

CURRAMBINE PRIMARY SCHOOL

SCIENCE SCOPE AND SEQUENCE

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Science understanding							
Biological sciences	Living things have basic needs, including food and water	Living things have a variety of external features Living things live in different places where their needs are met	Living things grow, change and have offspring similar to themselves	Living things can be grouped on the basis of observable features and can be distinguished from non-living things	Living things have life cycles Living things depend on each other and the environment to survive	Living things have structural features and adaptations that help them to survive in their environment	The growth and survival of living things are affected by physical conditions of their environment
Chemical sciences	Objects are made of materials that have observable properties	Everyday materials can be physically changed in a variety of ways	Different materials can be combined for a particular purpose	A change of state between solid and liquid can be caused by adding or removing heat	Natural and processed materials have a range of physical properties that can influence their use	Solids, liquids and gases have different observable properties and behave in different ways	Changes to materials can be reversible or irreversible
Earth and space sciences	Daily and seasonal changes in our environment affect everyday life	Observable changes occur in the sky and landscape	Earth's resources are used in a variety of ways	Earth's rotation on its axis causes regular changes, including night and day	Earth's surface changes over time as a result of natural processes and human activity	The Earth is part of a system of planets orbiting around a star (the sun)	Sudden geological changes and extreme weather events can affect Earth's surface
Physical sciences	The way objects move depends on a variety of factors, including their size and shape	Light and sound are produced by a range of sources and can be sensed	A push or a pull affects how an object moves or changes shape	Heat can be produced in many ways and can move from one object to another	Forces can be exerted by one object on another through direct contact or from a distance	Light from a source forms shadows and can be absorbed, reflected and refracted	Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources

	Kindergarten	Pre-primary	Year 1	Year 2
Science as a human endeavor will be embedded throughout the inquiry skills.				
Nature and development of science	Science involves observing, asking questions about, and describing changes in, objects and events.	Science involves observing, asking questions about, and describing changes in, objects and events.	Science involves observing, asking questions about, and describing changes in, objects and events.	Science involves observing, asking questions about, and describing changes in, objects and events
Use and influence of science			People use science in their daily lives, including when caring for their environment and living things.	People use science in their daily lives, including when caring for their environment and living things
Science inquiry skills				
Questioning and predicting	Model: Pose and respond to questions about familiar objects.	Model: Pose and respond to questions about familiar objects and events.	Explicit: Respond to questions, and make predictions about familiar objects and events Model: Posing questions	Explicit: Pose questions, and make predictions about familiar objects and events Revise: Respond to questions, and make predictions about familiar objects and events
Planning and conducting	Students orally make observations using the senses.	Model: Participate in guided investigations and make observations using the senses. T4- Conduct shared investigations using the investigation planner.	Use the investigation planner to explicitly teach how to conduct an investigation to an already posed question. Participate in guided investigations using the investigation planner to explore and answer questions. Use informal measurements to collect and record observations.	Revise: How to conduct an investigation to an already posed question. Participate in guided investigations using the investigation planner to explore and answer questions. Use digital technologies as appropriate to record observations.
Processing and analysing data and information	Teachers guide student discussions and conduct informal observations through the exploration of objects.	Engage in discussions and explicitly teach how to conduct an observation using the senses.	Explicitly teach students how to draw a diagram to represent information and label it. Conduct teacher led discussions and compare observations with predictions. Expose students to information being presented in bar and column graphs.	Model a range of methods to sort information, including drawings, column graphs and tables. Explicitly teach how to record information in column graphs. Conduct shared discussions to compare observations with predictions.
Evaluating	Teachers lead discussions when observing the similarities and differences between objects.	Teacher models how to compare observations. How are they different and how are they the same?	T1-T2: Explicitly teach how to compare observations with those of others using the investigation planner.	Revise: Students to compare observations with those of others using the investigation planner.
Communicating		Explicitly teach students how to share observations and ideas.	Explicit: Represent and communicate observations and ideas in a variety of ways (diagrams)	Explicit: Represent and communicate observations and ideas in a variety of ways (diagrams, tables, graphs)

	Year 3	Year 4	Year 5	Year 6
Science as a human endeavour				
Nature and development of science	Science involves making predictions and describing patterns and relationships	Science involves making predictions and describing patterns and relationships	Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena.	Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions
Use and influence of science	Explicit: Science knowledge helps people to understand the effect of their actions	Revise: Science knowledge helps people to understand the effect of their actions	Scientific knowledge is used to solve problems and inform personal and community decisions	Scientific knowledge is used to solve problems and inform personal and community decisions
Science inquiry skills				
Questioning and predicting	Model: With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge	Explicit: With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge	Explicit: Make predictions about scientific investigations Model: Pose clarifying questions using scientific reasoning.	Explicit: Pose clarifying questions. Revise: make predictions about scientific investigations
Planning and conducting	Explicitly teach how to conduct a scientific observation to find answers to questions, considering the safe use of appropriate materials and equipment. Model the elements of fair tests and use formal measurements to make and record observations accurately	Revise: how to conduct a scientific observation. to find answers to questions, considering the safe use of appropriate materials and equipment Explicitly teach the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately	Explicit: Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks Explicit: Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate	Revise: Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks Revise: Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate
Processing and analysing data and information	Revise simple column graphs to represent data and to identify patterns and trends. Explicitly teach tables to represent data and to identify patterns and trends. Model: Compare results with predictions, suggesting possible reasons for findings	Revise: the use of tables and bar graphs to represent data and to identify patterns and trends. Explicit: Compare results with predictions, suggesting possible reasons for findings	Explicit: Construct and use representations, including tables and graphs, to represent and describe observations or patterns. Model: Describe their observations, patterns and relationships.	Explicit: Construct and use a range of representations, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate Explicit: Compare data with predictions and use as evidence in developing explanations
Evaluating	Use reflection template to explicitly teach students to reflect on investigations, including whether a test was fair or not.	Use reflection template to teach students to reflect on investigations, including whether a test was fair or not.	Explicit: Suggest improvements to scientific investigations.	Revise: Reflect on and suggest improvements to scientific investigations
Communicating	Represent and communicate observations, ideas and findings using formal and informal representations Explicitly teach formal and informal representations.	Represent and communicate observations, ideas and findings using formal and informal representations Revise: formal and informal representations	Explicit: Explanations and processes using scientific representations in reports and posters.	Explicit: Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts.