Wren's Nest Primary School

Whole School Science Progression of Skills

SCIENCE Progression of Skills	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Observing and Measuring Changes	Discuss the similarities and differences. e.g. Do the leaves change on trees?	Begin to observe closely, using senses and simple equipment. e.g. Are the leaves different in Spring? Use simple observations and ideas to suggest answers to questions. To observe simple changes over time and, with guidance, begin to notice patterns and relationships. e.g. Seasonal Changes.	**Observing closely, using simple equipment.** Observe closely, using simple equipment. e.g. Through making simple observations, I can identify everyday materials and discuss their properties. Use observations and ideas to suggest answers to questions. To observe changes over time and, with guidance, begin to	Begin to make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment. e.g. To know that magnetism is a force which can act without direct contact. Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.	**Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.** e.g. To plan, set up and carry out comparative and fair tests, including controlling variables to observe the impact of a	Begin to take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate. e.g. To use scientific data to study early childhood growth and make comparisons between weight and height. Begin to identify patterns that might be found in the natural environment.	**Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.** e.g. To plan and develop a fair test that gives me information about the impact of exercise on my body (pulse rate). Identify patterns that might be found in the natural environment.

		To say what I am looking for and what I am measuring with adult support. To know how to use simple equipment safely with adult support. Begin to use simple measurements and equipment with adult support.	notice patterns and relationships. To begin say what I am looking for and what I am measuring. To know how to use simple equipment safely. Use simple measurements and equipment with increasing independence.	Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them. Learn to use some new equipment appropriately. Begin to see a pattern in my results. Begin to choose from a selection of equipment. Begin to observe and measure accurately using standard units.	power source on a component. Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them. Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used. Learn to use new equipment appropriately, Can see a pattern in my results. Can choose from a selection of equipment. Can observe and measure accurately using standard units.	Begin to make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them. Choose the most appropriate equipment and explain how to use it accurately. Begin to interpret data and find patterns. Select equipment on my own. Can make a set of observations and say what the interval and range are. Begin to take accurate and precise measurements.	Make their own decisions about what observations to make, what measurements to use and how long to make them for and whether to repeat them. Choose the most appropriate equipment and explain how to use it accurately. Can interpret data and find patterns. Select equipment on my own. Can make a set of observations and say what the interval and range are. Accurate and precise measurements.

Identifying, Classifying, Recording and Presenting Data	Identify with support. e.g. To identify a caterpillar and parts of its life cycle.	Identify and classify with some support. e.g. To know what animals come from eggs. To begin to observe and identify, compare and describe. To begin to use simple features to compare objects, materials and living things and, with help, decide how to sort and group them. e.g. I can name and sort the groups of animals including fish, mammals, birds, reptiles and amphibians.	**Identifying and classifying.** e.g. To identify everyday materials. **Gathering and recording data to help in answering questions.** Observe and identify, compare and describe. Use simple features to compare objects, materials and living things and, with help, decide how to sort and group them.	Begin to gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Begin to recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Begin to identify differences, similarities or changes related to simple scientific ideas and processes. e.g. To compare the teeth of animals and humans to identify their differences and similarities. Begin to talk about criteria for grouping, sorting and classifying and use simple keys. Begin to compare and group according to behaviour or properties, based on testing.	**Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.** **Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.** Identify differences, similarities or changes related to simple scientific ideas and processes. e.g. To group and classify materials based on given criteria. To use a range of scientific tests to classify materials.	Begin to recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Begin to use and develop keys and other information records to identify, classify and describe living things and materials. e.g. I can investigate the thermal efficiency of different materials and use my results to answer a question.	**Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.** Use and develop keys and other information records to identify, classify and describe living things and materials. e.g. Through studying report writing, I am able to present information about the functions of the parts of the circulatory system.

					Talk about criteria for grouping, sorting and classifying and use simple keys. Compare and group according to behaviour or properties, based on testing.		

Drawing Conclusions, Noticing Patterns and Presenting Findings	To begin to record data with adult support. e.g. Which ice cube melted the quickest?	Begin to use their observations and ideas to suggest answers to questions. e.g. By observing changes through the year, I can recognise deciduous or evergreen trees. Gather and record data with some adult support, to help in answering questions. Begin to record simple data. Begin to record and communicate their findings in a range of ways. Can show my results in a simple table that my teacher has provided Begin to talk about what they have found out and how	**Using their observations and ideas to suggest answers to questions.** e.g. Through exploring a variety of materials, I can identify and classify the properties of them and make comparisons about their suitability. Gather and record data to help in answering questions. Record simple data. Record and communicate their findings in a range of ways. Can show my results in a table that my teacher has provided. Talk about what they have found out and how they found it out. To say what happened in my investigation.	Using results begin to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. e.g. To design my own practical experiment to explore the effect of exercise on my muscles. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. Gather, record, and begin to classify and present data in a variety of ways to help in answering questions. Begin to record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. Begin to report on findings from enquiries, including	**Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.** e.g. Using my knowledge of electricity, I know that electrical equipment can be dangerous and the associated consequences. **Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.** Gather, record, classify and present data in a variety of ways to help in answering questions.	Begin to report and present 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. e.g. To understand how sexual and asexual reproduction occurs in plants. To draw conclusions based on my data and observations and use my scientific knowledge and understanding to explain my findings. Begin to record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs. Begin to report and present	**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.** e.g. Through studying report writing, I am able to present information about the functions of the parts of the circulatory system. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar and line graphs.

		they found it out To begin to say what happened in my investigation with adult support. To begin to say whether I was surprised at the results or not. To begin to say what I would change about my investigation with adult support.	To begin to say whether I was surprised at the results or not. To begin to say what I would change about my investigation.	oral and written explanations, displays or presentations of results and conclusions. Begin to use notes, simple tables and standard units and help to decide how to record and analyse their data. Begin to record results in tables and bar charts. Begin to use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Begin to use straight forward scientific evidence to answer questions or to support their findings. With help, begin to look for changes, patterns, similarities and differences in their data in order to draw simple	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. Use notes, simple tables and standard units and help to decide how to record and analyse their data. Can record results in tables and bar charts. Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise	findings from enquiries. Begin to decide how to record data from a choice of familiar approaches. Begin to choose how best to present data. Am beginning to report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Begin to identify scientific evidence that has been used to support or refute ideas or arguments. Begin to draw conclusions based on their data and observations, use evidence to justify their ideas, use scientific	Report and present findings from enquiries. Decide how to record data from a choice of familiar approaches. Can choose how best to present data Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments. Draw conclusions based on their data and observations, use evidence to

				conclusions and answer questions. With support, begin to identify new questions arising from the data, make new predictions and find ways of improving what they have already done. Begin to see a pattern in my results. Begin to say what I found out, linking cause and effect. Begin to say how I could make it better Begin to answer questions from what I have found out.	further questions. Use straightforward scientific evidence to answer questions or to support their findings. With help, look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions. With support, identify new questions arising from the data, make new predictions and find ways of improving what they have already done. Can see a pattern in my results.	knowledge and understanding to explain their findings. Begin to use test results to make predictions to set up further comparatives and fair tests. Begin to look for different causal relationships in their data and identify evidence that refutes or supports their ideas. Use their results to identify when further tests and observations are needed. Begin to separate opinion from fact. Begin to draw conclusions and identify scientific evidence. Can use simple models. Know which evidence proves a scientific point.	justify their ideas, use scientific knowledge and understanding to explain their findings. Use test results to make predictions to set up further comparatives and fair tests. Look for different causal relationships in their data and identify evidence that refutes or supports their ideas. Use their results to identify when further tests and observations are needed. Separate opinion from fact. Can draw conclusions and identify scientific evidence. Can use simple models.

					Can say what I found out, linking cause and effect. Can say how I could make it better. Can answer questions from what I have found out	Begin to use test results to make predictions to set up further comparative and fair tests.	Know which evidence proves a scientific point. Use test results to make predictions to set up further comparative and fair tests.

Using Scientific Evidence and Secondary Sources of Information	Listen and begin to respond to stories about scientific processes/ events/ objects with adult support. e.g. The Very Hungry Caterpillar.	Listen and respond to stories about scientific processes/ events/ objects. e.g. The Story of the Mermaid with the Damaged Scale.	Find information using given sources. e.g. To compare a range of images and identify the differences between a herbivore, carnivore and omnivore. Use simple secondary sources to find answers. Can find information to help me from books and computers with help.	Begin to identify differences, similarities or changes related to simple scientific ideas and processes. e.g. To use secondary sources of information to categorise animals into specific groups dependent on their diet. Using straightforward scientific evidence to answer questions or to support their findings. Select information from a range of given sources. Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations. e.g. Using secondary sources of information, I am beginning to learn the scientific vocabulary associated with parts of the tooth.	**Identifying differences, similarities or changes related to simple scientific ideas and processes.** e.g. To compare the teeth of animals and humans to identify their differences and similarities. Research using given sources. e.g. research different food groups and how they keep us healthy. Begin to recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.	Begin to select straightforward scientific evidence to answer questions or to support their findings. e.g. To use independent research to find out about the gestation period of different mammals and present my findings. Begin to identify scientific evidence that has been used to support or refute ideas or arguments.	**Using straightforward scientific evidence to answer questions or to support their findings.** **Identifying scientific evidence that has been used to support or refute ideas or arguments.** e.g. To understand that practical investigations are not always possible for some scientific enquiries, such as examining the inside of a human body and secondary sources must be used. Select straightforward scientific evidence to answer questions or to support their findings.

				To begin to use simple secondary sources to find answers. To begin to find information to help me from books and computers with help.			

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