



St Andrew's C of E (VA) Primary School

Working Scientifically Progression of Skills

Foundation Stage Science Progression Map

3 to 4 Years (taken from Development Matters July 2021)	Use all their senses in hands on exploration of natural materials (UW) <i>Provide interesting natural environments for children to explore freely outdoors.</i> Explore collections of materials with similar and/or different properties. (UW) <i>*Make collections of natural materials to investigate and talk about. Suggestions: contrasting pieces of bark, different types of leaves and seeds, different types of rocks, different shells and pebbles from the beach</i> Talk about what they see, using a wide vocabulary. (UW) <i>*Provide equipment to support these investigations. Suggestions: magnifying glasses or a tablet with a magnifying app. Encourage children to talk about what they see. Model observational and investigational skills. Ask out loud: "I wonder if...?" Plan and introduce new vocabulary, encouraging children to use it to discuss their findings and ideas.</i>
Children in Foundation	Explore the natural world around them. (UW) Provide children with frequent opportunities for outdoor play and exploration. Encourage interactions with the outdoors to foster curiosity and give children freedom to touch, smell and hear the natural world around them during hands-on experiences. Create opportunities to discuss how we care for the natural world around us. Offer opportunities to sing songs and join in with rhymes and poems about the natural world. After close observation, draw pictures of the natural world, including animals and plants. Observe and interact with natural processes, such as ice melting, a sound causing a vibration, light travelling through transparent material, an object casting a shadow, a magnet attracting an object and a boat floating on water. ear and feel whilst outside. (UW) ation of the natural world. g and commenting on things they have seen whilst outside, including plants and animals. ion with the outside world, offering children a chance to take supported risks, appropriate to ment within which they are in. lants and animals children are likely to see, encouraging children to recognise familiar outside. opportunities to work together to develop and realise creative ideas.
Early Learning Goals	Explore the natural world around them, making observations and drawing pictures of animals and plants. (NW) Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. (NW) Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (NW)

Year 1 / 2		
Asking questions, predicting, planning and doing	Observing, measuring and recording.	Interpreting, explaining and communicating
• Ask questions. • Participate in discussions about how to find answers. • With help, suggest what might happen. • Ask relevant questions. • Offer suggestions about how to find answers. • Perform simple tests. • Work safely with other people.	• Use all 5 senses to make observations. • Follow instructions about how to use simple equipment. • Take non-standard measurements. • Make close observations. • With guidance, record observations (complete a table).	• With support, recognize cause and effect in simple situations. • Describe to others what they did and what they observed. • Talk about what they have done or observed. • Use what they have found to suggest answers to the question. • Make simple comparisons. • Communicate findings in a simple way. • With help, decide how to sort and group.

Year 3 / 4		
Asking questions, predicting, planning and doing	Observing, measuring and recording.	Interpreting, explaining and communicating
• Ask relevant questions. • Recognise that questions can be answered using different types of scientific enquiries. • Make simple predictions. • Notice if they are working safely. • Recognise whether or not a test is fair. • Suggest ideas or make predictions that can be tested. • Suggest different types of enquiry to answer questions. • Set up a fair test.	• Make careful observations. • Use a range of equipment provided. • Take accurate measurements using standard units. • Record observations in simple tables. • Present observations using simple pictograms, Venn diagrams, bar charts or labelled diagrams. • Make systematic and careful observations. • Use a range of equipment provided. • Record observations and take accurate measurements.	• With help, decide how to sort and group. • Draw conclusions by linking observations to their question and scientific knowledge. • Suggest how to sort and group objects or materials. • Explain what happened and whether. • Identify similarities and differences between findings. • Make choices on how to sort and group. • Use graphs and tables to interpret patterns in data.

Year 5 / 6		
Asking questions, predicting, planning and doing	Observing, measuring and recording.	Interpreting, explaining and communicating
• Make predictions based on scientific knowledge. • Plan different types of scientific enquiry to answer questions. • Explain whether or not a test is fair. • Identify risks and decide how to work safely. • Suggest what evidence should be collected. • Begin to select measuring instruments independently. • Explain whether or not a test is fair by controlling variables. • Decide independently what evidence should be collected. • Select measuring instruments independently.	• Make decisions on how to present findings. • Use precision when taking accurate measurements, taking repeat readings where necessary. • Present results in tables, diagrams or graphs appropriate to the findings.	• Use graphs and tables to interpret patterns in data. • Link the outcome of the investigation to the original predictions. • Use scientific knowledge to explain what happened and why. • Use evidence collected to disprove or support their original predictions. • Link the outcome of the investigation to the original predictions. • Use scientific knowledge to explain relationships in the data. • Identify problems with their work; begin to suggest improvements. • Use results to make predictions for and set up further tests.