



# Chapel Hill State School

## Science Curriculum and Assessment Overview 2024

### YEAR 3



#### Curriculum Intent

#### Year Level Description

The science inquiry skills and science as a human endeavour strands are described across a two-year band. In their planning, schools and teachers refer to the expectations outlined in the achievement standard and also to the content of the science understanding strand for the relevant year level to ensure that these two strands are addressed over the two-year period. The three strands of the curriculum are interrelated and their content is taught in an integrated way. The order and detail in which the content descriptions are organised into teaching and learning programs are decisions to be made by the teacher.

#### Incorporating the key ideas of science

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. Students 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. They 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. They use their understanding of relationships between components of simple systems to make predictions.

#### Achievement Standards

#### Spiral Progression and Alignment

Developing the same concepts from one grade level to the next in increasing complexity and application.

#### YEAR 2

By the end of Year 2, students describe changes to objects, materials and living things. They identify that certain materials and resources have different uses and describe examples of where science is used in people's daily lives.

Students pose and respond to questions about their experiences and predict outcomes of investigations. They use informal measurements to make and compare observations. They record and represent observations and communicate ideas in a variety of ways.

#### YEAR 3

By the end of Year 3, students use their understanding of the movement of Earth, materials and the behaviour of heat to suggest explanations for everyday observations. They group living things based on observable features and distinguish them from non-living things. They describe how they can use science investigations to respond to questions.

Students use their experiences to identify questions and make predictions about scientific investigations. They follow procedures to collect and record observations and suggest possible reasons for their findings, based on patterns in their data. They describe how safety and fairness were considered and they use diagrams and other representations to communicate their ideas.

#### YEAR 4

By the end of Year 4, students apply the observable properties of materials to explain how objects and materials can be used. They describe how contact and non-contact forces affect interactions between objects. They discuss how natural processes and human activity cause changes to Earth's surface. They describe relationships that assist the survival of living things and sequence key stages in the life cycle of a plant or animal. They identify when science is used to understand the effect of their actions.

Students follow instructions to identify investigable questions about familiar contexts and make predictions based on prior knowledge. They describe ways to conduct investigations and safely use equipment to make and record observations with accuracy. They use provided tables and column graphs to organise data and identify patterns. Students suggest explanations for observations and compare their findings with their predictions. They suggest reasons why a test was fair or not. They use formal and informal ways to communicate their observations and findings.

Year 3		Science Curriculum and Assessment Overview		Chapel Hill State School			
Term 1	Term 2	Term 3	Term 4	Term 1	Term 2		
Unit 1	Unit 3	Unit 2	Unit 4	Unit 1	Unit 2		
<p><b>Is it Living?</b></p> <p>Students learn about grouping living things based on observable features and that living things can be distinguished from non-living things. They justify sorting living things into common animal and plant groups based on observable features. They also explore grouping familiar things into living, non-living, once living things and products of living things.</p> <p>Students understand that science knowledge helps people to understand the effect of actions. They use their experiences to identify questions that can be investigated scientifically and make predictions about scientific investigations. Students identify and use safe practices to make scientific observations and record data about living and non-living things. Students use scientific language and representations to communicate their observations, ideas and findings.</p>		<p><b>Hot Stuff</b></p> <p>Students investigate how heat energy is produced and the behaviour of heat when it transfers from one object or area to another. They explore how heat can be observed by touch and that formal measurements of the amount of heat (temperature) can be taken using a thermometer. Students identify that heat energy transfers from warmer areas to cooler areas. They use their experiences to identify questions about heat energy and make predictions about investigations. Students describe how they can use science investigations to respond to questions. Students plan and conduct investigations about heat and heat energy transfer and collect and record observations, using appropriate equipment to record measurements. They represent their data in tables and simple column graphs, to identify patterns, explain their results and describe how safety and fairness were considered in their investigations.</p>		<p><b>Spinning Earth</b></p> <p>Students use their understanding of the movement of Earth to suggest explanations for everyday observations such as day and night, sunrise and sunset and shadows. They identify the observable and non-observable features of Earth and compare its size with the sun and moon. They make observations of the changes in sunlight throughout the day and investigate how Earth's movement causes these changes. Students plan and conduct an investigation about shadows and collect data safely using appropriate equipment to record formal measurements. Students represent their data in tables and simple column graphs to identify patterns and explain their results. They identify how Aboriginal peoples use knowledge of Earth's movement in their traditional lives. Students explore the relationship between the sun and Earth to identify where people use science knowledge in their lives. They create a presentation to communicate their understandings and findings about the regular changes on Earth and its rotation.</p>		<p><b>What's the Matter?</b></p> <p>Students understand how a change of state between solid and liquid can be caused by adding or removing heat. They explore the properties of liquids and solids and understand how to identify an object as a solid or a liquid. Students identify how science is involved in making decisions and how it helps people to understand the effect of their actions. They evaluate how adding or removing heat affects materials used in everyday life. They conduct investigations, including identifying investigation questions and making predictions, assessing safety, recording and analysing results, considering fairness and communicating ideas and findings. Students describe how science investigations can be used to answer questions. They recognise that Australia's First Peoples traditionally used knowledge of solids and liquids in their everyday lives.</p>	
<b>Assessment</b>							
<p><b>Living Things</b></p> <p><i>Written Task</i></p> <p>Students group living things based on observable features and distinguish them from non-living things</p>		<p><b>Understanding Heat</b></p> <p><i>Experimental Investigation and Report</i></p> <p>Students conduct an investigation into the behaviour of heat to explain everyday observations. They describe how science investigations can be used to respond to questions. Students describe how safety and fairness were considered and use diagrams and other representations to communicate ideas.</p>		<p><b>Investigating the Sun, Earth and Us</b></p> <p>ERP</p> <p>Students explain the cause of everyday observations on Earth, including night and day, sunrise and sunset, and shadows and use diagrams and other representations to communicate ideas.</p>		<p><b>Investigating Solids and Liquids</b></p> <p><i>Investigation and Short Written Assessment</i></p> <p>Students conduct an investigation about solids and liquids changing state when heat is added or taken away. They make a prediction, record observations and suggest reasons for findings. Students describe how safety and fairness were considered.</p>	
<b>Achievement Standard – Elements Assessed</b>							
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**Disclaimer:** Please use this Curriculum Map as a guide. Due to professional judgement or circumstances beyond our control, it may be necessary to make changes to the published timetabling, delivery or instrument of an assessment.

