

Science Achievement Standards Scope and Sequence F-6 ACV9.0



	Scientific Inquiry Skill					Scientific Understanding				Science as a Human Endeavour	
Level	Questioning and Predicting	Planning and Conducting	Processing and analysing data and information	Evaluating	Communicating	Chemical Sciences	Physical Sciences	Earth Sciences	Biological Sciences	Nature and Development of Science	Use and influence of Science
F	Pose questions and make predictions based on their experiences.	Engage in investigations and make observations safely	With guidance, they represent observations and identify patterns.	With guidance, they compare their observations with their predictions.	Share questions, predictions, observations and ideas about their experiences with others.	Describe the observable properties of the materials that make up objects.	Identify factors that influence the movement of objects		Group plants and animals based on external features.		Identify examples of people using observation and questioning to learn about the natural world.
1	Pose questions to explore observations and make predictions based on experiences	Pose questions to explore observations and make predictions based on experiences	Follow safe procedures to make and record observations.	Use provided tables and organisers to sort and order data and information and, with guidance, represent patterns. Compare observations with predictions and identify further questions.	Use everyday vocabulary to communicate observations, findings and ideas.		Describe how different pushes and pulls change the motion and shape of objects.	Identify daily and seasonal changes and describe ways these changes affect their everyday life.	Identify how living things meet their needs in the places they live		Describe situations where they use science in their daily lives and identify examples of people making scientific predictions.
2	Pose questions to explore observed patterns or relationships and make predictions based on experience.	Suggest steps to be followed in an investigation and follow safe procedures to make and record observations.	Use provided tables and organisers to sort and order data and represent patterns in data.	With guidance, they compare their observations with those of others, identify whether their investigation was fair and identify further questions.	Use everyday and scientific vocabulary to communicate observations, findings and ideas.	Identify ways to change materials without changing their material composition.	Demonstrate how different sounds can be produced and describe the effect of sound energy on objects.	Identify celestial objects and describe patterns they observe in the sky.			Describe how people use science in their daily lives and how people use patterns to make scientific predictions.
3	Pose questions to explore patterns and relationships and make predictions based on observations.	Use scaffolds to plan safe investigations and fair tests. Use familiar classroom instruments to make measurements.	Organise data and information using provided scaffolds and identify patterns and relationships.	Compare their findings with those of others, explain how they kept their investigation fair, identify further questions, and draw conclusions.	Communicate ideas and findings for an identified purpose, including using scientific vocabulary when appropriate	Classify solids and liquids based on observable properties and describe how to cause a change of state.	Identify sources of heat energy and examples of heat transfer and explain changes in the temperature of objects.	Describe the observable properties of soils, rocks and minerals and describe their importance as resources.	Classify and compare living and non-living things and different life cycles.	Identify solutions that use scientific explanations.	Describe how people use data to develop explanations
4	Pose questions to identify patterns and relationships and make predictions based on observations.	Plan investigations using planning scaffolds, identify key elements of fair tests and describe how they conduct investigations safely. Use simple procedures to make accurate formal measurements.	Construct representations to organise data and information and identify patterns and relationships.	Compare their findings with those of others, assess the fairness of their investigation, identify further questions for investigation and draw conclusions.	Communicate ideas and findings for an identified audience and purpose, including using scientific vocabulary when appropriate.	Relate the uses of materials to their properties.	Identify forces acting on objects and describe their effect.	Identify key processes in the water cycle and describe how water cycles through the environment.	Identify the roles of organisms in a habitat and construct food chains.	Identify solutions based on scientific explanations and describe the needs these meet.	Explain the role of data in science inquiry.
5	Plan safe investigations to identify patterns and relationships and make reasoned predictions.	Identify risks associated with investigations and key intercultural considerations when planning field work. Identify variables to be changed and measured.	Use equipment to generate data with appropriate precision. Construct representations to organise data and information and describe patterns, trends and relationships	Compare their methods and findings to those of others, identify possible sources of error in their investigation, pose questions for further investigation and draw reasoned conclusions.	Use language features that reflect their purpose and audience when communicating their ideas and findings.	Relate the particulate arrangement of solids, liquids and gases to their observable properties.	Identify sources of light and model the transfer of light to explain observed phenomena.	Describe key processes that change Earth's surface.	Explain how the form and behaviour of living things enables survival.	Describe examples of collaboration leading to advances in science, and scientific knowledge that has changed over time.	Identify examples where scientific knowledge informs the actions of individuals and communities.
6	Plan safe, repeatable investigations to identify patterns and test relationships and make reasoned predictions.	Describe risks associated with investigations and key intercultural considerations when planning field work. Identify variables to be changed, measured and controlled.	Use equipment to generate and record data with appropriate precision. Construct representations to organise and process data and information and describe patterns, trends and relationships	Identify possible sources of error in their own and others' methods and findings, pose questions for further investigation and select evidence to support reasoned conclusions.	Select and use language features effectively for their purpose and audience when communicating their ideas and findings.	Classify and compare reversible and irreversible changes to substances.	Identify the role of circuit components in the transfer and transformation of electrical energy.	Model the relationship between the sun and planets of the solar system and explain how the relative positions of Earth and the sun relate to observed phenomena on Earth	Explain how changes in physical conditions affect living things.	Explain why science is often collaborative and describe different individuals' contributions to scientific knowledge.	Describe how individuals and communities use scientific knowledge.