










General Capabilities:  Literacy  Numeracy  ICT competence  Critical and creative thinking  Ethical behaviour  Personal and social competence  Intercultural understanding

Cross Curriculum Perspectives   Aboriginal and Torres Strait Islander histories and cultures, **ASIA** Asia and Australia's engagement with Asia, **SUST** Sustainability

Science Content Strands: The 3 strands are interrelated and their content is taught in an integrated way. The strands *Science Inquiry Skills* & *Science as a Human Endeavour* are described across a 2-year band.

Achievement standard - By the end of Year 3:

The order and detail in which the content descriptions are organised into teaching/learning programs are decisions to be made by the teacher.

Over Years 3 to 6:

Students develop their understanding of a range of systems operating at different time and geographic scales.

In Year 3 Students:

- observe heat and its effects on solids and liquids and begin to develop an understanding of energy flows through simple systems.
- In observing day and night, they develop an appreciation of regular and predictable cycles.
- order their observations by grouping and classifying; in classifying things as living or non-living they begin to recognise that classifications are not always easy to define or apply.
- begin to quantify their observations to enable comparison, and learn more sophisticated ways of identifying and representing relationships, including the use of tables and graphs to identify trends.
- use their understanding of relationships between components of simple systems to make predictions.

Students :

- **describe** how they can use science investigations to respond to questions
- **identify** where people use science knowledge in their lives.
- **collect** and present data in a way that helps to answer their questions
- **use** their experiences to make predictions.
- **describe** features common to living things.
- **use** their knowledge of the movement of the Earth, materials and the behaviour of heat to suggest explanations for everyday observations.

What do I want them to Learn?

BIOLOGICAL SCIENCES

Living things can be grouped on the basis of observable features and can be distinguished from non-living things

Students will be:

- recognising characteristics of living things such as growing, moving, sensitivity and reproducing
- recognising the range of different living things
- sorting living and non-living things based on characteristics
- exploring differences between living, once living and products of living things

Primary Connections Unit
Feathers, Fur or Leaves

EARTH & SPACE SCIENCES

Earth's rotation on its axis causes regular changes, including night and day

Students will be:

- recognising the sun as a source of light
- constructing sundials and investigating how they work
- describing timescales for the rotation of the Earth
- modelling the relative sizes and movement of the sun, Earth and moon

Primary Connections Unit
Spinning in Space

CHEMICAL SCIENCES

A change of state between solid and liquid can be caused by adding or removing heat

Students will be:

- investigating how liquids and solids respond to changes in temperature, for example water changing to ice, or melting chocolate
- exploring how changes from solid to liquid and liquid to solid can help us recycle materials
- predicting the effect of heat on different materials

Primary Connections Unit
Runny or Not

PHYSICAL SCIENCES

Heat can be produced in many ways and can move from one object to another

Students will be:

- describing how heat can be produced such as through friction or motion, electricity or chemically (burning)
- identifying changes that occur in everyday situations due to heating and cooling
- exploring how heat can be transferred through conduction
- recognising that we can feel heat and measure its effects using a thermometer

Primary Connections Units
Heat

What do I want them to learn? (Science Understanding)
(Review for balance and coverage of content descriptors)

YEAR 3 SCIENCE	SCIENCE UNDERSTANDING				
Content Description	Elaborations	T1	T2	T3	T4
Biological sciences					
Living things can be grouped on the basis of observable features and can be distinguished from non-living things	<ul style="list-style-type: none"> recognising characteristics of living things such as growing, moving, sensitivity and reproducing recognising the range of different living things sorting living and non-living things based on characteristics exploring differences between living, once living and products of living things 				
Chemical sciences					
A change of state between solid and liquid can be caused by adding or removing heat	<ul style="list-style-type: none"> investigating how liquids and solids respond to changes in temperature, for example water changing to ice, or melting chocolate exploring how changes from solid to liquid and liquid to solid can help us recycle materials predicting the effect of heat on different materials 				
Earth and space sciences					
Earth's rotation on its axis causes regular changes, including night and day	<ul style="list-style-type: none"> recognising the sun as a source of light constructing sundials and investigating how they work describing timescales for the rotation of the Earth modelling the relative sizes and movement of the sun, Earth and moon 				
Physical sciences					
Heat can be produced in many ways and can move from one object to another	<ul style="list-style-type: none"> describing how heat can be produced such as through friction or motion, electricity or chemically (burning) identifying changes that occur in everyday situations due to heating and cooling exploring how heat can be transferred through conduction recognising that we can feel heat and measure its effects using a thermometer 				

What do I want them to learn? (Science as a Human Endeavour)
 (Review for balance and coverage of content descriptors)

YEAR 3 SCIENCE	SCIENCE AS A HUMAN ENDEAVOUR				
Content Description	Elaborations	Biology	Earth/ Space	Chemistry	Physics
Nature and development of science					
Science involves making predictions and describing patterns and relationships	<ul style="list-style-type: none"> • making predictions about change and events in our environment • researching how knowledge of astronomy has been used by some Aboriginal and Torres Strait Islander people • considering how posing questions helps us plan for the future 				
Use and influence of science					
Science knowledge helps people to understand the effect of their actions	<ul style="list-style-type: none"> • considering how heating affects materials used in everyday life • investigating how science helps people such as nurses, doctors, dentists, mechanics and gardeners • considering how materials including solids and liquids affect the environment in different ways • deciding what characteristics make a material a pollutant • researching Aboriginal and Torres Strait Islander people's knowledge of the local natural environment, such as the characteristics of plants and animals 				

What do I want them to learn? (Science Inquiry Skills)

(Review for balance and coverage of content descriptors)

YEAR 3 SCIENCE	SCIENCE INQUIRY SKILLS				
Content Description	Elaborations	Biology	Earth/ Space	Chemistry	Physics
Questioning and predicting					
With guidance, identify questions in familiar contexts that can be investigated scientifically and predict what might happen based on prior knowledge	<ul style="list-style-type: none"> choosing questions to investigate from a list of possibilities provided by the teacher considering familiar situations in order to think of possible areas for investigation working in groups to discuss things that might happen during an investigation 				
Planning and conducting					
Suggest ways to plan and conduct investigations to find answers to questions	<ul style="list-style-type: none"> working in groups, with teacher guidance, to test simple cause-and-effect relationships carrying out class surveys to identify trends With guidance, identify questions in familiar contexts that can be investigated scientifically and predict what might happen based on prior knowledge choosing questions to investigate from a list of possibilities provided by the teacher considering familiar situations in order to think of possible areas for investigation working in groups to discuss things that might happen during an investigation patterns in data and patterns in data 				
Safely use appropriate materials, tools or equipment to make and record observations, using formal measurements and digital technologies as appropriate	<ul style="list-style-type: none"> considering safety rules for equipment used recording measurements using familiar formal units and appropriate abbreviations, such as seconds (s), grams (g), centimetres (cm) using a digital camera to record observations 				
Processing and analysing data and information					
Use a range of methods including tables and simple column graphs to represent data and to identify patterns and trends	<ul style="list-style-type: none"> using tables to organise materials and objects based on observable properties identifying and discussing numerical and visual patterns in data collected from students' own investigations and from secondary sources 				
Compare results with predictions, suggesting possible reasons for findings	<ul style="list-style-type: none"> discussing how well predictions matched results from an investigation and sharing ideas about what was learnt 				
Evaluating					
Reflect on the investigation, including whether a test was fair or not	<ul style="list-style-type: none"> describing experiences of carrying out investigations to the teacher, small group or whole class 				
Communicating					
Represent and communicate ideas and findings in a variety of ways such as diagrams, physical representations and simple reports	<ul style="list-style-type: none"> Communicating with other students carrying out similar investigations to share experiences and improve investigation skills using simple explanations and arguments, reports or graphical representations to communicate ideas to other students 				