

WATER CONSERVATION

Water is Important

SCIENCE UNDERSTANDING		QUALITY CRITERIA				
		Insufficient evidence to demonstrate working towards the achievement standard	Working towards the achievement standard	Achieving and demonstrating the achievement standard	Working beyond the achievement standard	Extending with depth beyond the achievement standard
Science as a human endeavour Science knowledge helps people to understand the effects of their actions (VCSSU056)	• considering how the use of materials including solids and liquids can affect the environment in different ways, for example, fertilisers and food and drink containers PS 1-4 WS 1-5 A G	Insufficient evidence	With guidance, considers and begins to recognise s the role of household appliances in conserving water and reducing waste.	Considers and recognises the role of household appliances in conserving water and reducing waste.	Considers and recognises the role of household appliances in conserving water and reducing waste, and can provide examples .	Considers and confidently recognises the role of household appliances in conserving water and reducing waste, and can provide further examples .
	• exploring how science has contributed to understanding and resolving issues related to the effects of human activities, for example, clearing of bushland to build housing and roads and management of waste PS 1-3 WS 3 A G	Insufficient evidence	With assistance, explores and begins to understand that science has enabled the invention of appliances that help people to conserve water and reduce waste.	Explores and understands that science has enabled the invention of appliances that help people to conserve water and reduce waste.	Explores, understands and recognises that science has enabled the invention of appliances that help people to conserve water and reduce waste.	Confidently explores, understands and recognises that science has enabled the invention of appliances that help people to conserve water and reduce waste.
	• investigating how people can use science to select appropriate materials for their work, for example, builders, clothing designers, engineers, gardeners and chefs PS 1-3 WS 1, 4-5 A	Insufficient evidence	With assistance, investigates how people use appliances to conserve water and reduce waste.	Investigates how people use appliances to conserve water and reduce waste.	Investigates how people use appliances to conserve water and reduce waste, and begins to understand human actions have an impact on water conservation.	Investigates how people use appliances to conserve water and reduce waste, and understands human actions have an impact on water conservation.

SCIENCE INQUIRY SKILLS		QUALITY CRITERIA				
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Questioning and predicting	With guidance, identify questions in familiar contexts that can be investigated scientifically and predict what might happen based on prior knowledge (VCS1S065)	Insufficient evidence	With assistance, share experience , using familiar context, about how people use appliances to conserve water.	Share experience , using familiar context, about how people use appliances to conserve water, and then identify how to investigate.	Confidently share experience , using familiar context, about how people use appliances to conserve water, and then identify how to investigate.	Confidently share experience , using familiar and unfamiliar context, about how people use appliances to conserve water, and then identify how to investigate.
	• listing shared experiences as a whole class and identifying possible investigations PS 2, 4 WS 3, 5 A	Insufficient evidence	With assistance, reflect on water usage at home and begin to predict volume using either formal or informal measurement.	Reflect on water usage at home and predict volume using either formal or informal measurement.	Confidently reflect on water usage at home and reasonably predict volume using either formal or informal measurement.	Confidently reflect on water usage at home and realistically predict volume using formal measurement.
Planning and conducting	Suggest ways to plan and conduct investigations to find answers to questions including consideration of the elements of fair tests (VCS1S066)	Insufficient evidence	With teacher guidance, work in a group to plan an investigation about water use.	With teacher guidance, work in a group to plan an investigation about water use and evaluate ways that might be successful.	With teacher guidance, work in a group to plan an investigation about water use, and evaluate and question ways that might be successful.	Independently work in a group to plan an investigation about water use, and evaluate and question ways that might be successful.
	• working in groups, with teacher guidance, to plan ways to investigate questions and evaluating which ways might be most successful WS 3, 5 A	Insufficient evidence	With teacher guidance, explore ways to conduct an investigation about water use.	With teacher guidance, explore ways to conduct an investigation about water use, and understand why doing this will help us to answer questions.	Explore ways to conduct an investigation about water use, and understand why doing this will help us to answer questions.	Explore ways to conduct an investigation about water use, and understand and explain why doing this will help us to answer questions.
	• exploring, with teacher guidance, different ways to conduct investigations and connecting these to the types of questions asked WS 3, 5 A	Insufficient evidence	With assistance, discuss rules to conduct an investigation safely.	Discuss and write rules to conduct an investigation safely.	Confidently discuss and write rules to conduct an investigation safely. Show awareness of consequences and why we need rules for safety.	Confidently discuss and write rules to conduct an investigation safely. Demonstrate understanding of consequences and why we need rules for safety.
	Safely use appropriate materials, tools, equipment and technologies (VCS1S067)	Insufficient evidence	With assistance, use measuring tools to conduct an investigation.	Use measuring tools to conduct an investigation.	Confidently use measuring tools to conduct an investigation.	Confidently use and choose appropriate measuring tools to conduct an investigation.
• discussing and recording safety rules for use of equipment as a whole class WS 3, 5 A	Insufficient evidence					
• using a variety of tools to make observations, for example, digital cameras, thermometers, rulers and scales WS 3, 5 A	Insufficient evidence					

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Recording and processing	Use formal measurements in the collection and recording of observations (VCIS1068) <ul style="list-style-type: none"> making and recording measurements using familiar formal units and appropriate abbreviations, such as seconds (s), grams (g), centimetres (cm) and millilitres (mL) PS 3–4 WS 3 	Insufficient evidence	With assistance, use formal units, and their abbreviations, to record measurement.	Use formal units, and their abbreviations, to record measurement.	Confidently use formal units, and their abbreviations, to record measurement.	Confidently use and choose the most appropriate formal units, and their abbreviations, to record measurement.
	Use a range of methods including tables and column graphs to represent data and to identify patterns and trends (VCIS1069) <ul style="list-style-type: none"> using provided tables to organise materials and objects based on observable properties PS 4 WS 4 	Insufficient evidence	With assistance, use a table to record and organise data.	Use a table to record and organise data.	Confidently use a table to record and organise data.	Create a table to record and organise data.
	<ul style="list-style-type: none"> discussing with teacher guidance which graphic organisers will be most useful in sorting or organising data arising from investigations PS 4 WS 3–4 	Insufficient evidence	With teacher guidance, begins to discuss which graphic organisers may be useful in sorting data from an investigation.	With teacher guidance, can discuss which graphic organisers may be useful in sorting data from an investigation.	With teacher guidance, can confidently discuss which graphic organisers may be useful in sorting data from an investigation.	Confidently discuss and describe which graphic organisers may be useful in sorting data from an investigation.
	<ul style="list-style-type: none"> discussing how to graph data presented in a table PS 4 WS 4 	Insufficient evidence	With assistance, discuss how to construct a column graph from recorded data in a table.	Discuss how to construct a column graph from recorded data in a table.	Confidently discuss how to construct a column graph from recorded data in a table.	Confidently discuss and construct a column graph from recorded data in a table.
	<ul style="list-style-type: none"> identifying and discussing numerical and visual patterns in data collected from students' investigations and from other sources WS 3 	Insufficient evidence	With assistance, discuss an investigation and begin to identify any patterns in the data collected.	Discuss an investigation and identify any patterns in the data collected.	Confidently discuss an investigation and identify any patterns in the data collected.	Confidently discuss an investigation and identify and explain any patterns in the data collected.
Analysing and evaluating	<ul style="list-style-type: none"> identifying and discussing numerical and visual patterns in data collected from students' investigations and from other sources WS 3 	Insufficient evidence	With assistance, discuss an investigation and begin to identify any patterns in the data collected.	Discuss an investigation and identify any patterns in the data collected.	Confidently discuss an investigation and identify any patterns in the data collected.	Confidently discuss an investigation and identify and explain any patterns in the data collected.
	<ul style="list-style-type: none"> discussing how well predictions matched results from an investigation WS 3 	Insufficient evidence	With guidance, discuss predictions from an investigation.	Discuss predictions from an investigation and how they matched the results.	Confidently discuss predictions from an investigation and how they matched the results.	Confidently discuss predictions from an investigation and how they matched the results. Suggest possible reasons why.
	<ul style="list-style-type: none"> comparing, in small groups, results of investigations and accounting for differences, including explanation of their reasoning WS 3 	Insufficient evidence	With guidance, compare results of an investigation and explain why results may differ.	Compare results of an investigation and explain why results may differ.	Confidently compare results of an investigation and explain why results may differ.	Confidently compare results of an investigation and extensively explain why results may differ.

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Analysing and evaluating (cont.) Reflect on an investigation, including whether a test was fair or not (VCSIS071)	<ul style="list-style-type: none"> discussing as a whole class the idea of fairness in testing WS 3 	Insufficient evidence	With assistance, discuss what is a fair test.	Discuss what is a fair test.	Confidently discuss what is a fair test and begin to explain what makes it fair.	Confidently discuss what is a fair test and explain what makes it fair using scientific reasoning.
	<ul style="list-style-type: none"> discussing which aspects of the investigation helped improve fairness, and any aspects that weren't fair WS 3 	Insufficient evidence	With assistance, discuss ideas that make a test fair or not fair.	Discuss ideas that make a test fair or not fair.	Confidently discuss ideas that make a test fair or not fair.	Confidently discuss and explain why ideas that make a test fair or not fair.
	<ul style="list-style-type: none"> reflecting on investigations, identifying what went well, what was difficult or didn't work so well, and how well the investigation helped answer the question WS 3 	Insufficient evidence	With assistance, reflect on the investigation and identify what went well and what was difficult.	Reflect on the investigation and identify what went well and what was difficult. Discuss how it helped answer the question.	Reflect on the investigation and confidently identify what went well and what was difficult. Discuss how it helped answer the question.	Reflect on the investigation and confidently identify what went well and what was difficult. Discuss how it helped answer the question, and if the investigation could be done another way?
Communicating Represent and communicate observations, ideas and findings to show patterns and relationships using formal and informal scientific language (VCSIS072)	<ul style="list-style-type: none"> using simple explanations and arguments, reports or graphical representations to communicate ideas to other students PS 2-4 WS 3-5 A 	Insufficient evidence	With assistance, share simple explanations and ideas with other students using informal scientific language.	Share simple explanations and ideas with other students using either formal or informal scientific language.	Confidently share simple explanations and ideas with other students using both formal and informal scientific language.	Confidently share simple explanations and more complex ideas with other students using both formal and informal scientific language.
	<ul style="list-style-type: none"> communicating with other students carrying out similar investigations to share experiences and improve investigation skills WS 3, 5 A 	Insufficient evidence	With assistance, communicate observations and outcomes of an investigation with other students.	Communicate observations and outcomes of an investigation with other students, and suggest ways to improve investigation skills.	Confidently communicate observations and outcomes of an investigation with other students, using both formal and informal scientific language, and suggest ways to improve investigation skills.	Confidently communicate observations and outcomes of an investigation with other students, using both formal and informal scientific language, and suggest and explain ways to improve investigation skills.

FEEDBACK

VIC Curriculum

VCSSU056, VCSIS065, VCSIS066, VCSIS067, VCSIS068, VCSIS069, VCSIS070, VCSIS071, VCSIS072