Government of **Western Australia**
School Curriculum and Standards Authority

Western Australian Curriculum

Science

Proposed Comparison of Curriculum | Pre-primary–Year 6
Draft for consultation | Not for implementation

Acknowledgement of Country

Kaya. The School Curriculum and Standards Authority (the Authority) acknowledges that our offices are on Whadjuk Noongar boodjar and that we deliver our services on the country of many traditional custodians and language groups throughout Western Australia. The Authority acknowledges the traditional custodians throughout Western Australia and their continuing connection to land, waters and community. We offer our respect to Elders past and present.

Disclaimer

Any resources such as texts, websites and so on that may be referred to in this document are provided as examples of resources that teachers can use to support their learning programs. Their inclusion does not imply that they are mandatory or that they are the only resources relevant to the course. Teachers must exercise their professional judgement as to the appropriateness of any they may wish to use.

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Contents

Overview

The current Western Australian Curriculum: Science was adopted from the Australian Curriculum version 8.1.

Western Australia provided feedback to the Australian Curriculum, Assessment and Reporting Authority (ACARA) during the consultation for the Australian Curriculum. Teachers advised that the content descriptions needed to be clarified and examples provided to support teaching and learning.

The proposed revisions to the Western Australian Curriculum: Science are adopted and adapted from the Australian Curriculum version 9.

Guide to reading this document

The first row contains the current Western Australian Curriculum: Science curriculum content organised in year levels. The second row contains the endorsed content for Australian Curriculum version 9. The content listed for the Western Australian Curriculum and the Australian Curriculum version 9 is unedited. The third row contains the proposed content for consultation.

Strand: Science and understanding

Sub-strand: Biological sciences

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	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 have life cycles	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
Australian Curriculum v9	observe external features of plants and animals and describe ways they can be grouped based on these features (AC9SFU01)	identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs (AC9S1U01)		compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals (AC9S3U01)	explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships (AC9S4U01)	examine how particular structural features and behaviours of living things enable their survival in specific habitats (AC9S5U01)	investigate the physical conditions of a habitat and analyse how the growth and survival of living things is affected by changing physical conditions (AC9S6U01)
Proposed WA Curriculum	Plants and animals have basic needs and live in different places where these are met For example: • basic needs include air, food, water and shelter • the places plants and animals live include our homes and local areas, wetlands, forests and deserts • how connection to Country and relationships to plants and animals is important to Aboriginal and Torres Strait Islander Peoples	Plants and animals have external features that serve a purpose and by which they can be grouped For example: • the external features of plants include seeds, bark, flowers, fruits and roots • the external features of animals include eyes, body covering, legs and wings	Plants and animals have life cycles through which they grow, change and have offspring For example: • living things have predictable characteristics at different stages of development; these are used by Aboriginal and Torres Strait Islander Peoples to know when to harvest different foods	Living things can be distinguished from non-living and once-living things, and classified by their characteristics For example: • using a dichotomous key to classify living things based on their characteristics • vertebrates include fish, amphibians, reptiles, birds and mammals • invertebrates include insects, molluscs and arachnids • systems of classifying living things used by Aboriginal and Torres Strait Islander Peoples, such as by use, age, stage in life cycle, sex, social status and totemic association	Consumers, producers, and decomposers have roles within a habitat and interact in ways that can be represented by food chains For example: • feeding relationships of producers and consumers represented in a food chain • comparing food chains across habitats • arrows represent the transfer and direction of the flow of energy within a habitat	Living things have structural and behavioural adaptations that help them to survive in their habitat For example: • features that allow plants and animals to survive in Australia's desert environments or ocean environments • camouflage is an adaptation by animals to hide from predators and to ambush prey	The growth and survival of living things are affected by the changing physical conditions of their environment, which can be influenced by human activities For example: • the effect of changes to physical conditions, such as salinity, soil type, sunlight or temperature, on plant growth • coral bleaching on the Great Barrier Reef due to increased water temperature • knowledge of the physical conditions required for animal and plant survival, and effective practices to farm them, was vital to the survival of Aboriginal and Torres Strait Islander Peoples

Sub-strand: Chemical sciences

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	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
Australian Curriculum v9	recognise that objects can be composed of different materials and describe the observable properties of those materials (AC9SFU03)	recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces (AC9S2U03)		investigate the observable properties of solids and liquids and how adding or removing heat energy leads to a change of state (AC9S3U04)	examine the properties of natural and made materials including fibres, metals, glass and plastics and consider how these properties influence their use (AC9S4U04)	explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles (AC9S5U04)	compare reversible changes, including dissolving and changes of state, and irreversible changes, including cooking and rusting that produce new substances (AC9S6U04)
Proposed WA Curriculum	Objects are made of different materials that have observable properties For example: • raw and processed materials can be grouped based on observed properties, such as colour, hardness, texture, potential use and flexibility	Materials can be changed physically without changing their composition For example: • raw and processed materials can be physically changed to suit a particular purpose, such as twisting strands of cotton or wool together to make thread stronger • raw materials may include clay, sand, wood and stone • processed materials may include modelling clay, paper, fabric and plastic • physical changes can include scrunching, twisting, pulling, stretching, melting, bending or breaking into smaller pieces by cutting, tearing or crushing	Materials can be combined for a particular purpose For example: • the materials used in the construction of everyday objects, and ways their properties work together • the ways in which Aboriginal and Torres Strait Islander Peoples combine different materials to produce utensils that include hafting, weaving, sewing and gluing	A change of state between solid and liquid can be caused by adding or removing heat For example: • changes of state caused by removing or adding heat (thermal energy) • a solid will hold its shape while a liquid will fill the bottom of a container	Materials, including fibres, metals, glass and plastics, have a range of physical properties that influence their use For example: • processed materials are manufactured from raw materials to fulfil a purpose, and include paper, glass, leather, steel and cloth • reasons why materials, or combinations of materials, are used in familiar objects, such as shoes, drink containers or backpacks • the use of raw materials and processed materials by Aboriginal and Torres Strait Islander Peoples for different purposes, such as tools, clothing and shelter, based on their properties	Solids, liquids and gases have different observable properties and behave in different ways, which may be explained by modelling the motion and arrangement of atoms and molecules (particles) For example: • substances can be classified as solids, liquids and gases based on their shape, ability to flow, and volume • the arrangement of atoms and molecules in each state of matter can be represented using drawings or models • gases have mass and this can be observed when using a balance to compare an empty balloon with one filled with air	Materials can undergo reversible changes and irreversible changes For example: • reversible changes include mixing and changes of state • irreversible changes include chemical reactions that produce new substances, such as cooking, burning and rusting

Sub-strand: Earth and space sciences

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	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	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
Australian Curriculum v9	describe daily and seasonal changes in the environment and explore how these changes affect everyday life (AC9S1U02)		recognise Earth is a planet in the solar system and identify patterns in the changing position of the sun, moon, planets and stars in the sky (AC9S2U01)	compare the observable properties of soils, rocks and minerals and investigate why they are important Earth resources (AC9S3U02)	identify sources of water and describe key processes in the water cycle, including movement of water through the sky, landscape and ocean; precipitation; evaporation; and condensation (AC9S4U02)	describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface (AC9S5U02)	describe the movement of Earth and other planets relative to the sun and model how Earth's tilt, rotation on its axis and revolution around the sun relate to cyclic observable phenomena, including variable day and night length (AC9S6U02)
Proposed WA Curriculum	Daily and seasonal changes in the environment affect our local community and the world around us For example: • changes in the weather affect plants and animals, including humans • daily changes include temperature, precipitation and cloud cover • seasonal changes include flowers, activity of insects and bird behaviour • the seasonal calendar of Aboriginal and Torres Strait Islander Peoples, its significance, and observation of associated changes in the environment	Water is a natural resource that comes from a range of sources and moves through the environment in a continuous cycle, and is used by people, plants and animals in different ways For example: • the key processes of the water cycle are evaporation, condensation and precipitation • water use at home or school and planning ways to reduce consumption • Aboriginal and Torres Strait Islander Peoples' connections with, and valuing of, water and water resource management	Earth is a planet in the solar system that orbits a star (the sun) For example: • the revolution of Earth around the sun • some phenomena in the sky are only visible during the day and others during the night • patterns in the position and appearance of the sun and moon in the sky and how these were used by Aboriginal and Torres Strait Islander Peoples	Soils, rocks and minerals are important Earth resources, and are used by both humans and other living things in various and interconnected ways For example: • ways in which living things, including humans, depend on soil for food, growing plants, providing habitat for organisms, and holding and cleaning water • the interconnected use of resources, such as water, by humans and other living things	Weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface For example: • types of weathering caused by mechanical means, such as wind abrasion, cycles of extreme heat and cold and frost wedging; and biological means, such as by plants and tree roots • how humans change local landscapes and the effect these changes might have on rates of erosion • the significance to Aboriginal and Torres Strait Islander Peoples of landforms, such as Katter Kich (Wave Rock) and its importance to Ballardong Noongar people	Cyclic observable phenomena on Earth, such as the day/night cycle or tides, are caused by its rotation on its axis and the influence of the moon For example: • the role of gravity in the orbit of planets around the sun • day and night are caused by Earth's rotation on its axis • Aboriginal and Torres Strait Islander Peoples' understanding of the night sky and its use for timekeeping purposes as evidenced in oral cultural records, petroglyphs, paintings and stone arrangements	The effect of sudden geological events on Earth's surface, including tsunamis, earthquakes and volcanic eruptions, and extreme weather, including cyclones, extreme heat and floods. For example: • the characteristics of earthquakes, including magnitude and location, and the geographic locations where earthquakes and volcanoes will most commonly occur • extreme weather, and factors that cause these phenomena • the effects of extreme weather on Earth's surface, such as bushfires and floods

Sub-strand: Physical sciences

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	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
Australian Curriculum v9	describe how objects move and how factors including their size, shape or material influence their movement (AC9SFU02)	describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape (AC9S1U03)	explore different actions to make sounds and how to make a variety of sounds, and recognise that sound energy causes objects to vibrate (AC9S2U02)	identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another (AC9S3U03)	identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects (AC9S4U03)	identify sources of light, recognise that light travels in a straight path and describe how shadows are formed and light can be reflected and refracted (AC9S5U03)	investigate the transfer and transformation of energy in electrical circuits, including the role of circuit components, insulators and conductors (AC9S6U03)
Proposed WA Curriculum	The way objects move depends on a variety of factors, including their size, shape, material and the force applied For example: • the ways different and unusually shaped objects move • the way similar-shaped, but different sized objects, such as marbles and basketballs, move • traditional Aboriginal and Torres Strait Islander Peoples' toys and how they move	Sound energy is produced by a range of natural and human-made sources and can be sensed For example: • ways to produce sound using familiar objects and actions, such as striking, blowing, scraping, plucking and shaking, and the qualities of sounds including volume and pitch • traditional Aboriginal and Torres Strait Islander Peoples' instruments and how they make their characteristic sounds	The strength and direction of a push or a pull force affects how an object moves or changes shape For example: • pushing or pulling on an object can start or stop its motion, change its direction of travel or change its shape • push and pull forces can be represented using models, drawings or role-play • traditional games, such as Kendama, Daruma Otoshi, marbles or shuttlecock use push and pull forces	Energy can move from one thing to another (transfer) in different ways, and can be transformed For example: • energy changes state and cannot be created or destroyed • energy from food is converted to movement (transform) to kick a ball (transfer) • designing and making a toy that uses elastic energy (stored energy) to move (kinetic energy)	Forces, including frictional, gravitational and magnetic, can be exerted by one object on another through direct contact or from a distance For example: • gravity is the force that pulls all objects towards the centre of Earth and gravitational force acts on an object, regardless of whether it is moving or not moving • force arrows to represent the direction and magnitude of forces acting on an object • magnetic forces can pull objects from a distance • the effect of friction on movement of a toy car	Light travels from a source in a straight path and can be absorbed, reflected, refracted, form shadows and be sensed For example: • the effect of colour on the absorption or reflection of light • shadows that are formed when light is completely or partially blocked by an object • light enters the eye and is refracted by the lens onto the fovea, where it is sensed	Electrical energy can be transferred and transformed in electrical circuits and can be generated from renewable and non-renewable sources For example: • the necessary components of an electrical circuit include a source, conductor and load • circuits transfer and transform electrical energy into different forms that include light, sound or motion Different materials have different levels of conductivity For example: • common insulators and conductors and their practical applications

Strand: Science inquiry skills

Sub-strand: Questioning and predicting

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	No content	Pose and respond to questions, and make predictions about familiar objects and events		With guidance, identify questions in familiar contexts that can be investigated scientifically and make predictions based on prior knowledge		With guidance, pose clarifying questions and make predictions about scientific investigations	
Australian Curriculum v9	pose questions and make predictions based on experiences	pose questions to explore observed simple patterns and relationships and make predictions based on experiences		pose questions to explore observed patterns and relationships and make predictions based on observations		pose investigable questions to identify patterns and test relationships and make reasoned predictions	
Proposed WA Curriculum	Pose questions and make predictions based on prior knowledge and shared experiences	Pose questions, explore ideas and make predictions based on knowledge and experiences		Pose questions that include variables to be changed and measured for investigation to explore science ideas and make predictions based on observations of planned phenomena		Pose specific, relevant and measurable questions that include variables to be changed and measured and apply science knowledge to make predictions	
	(Pre-primary) For example: • posing, exploring and responding to questions based on experiences • predicting how an unusually shaped object, such as an egg or hexagonal block might move	(Year 1) For example: • observing the sky and making predictions about rainfall • posing questions about how to vary the pitch of sounds made with different instruments	(Year 2) For example: • posing questions about the appearance of the moon or the stars • predicting what might occur when materials, such as playdough or tissue paper, are pulled with different strengths	(Year 3) For example: • observing the melting of ice and predicting factors that will affect the rate of change • asking questions about how different media affect the growth of plants and predicting the outcome of investigations designed to answer these • predicting which material will be the most effective insulator of heat	(Year 4) For example: • predicting the landforms that are formed by the erosion of different rock types, such as limestone or granite • posing questions about how changing the wheels of a toy car can affect the distance it will travel • predicting the effect on food chains when living things are removed or die out in an area	(Year 5) For example: • predicting how light is absorbed or reflected by dark and light surfaces • posing questions about the behaviour of solids, liquids and gases under different conditions including when heated or cooled	(Year 6) For example: • posing questions about the conductivity of different materials when tested in a simple circuit • making reasoned predictions about the physical conditions that will result in greatest plant growth

Sub-strand: Planning and conducting

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	Participate in guided investigations and make observations using the senses	Participate in guided investigations to explore and answer questions		With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment		Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks	
Australian Curriculum v9	engage in investigations safely and make observations using their senses	suggest and follow safe procedures to investigate questions and test predictions		use provided scaffolds to plan and conduct investigations to answer questions or test predictions, including identifying the elements of fair tests, and considering the safe use of materials and equipment		plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place	
Proposed WA Curriculum	Participate in guided and self-initiated investigations making observations and assessing risks	Engage in guided investigations to explore and answer questions, test predictions, and assess risks		Plan and conduct investigations including elements of fair tests, and consider the material and equipment risks		Plan and conduct fair, safe, and repeatable investigations	
	(Pre-primary) For example: • testing ideas using the five senses, such as how different surfaces are cool or warm to touch • discussing ways to conduct investigations safely	(Year 1) For example: • suggesting ways to conduct investigations safely, including wearing goggles and aprons • following visual or verbal steps to construct a musical instrument or manipulate a material	(Year 2) For example: • comparing how different objects move when pushed or pulled • demonstrating appropriate use of materials and equipment	(Year 3) For example: • using an investigation planner to identify what to change, what to keep the same and what to measure • planning an investigation, using a scaffold, to determine which material is the best to keep substances cold	(Year 4) For example: • planning a fair test to identify which shoe provides the greatest or least friction • predicting the interactions of forces in a game or toy design, and building and testing a prototype	(Year 5) For example: • planning and recording the method to be used in an investigation so that it can be repeated by someone else • making decisions on the variables to be controlled in fair tests	(Year 6) For example: • considering ways to approach investigations that include researching, trial-and-error, experimental testing, field observations, accessing digital tools to collect and manage data and virtual simulations • identify other variables that should remain the same during an investigation

Sub-strand: Planning and conducting

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	No content	Use informal measurements to collect and record observations, using digital technologies as appropriate		Consider the elements of fair tests and use formal measurements and digital technologies as appropriate, to make and record observations accurately		Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate	
Australian Curriculum v9	No content	make and record observations, including informal measurements, using digital tools as appropriate		follow procedures to make and record observations, including making formal measurements using familiar scaled instruments and using digital tools as appropriate		use equipment to observe, measure and record data with reasonable precision, using digital tools as appropriate	
Proposed WA Curriculum	Record observations using a range of strategies	Make and record observations, including informal measurements		Make and record observations, including formal measurements using familiar scaled instruments		Select and use equipment to observe, measure and record data	
	(Pre-primary) For example: • taking photographs during an investigation to show the outcome of manipulating materials or observations of the weather • making a collection of drawings in a journal to document change in an aspect of their local environment over time	(Year 1) For example: • making observations using the senses to gather information and record it using text, drawing, counts or digital tools • using uniform informal units of measurement, such as cups, handspans, walking paces, blocks or pop-stick lengths	(Year 2) For example: • making observations of the different life stages of silkworms and record the change of appearance by taking digital images and providing a description	(Year 3) For example: • making and recording observations using appropriate equipment, including scaled instruments • exploring how to use equipment, such as thermometers or measuring cylinders to make readings	(Year 4) For example: • making observations, including with familiar scaled instruments, and recording these using tables or graphic organisers	(Year 5) For example: • comparing the precision of different measuring instruments, such as a measuring jug and a cup, and discussing why precision is important • recording data using standard units, such as grams, seconds and metres	(Year 6) For example: • recording data in tables and diagrams or electronically, such as in spreadsheets • using tools, such as digital thermometers or soil moisture probes, to collect and record data over time

Sub-strand: Processing, modelling and analysing

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	Engage in discussions about observations and represent ideas	Use a range of methods to sort information, including drawings and provided tables and through discussion, compare observations with predictions		Use a range of methods including tables and simple column graphs to represent data and to identify patterns and trends		Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate	
Australian Curriculum v9	represent observations in provided templates and identify patterns with guidance	sort and order data and information and represent patterns with visual or physical models		construct and use representations, including tables, simple column graphs and visual or physical models, to organise data and information, show simple relationships and identify patterns		construct and use appropriate representations, including tables, graphs and visual or physical models, to organise and process data and information and describe patterns and relationships	
Proposed WA Curriculum	Represent and discuss observations and identify patterns	Sort and order data using provided tables and represent data using visual or physical models		Organise and represent data using tables, column graphs and visual or physical models to identify patterns		Process and represent data using tables, graphs and visual or physical models to identify patterns, and describe the observed relationship between the dependent and independent variables	
	(Pre-primary) For example: • discussing places where animals live and identifying patterns in their needs and features of their habitat • counting the number of drink bottles in the class made from different materials and representing this information using a picture graph	(Year 1) For example: • representing measurements of plant growth in tables, pictographs, drawings or photographs • representing rainfall data collected with a rain gauge using tally marks, drawings, objects or symbols	(Year 2) For example: • investigating and representing the number of objects made of different materials in the classroom by constructing picture graphs • sequencing images of phases of the moon	(Year 3) For example: • comparing, with column graphs, data collected when investigating the effect of different insulation layers on the melting of ice • graphing data about the amount of water used in the home	(Year 4) For example: • simulating, with computer software, the number of producers and consumers in a food chain and how these changes over time • measuring the volume of liquid absorbed by different materials and representing this graphically	(Year 5) For example: • represent the connection between animals, their environments and adaptations • modelling the movement of the planets in the solar system • locating tide data and creating appropriate graphs to show how the height changes over time	(Year 6) For example: • mapping the location of tectonic activity and representing the magnitude of earthquakes using a key • investigating school energy use and graphing this data to determine the times of the year when it is greatest and least • representing data about the growth of plants in soils of varying salinity over time using appropriate graphs

Sub-strand: Evaluating

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	No content	Compare observations with those of others		Reflect on investigations, including whether a test was fair or not		Reflect on and suggest improvements to scientific investigations	
Australian Curriculum v9	Compare observations with predictions with guidance	Compare observations with predictions and others' observations, consider if investigations are fair and identify further questions with guidance		Compare findings with those of others, consider if investigations were fair, identify questions for further investigation and draw conclusions		Compare methods and findings with those of others, recognise possible sources of error, pose questions for further investigation and select evidence to draw reasoned conclusions	
Proposed WA Curriculum	Discuss similarities and differences between predictions and observations	Compare observations with predictions and identify further questions		Compare findings to those of others, and to predictions; consider if investigations were fair, identify questions for further investigation		Compare methods and findings with those of others, and to predictions; pose questions for further investigation; select evidence to draw conclusions	
	(Pre-primary) For example: • discussing and comparing their observations of the weather in the afternoon to predictions made in the morning • comparing, with guidance, observations of plants or animals made during fieldwork	(Year 1) For example: • predicting the features of plants or animals based on their classification • comparing findings of water use surveys and discussing differences between home and school, or between each other's homes	(Year 2) For example: • comparing observations of movement with predictions, such as how far an object may travel • predicting the result of combining two materials and observing the outcome, such as mixing cornflour and water to make a non-Newtonian fluid	(Year 3) For example: • discussing the factors that make investigations fair and evaluating the fairness of their own and others' investigations • comparing predictions of which material will keep ice frozen the longest and asking why predictions and data may not match	(Year 4) For example: • comparing designed solutions, such as toys, lunchboxes or structures, to determine suitability of selected materials • observing the effect of magnets on different materials, and asking questions about the application of these properties in a design context	(Year 5) For example: • comparing the accuracy of measurements with those of others to determine if the investigation was a fair test • identifying the strengths and weaknesses of their own and others' investigations, including where testing was not fair and practices that could be improved	(Year 6) For example: • determining errors that may have occurred during investigations, including changing too many variables, incorrect measurements or changes in environmental factors • comparing and contrasting data collected by different individuals or groups to discuss similarities and differences in their findings and posing questions about differences for further investigation

Sub-strand: Communicating

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	Share observations and ideas	Represent and communicate observations and ideas in a variety of ways		Represent and communicate observations, ideas and findings using formal and informal representations		Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts	
Australian Curriculum v9	share questions, predictions, observations and ideas with others	Represent and communicate observations and ideas in a variety of ways		write and create texts to communicate findings and ideas for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate		write and create texts to communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate	
Proposed WA Curriculum	Share questions, predictions, observations and ideas with others	Communicate observations, ideas, and findings using everyday and scientific vocabulary		Communicate ideas and findings for identified purposes and audiences, using scientific vocabulary and digital tools as appropriate		Communicate ideas and findings for specific purposes and audiences, including selection of language features, using digital tools as appropriate	
	(Pre-primary) For example: • describing observations to others through discussions, drawings or models • retelling the steps of an investigation and what happened	(Year 1) For example: • documenting changes in weather over days or weeks using drawings or digital tools • drawing or modelling the external features of a plant or animal	(Year 2) For example: • representing push and pull forces using role-play, labels, arrows or time lapse drawings and describing their representation • sequencing events, processes or ideas	(Year 3) For example: • discussing how to prepare simple reports of their investigations to share predictions, methods, results, and conclusions with their peers • representing energy transfer using diagrams, digital drawings, arrows, or labels using scientific vocabulary	(Year 4) For example: • modelling landscapes using materials, such as sand, gravel, soil and rocks to show effects of erosion by water • describing the effects of changing numbers of producers or consumers in a habitat using virtual or game-based food chain simulations	(Year 5) For example: • preparing a scientific report for an investigation using scientific vocabulary, data representations and sentence structures • annotating digital photography or field sketches to describe structural features of plants or animals	(Year 6) For example: • preparing a scientific report to share findings about how plants respond to changes in physical conditions, such as temperature or salinity • representing circuits using virtual simulations or circuit diagrams and indicating the direction of electricity flow

Sub-strand: Collaborating and applying

	Pre-primary	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Current WA Curriculum	**Nature and development of science**						
	Science involves making predictions and describing patterns and relationships	Science involves observing, asking questions about, and describing changes in, objects and events		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 and reflects historical and cultural contributions	
	Use and influence of science						
	Science involves making predictions and describing patterns and relationships	People use science in their daily lives, including when caring for their environment and living things		Science knowledge helps people to understand the effect of their actions		Scientific knowledge is used to solve problems and inform personal and community decisions	
Australian Curriculum v9	**Nature and development of science**						
	explore the ways people make and use observations and questions to learn about the natural world	describe how people use science in their daily lives, including using patterns to make scientific predictions		examine how people use data to develop scientific explanations		examine why advances in science are often the result of collaboration or build on the work of others	
	Use and influence of science						
				consider how people use scientific explanations to meet a need or solve a problem		investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions	
Proposed WA Curriculum	Use the senses to develop scientific ideas and learn about the natural and physical world	Use science knowledge to make decisions and choices in their environment		Use science knowledge to propose explanations for observed phenomena and solutions to problems		Use science knowledge to develop considered responses to problems through investigation and research at a local and global level	
	(Pre-primary) For example: • exploring the results of applying different forces when using play equipment • responding to questions posed by teachers or children about the way different materials behave	(Year 1) For example: • selecting plants for an edible class garden • explaining why classroom furniture is made from a combination of materials • describing how they can make sustainable choices when choosing foods	(Year 2) For example: • examining play equipment to identify the materials used and describe why each was chosen • describing the best way to push and pull a Kendama to consistently land the ball in the desired place	(Year 3) For example: • examining a drink cooler and considering the materials it is made from and why they were chosen • observing evaporation and investigating ways to keep soil moist while conserving water	(Year 4) For example: • designing an investigation to test how storage life for fruit may be increased • examining the wheels of different toys and evaluating which material has the most friction on a different surfaces	(Year 5) For example: • applying knowledge of animal adaptations to propose solutions to prevent the extinction of an endangered species • participating in a citizen science project in the local community	(Year 6) For example: • researching structures resistant to seismic activity and the materials used in regions prone to such events to design a house that can withstand an earthquake • collaborating with other students to research a local issue and suggest ways of solving it, such as keeping the classroom cool while reducing energy use