

Year levels: Kindergarten, Pre-primary and Year 1 | Learning area: Science – Biological sciences

Plan for the early years			
Context		Funds of knowledge	
Three year levels receive Science instruction in the general classroom. The children present with a range of abilities, varying from those requiring structured support to others requiring extension. Skills from the Science inquiry sub-strand are integrated into all Science learning experiences.		Draw on children’s lived experiences with plants, pets, school gardens, parks, local bushland and family routines. Invite families to share cultural practices related to growing food, caring for Country/Place and seasonal observations. Use community resources (e.g. local community gardens, Aboriginal rangers or Elders, waste/recycling educators) to enrich the inquiry.	
Teach			
Kindergarten learning outcomes	Pre-primary learning area content	Year 1 learning area content	Play-based learning experiences
Developing skills for working with others - Share observations with others as they explore their immediate world using their five senses Developing inquiry and communication skills - Plan and carry out a few simple sequenced steps when exploring and investigating - Use simple language of measurement to describe, compare, order or sort observations made when exploring Investigating interactions between the environment and its people - Describe the basic needs of people, plants and animals, and places where they live - Investigate places where people, plants and animals live - Describe relationships between living and non-living things - Discuss how not caring for the environment might harm it - Infer, predict and hypothesise in order to develop an increased understanding of the interdependence between land, people, plants and animals	Science understanding - Biological sciences - Plants and animals have basic needs that are met by the places they live Science inquiry - Questioning and predicting - Planning and conducting - Processing, modelling and analysing - Evaluating - Communicating - Collaborating and applying	Science understanding - Biological sciences - Plants and animals have external features that serve a purpose and by which they can be grouped Science inquiry - Questioning and predicting - Planning and conducting - Processing, modelling and analysing - Evaluating - Communicating - Collaborating and applying	- Set up a garden shop in the classroom with labels, price tags, seed packets and care cards. - Plant a garden (or tend to an existing garden). - Use magnifying glasses to observe and sort natural objects or living things by external features, e.g. colour, shape, texture, number of leaves/legs etc. - Conduct a plant-growing inquiry (beans or seedlings) for children to observe, compare and document changes over time based on different conditions, e.g. light, moisture. - Observe minibeasts (snails, worms, insects) and notice how their features help them move, eat, hide or survive in different environments. - Explore changes using the Aboriginal and Torres Strait Islander seasonal calendar that is relevant to your context. Children notice which plants, animals or weather patterns match the current season and connect these observations to needs, features and environmental relationships. - Supply books for the children to read and use to make a Wonder wall. Record the questions and research the answers. - Pose a big picture question about life and living things to the children and create an inquiry together. - Create a class book of the children’s wonderings and share with an older year group. - Use cameras or other devices to record changes over time, allowing the children to determine what they would like to observe and how they would like to measure it. - Go on outdoor walks, asking the children to notice where living things are found and discuss how environments support their needs, e.g. shade, moisture, food sources, etc. - Set up a ‘Listen to Country’ quiet observation space where children sit, listen and record what they notice, e.g. birds, insects, wind, temperature shifts etc. - Children create nature prints, leaf rubbings or clay models of plant parts. - Children dramatise the growing of a plant from a seed.



			Whole/small group teaching Plant growing inquiry Kindergarten: Follow a two-step routine (water then record); describe changes using senses (looks taller/changed leaf colour). Pre-primary: Pose a prediction comparing plants (more water versus less); discuss pattern over a week. Year 1: Record informal measurements (leaf count/height spans); sort results in a simple table; compare to predictions and pose a new question. Garden shop Kindergarten: Sort items as living or non-living; match pictures to needs (water, sun). Pre-primary: Explain how the ‘place’ meets a plant’s needs (sunny windowsill versus shade). Year 1: Group plants by external features (leaf type/stem/flower) and justify groupings with purpose statements (broad leaves help gather light).
Common understandings <i>Some suggested common understandings that could be applied across year groups for teaching</i>			
Common vocabulary: observe, compare, describe, predict, question, measure, investigate, record, features, similarities/differences, needs, living/non-living, environment		Common skills: - Posing questions and predicting - Conducting investigations - Observing, measuring and recording - Discussing findings	
Common concepts: - Living things and their needs - Features of living things - Caring for the environment			
Environments and provocations			
Indoor		Outdoor	
- Dramatic play: Garden shop with labels, price tags, seed packets, care cards - Investigation table: Hand lenses, magnifying glasses, trays, living/non-living samples, sorting rings, balance scales - Science lab corner: Three-plant watering trial with observation journals/clipboards, lab coats - Wonder wall and research area: Non-fiction texts, picture dictionaries, prompt cards for questioning and predicting		- Garden beds and pots: Dedicated plots for variable tests and general exploration (sun/shade; wet/dry) - Mini-habitat areas: Logs/leaf litter for minibeast observations - Weather station: Rain gauge, shade/sun markers, daily observation roster - Photo posts: Fixed points to capture changes over time - Outdoor observation walks or quiet observation space	



Monitor and assess <i>Consider the learning experiences and identify the points of assessment for learning, of learning and as learning</i>		
Opportunities to assess and evaluate for learning, development and wellbeing		
Kindergarten	Pre-primary	Year 1
- Observe children as they explore with their senses and record anecdotal notes about the language they use, e.g. ‘cold’, ‘wet’, ‘tiny’. - Prompt children to follow a simple two-step investigation and record whether they can keep the sequence, e.g. First water, then draw. - Invite children to explain whether something is living or non-living, and record their reasoning. - Sit nearby during play and scribe children’s wonderings for the Wonder wall. - Photograph children as they notice changes (e.g. wilting, growing, drying) and ask them to tell you what’s happening, recording their words. - Encourage collaborative exploration and observe how children share materials, ideas and roles.	- Before an investigation, ask children to make a prediction and scribe or support them to record it. - After the investigation, prompt children to compare their prediction with their observation, documenting their explanation. - Facilitate small-group discussions where children identify basic needs of plants/animals, noting accuracy and vocabulary use. - Provide a set of images (Sun, water, soil, shelter) and ask children to sort and justify, recording their reasoning. - Ask children to choose a place in the outdoor area and explain why it suits a plant/animal; note the link between place and need. - During play-based scenarios (Garden shop or Plant growing inquiry), listen and record key language that shows emerging scientific ideas.	- Provide images of plants/animals and ask children to identify external features, noting accuracy and vocabulary use. - Set up sorting activities where children group living things; ask them to justify their grouping and record their reasoning. - Support children to record data in simple tables, with tallies or other visual/physical models, assessing clarity and accuracy. - Ask children to compare their observations to their predictions, noting the quality of their reasoning. - Prompt children to create a new question based on findings (e.g. by asking ‘What else do you want to find out?’) - Provide opportunities for children to communicate findings orally or in writing, listening for correct use of everyday and scientific vocabulary. - Present simple environmental choices (e.g. ‘Where should we plant this seedling?’) and assess how children apply science knowledge to justify decisions.
Kindergarten focus learning sub-outcomes	Relevant statements from the Pre-primary Achievement standard	Relevant statements from the Year 1 Achievement standard
- Shares observations with peers, using senses and descriptive language. - Follows simple sequenced steps in an investigation. - Uses simple comparative language (bigger/smaller; more/less; longer/shorter). - Identifies basic needs of familiar living things and places where these needs are met. - Begins to describe relationships between living and non-living things in familiar places. - Talks about caring for the environment and simple consequences when we don’t.	Science understanding: Biological sciences - Children describe the basic needs of plants and animals and how these are met by the places they live. - Children describe how daily and seasonal changes in the environment affect everyday life. Science inquiry - Children in Pre-primary pose questions and make predictions based on their shared experiences and knowledge. They use their senses in guided investigations to make observations, discuss these and represent them in a variety of ways. Children discuss similarities between their predictions and observations.	Science understanding: Biological sciences - Children group plants and animals by observing their external features. Science inquiry - Children pose questions to explore science ideas and make predictions based on experiences and prior knowledge. They engage safely in guided investigations, making and recording observations, including informal measurements. Children use provided tables to sort data and represent it visually and with physical models. With guidance, children compare observations with predictions and identify further questions. They use everyday vocabulary to communicate observations and findings. Children use their science knowledge to help them make choices and decisions, such as choosing ways to manipulate materials to alter their appearance.

