. • Identify the variable factor to be considered.	• Plan comparative and fair tests and begin to think of more than one variable factor.	• Decide when it is appropriate to do a fair test. • Decide which variables to keep the same and which to change • Using test results to make predictions to set up further comparative and fair tests	• Plan different types of scientific enquiries to answer questions, • Recognise and control variables where necessary. • Suggest improvements to methods and give reasons.

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Collecting & Recording Data					
Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Yr 6**
Gather data through observations and taking measurements Record observations through drawing, writing and in completing charts / tables prepared by the teacher.	Sort and classify information, recording in charts / tables / diagrams prepared by the teacher.	Gather, record, classify and present data in a variety of ways to help answer questions Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	Use and construct increasingly complex tables, line graphs and keys to record findings.	Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, and bar and line graphs	Decide in detail how to record data accurately from a choice of familiar approaches. including line graphs, scientific diagrams, classification keys, scatter, bar and line graphs etc.

Identifying / Classifying					
Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Yr 6**
Begin to use simple features to compare objects, materials and living things To observe simple changes over time.	Talk about, describe and sort simple similarities and differences, noting patterns and relationships Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.	Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.	Identify differences, similarities or changes related to simple scientific ideas and processes.	Compare and group according to behaviour or properties, based on testing.	Use and develop keys and other information records to identify, classify and describe living things and materials.

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Forming Hypothesis & Conclusions					
Yr 1	**Yr 2**	**Yr 3**	**Yr 4**	**Yr 5**	**Yr 6**
Talk in simple terms about what might happen based own experiences. Using their observations and ideas to suggest answers to questions Identify what has changed when observing objects, living things or events.	Talk in simple scientific terms about what might happen and why? Talk about what has been found out and how it was discovered	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions Using straightforward scientific evidence to answer questions or to support their findings. Begin to identify new questions arising from data, make new predictions for new values.	Use results to draw conclusions, make predictions for new values, suggest improvements and raise further questions Report on findings from enquires including oral and written explanations.	Begin to draw and express some conclusions, by looking at changes, patterns, similarities and differences in data. Begin to identify new questions arising from data, make new predictions for new values within or beyond the data collected. Look for a range of different relationships in data and begin to identify evidence that refutes or supports ideas.	Use relevant scientific language and illustrations to discuss, communicate and justify findings and scientific ideas. Report on and present findings from enquiries, including conclusions, causal relationships and explanations of results, in oral and written forms such as displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments.