

Research Safari Trailblazer

Curriculum Map

Teacher's Guide

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Any inquiry that students undertake will address a range of curriculum outcomes. The **Knowledge** and **Understanding** outcomes will be dependent upon the topic / unit chosen, however, the skills acquire while students undertake their inquiry will be the similar regardless of the topic as the focus is on a PROCESS. Inquiry skills can be found in these *Learning Areas* and *General Capabilities*:

Learning Area

Science Inquiry Skills (Science Learning Area)

Inquiry and skills (Humanities and Social Sciences)

General Capability

Critical and Creating Thinking General Capability

Information and Communication Technologies General Capabilities

Curriculum Links

Science Learning Area			
Science Inquiry			
<p>Year 5</p> <p>Questioning and predicting With guidance, pose clarifying questions and make predictions about scientific investigations (AC SIS231)</p> <p>Planning and Conducting Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS086)</p> <p>Processing and analysing data and information Compare data with predictions and use as evidence in developing explanations (AC SIS218)</p> <p>Evaluating Reflect on and suggest improvements to scientific investigations (AC SIS091)</p> <p>Communicating Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (AC SIS093)</p>	<p>Year 6</p> <p>Questioning and predicting With guidance, pose clarifying questions and make predictions about scientific investigations (AC SIS232)</p> <p>Planning and Conducting Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS103)</p> <p>Processing and analysing data and information Compare data with predictions and use as evidence in developing explanations (AC SIS221)</p> <p>Evaluating Reflect on and suggest improvements to scientific investigations (AC SIS108)</p> <p>Communicating Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (AC SIS110)</p>	<p>Year 7</p> <p>Questioning and predicting Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (AC SIS124)</p> <p>Planning and Conducting Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (AC SIS125)</p> <p>Processing and analysing data and information Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence (AC SIS130)</p> <p>Evaluating</p> <ul style="list-style-type: none"> • Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements (AC SIS131) • Use scientific knowledge and findings from investigations to evaluate claims based on evidence (AC SIS132) <p>communicating Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS133)</p>	<p>Year 8</p> <p>Questioning and predicting Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (AC SIS139)</p> <p>Planning and Conducting Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed (AC SIS140)</p> <p>Processing and analysing data and information</p> <ul style="list-style-type: none"> • Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships in data using digital technologies as appropriate (AC SIS144) • Summarise data, from students' own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence (AC SIS145) <p>Evaluating Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements (AC SIS146)</p> <p>Use scientific knowledge and findings from investigations to evaluate claims based on evidence (AC SIS234)</p> <p>Communicating Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS148)</p>

Humanities And Social Sciences (HASS)

Inquiry and skills

Year 5

Questioning

Develop appropriate questions to guide an inquiry about people, events, developments, places, systems and challenges (ACHASSI094)

Researching

- Locate and collect relevant information and data from primary sources and secondary sources (ACHASSI095)
- Organise and represent data in a range of formats including tables, graphs and large- and small-scale maps, using discipline-appropriate conventions (ACHASSI096)
- Sequence information about people's lives, events, developments and phenomena using a variety of methods including timelines (ACHASSI097)

Analysing

- Examine primary sources and secondary sources to determine their origin and purpose (ACHASSI098)
- Examine different viewpoints on actions, events, issues and phenomena in the past and present (ACHASSI099)
- Interpret data and information displayed in a range of formats to identify, describe and compare distributions, patterns and trends, and to infer relationships (ACHASSI100)

Evaluating and reflecting

- Evaluate evidence to draw conclusions (ACHASSI101)
- Work in groups to generate responses to issues and challenges (ACHASSI102)
- Use criteria to make decisions and judgements and consider advantages and disadvantages of preferring one decision over others (ACHASSI103)
- Reflect on learning to propose personal and/or collective action in response to an issue or challenge, and predict the probable effects (ACHASSI104)

Communicating

Present ideas, findings, viewpoints and conclusions in a range of texts and modes that incorporate source materials, digital and non-digital representations and discipline-specific terms and conventions (ACHASSI105)

Year 6

Questioning

Develop appropriate questions to guide an inquiry about people, events, developments, places, systems and challenges (ACHASSI122)

Researching

- Locate and collect relevant information and data from primary sources & secondary sources (ACHASSI123)
- Organise and represent data in a range of formats including tables, graphs and large- and small-scale maps, using discipline-appropriate conventions (ACHASSI124)

Analysing

- Examine primary sources and secondary sources to determine their origin and purpose (ACHASSI126)
- Examine different viewpoints on actions, events, issues and phenomena in the past and present (ACHASSI127)

Evaluating and reflecting

Evaluate evidence to draw conclusions (ACHASSI129 - Scootle)

Communicating

Present ideas, findings, viewpoints and conclusions in a range of texts and modes that incorporate source materials, digital and non-digital representations and discipline-specific terms and conventions (ACHASSI133)

Year 7

Questioning

Construct significant questions and propositions to guide investigations about people, events, developments, places, systems and challenges (ACHASSI152)

Researching

- Apply a methodology to locate and collect relevant information and data from a range of primary sources and secondary sources (ACHASSI153)
- Organise, categorise and represent data in a range of appropriate formats using discipline-specific conventions, including different types of graphs, tables, field sketches and annotated diagrams, and maps at different scales (ACHASSI154)

Analysing

- Examine primary sources and secondary sources to determine their origin, purpose and reliability (ACHASSI156 - Scootle)
- Analyse primary sources and secondary sources to identify values and perspectives on people, actions, events, issues and phenomena, past and present (ACHASSI157)

Evaluating and reflecting

- Evaluate and synthesise evidence to draw conclusions (ACHASSI159)
- Develop and use criteria to make informed decisions and judgements (ACHASSI161)
- Reflect on learning to propose personal and/or collective action in response to an issue or challenge, taking into account different perspectives, and describe the expected effects (ACHASSI162)

Communicating

Present ideas, findings, viewpoints, explanations and conclusions in a range of texts and modes that incorporate source materials, citations, graphic representations and discipline-specific terms, conventions and concepts (ACHASSI163)

General Capabilities

Critical and Creative Thinking

Inquiring – identifying, exploring and organising information and ideas element

Pose questions

Level 4 (Year 5-6)

pose questions to clarify and interpret information and probe for causes and consequences

Level 5 (Year 7-8)

pose questions to probe assumptions and investigate complex issues

Identify and clarify information and ideas

Level 4 (Year 5-6)

identify and clarify relevant information and prioritise ideas

Level 5 (Year 7-8)

clarify information and ideas from texts or images when exploring challenging issues

Organise and process information

Level 4 (Year 5-6)

analyse, condense and combine relevant information from multiple sources

Level 5 (Year 7-8)

critically analyse information and evidence according to criteria such as validity and relevance

Generating ideas, possibilities and actions element

Imagine possibilities and connect ideas

Level 4 (Year 5-6)

combine ideas in a variety of ways and from a range of sources to create new possibilities

Level 5 (Year 7-8)

draw parallels between known and new ideas to create new ways of achieving goals

Consider alternatives

Level 4 (Year 5-6)

identify situations where current approaches do not work, challenge existing ideas and generate alternative solutions

Level 5 (Year 7-8)

generate alternatives and innovative solutions, and adapt ideas, including when information is limited or conflicting

Seek solutions and put ideas into action

Level 4 (Year 5-6)

assess and test options to identify the most effective solution and to put ideas into action

Level 5 (Year 7-8)

predict possibilities, and identify and test consequences when seeking solutions and putting ideas into action

Reflecting on thinking and processes element

Think about thinking (metacognition)

Level 4 (Year 5-6)

reflect on assumptions made, consider reasonable criticism and adjust their thinking if necessary

Level 5 (Year 7-8)

assess assumptions in their thinking and invite alternative opinions

Reflect on processes

Level 4 (Year 5-6)

identify and justify the thinking behind choices they have made

Level 5 (Year 7-8)

evaluate and justify the reasons behind choosing a particular problem solving strategy

Transfer knowledge into new contexts

Level 4 (Year 5-6)

apply knowledge gained from one context to another unrelated context and identify new meaning

Level 5 (Year 7-8)

justify reasons for decisions when transferring information to similar and different contexts

Analysing, synthesising and evaluating reasoning and procedures element

Apply logic and reasoning

Level 4 (Year 5-6)

assess whether there is adequate reasoning and evidence to justify a claim, conclusion or outcome

Level 5 (Year 7-8)

identify gaps in reasoning and missing elements in information

Draw conclusions and design a course of action

Level 4 (Year 5-6)

scrutinise ideas or concepts, test conclusions and modify actions when designing a course of action

Level 5 (Year 7-8)

differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions

Evaluate procedures and outcomes

Level 4 (Year 5-6)

evaluate the effectiveness of ideas, products, performances, methods and courses of action against given criteria

Level 5 (Year 7-8)

explain intentions and justify ideas, methods and courses of action, and account for expected and unexpected outcomes against criteria they have identified

General Capabilities

Information and Communication Technologies

Investigating with ICT

Define and plan information searches

Level 4 (Year 5-6)

use a range of ICT to identify and represent patterns in sets of information and to pose questions to guide searching for, or generating, further information.

Level 5 (Year 7-8)

use a range of ICT to analyse information in terms of implicit patterns and structures as a basis to plan an information search or generation

Locate, generate and access data and information

Level 4 (Year 5-6)

locate, retrieve or generate information using search engines and simple search functions and classify information in meaningful ways

Level 5 (Year 7-8)

locate, retrieve or generate information using search facilities and organise information in meaningful ways

Select and evaluate data and information

Level 4 (Year 5-6)

assess the suitability of data or information using a range of appropriate given criteria

Level 5 (Year 7-8)

assess the suitability of data or information using appropriate own criteria

Creating with ICT

Generate ideas, plans and processes

Level 4 (Year 5-6)

use ICT effectively to record ideas, represent thinking and plan solutions

Level 5 (Year 7-8)

use appropriate ICT to collaboratively generate ideas and develop plans

Generate solutions to challenges and learning area tasks

Level 4 (Year 5-6)

independently or collaboratively create and modify digital solutions, creative outputs or data representation/ transformation for particular audiences and purposes

Level 5 (Year 7-8)

design and modify simple digital solutions, or multimodal creative outputs or data transformations for particular audiences and purposes following recognised conventions

Communicating with ICT

Collaborate, share and exchange

Level 4 (Year 5-6)

select and use appropriate ICT tools safely to share and exchange information and to safely collaborate with others

Level 5 (Year 7-8)

select and use appropriate ICT tools safely to lead groups in sharing and exchanging information, and taking part in online projects or active collaborations with appropriate global audiences

Understand computer mediated communications

Level 4 (Year 5-6)

understand that particular forms of computer mediated communications and tools are suited to synchronous or asynchronous and one-to-one or group communications

Level 5 (Year 7-8)

understand that there are various methods of collaboration through computer mediated communications that vary in form and control

Cross-curriculum Priorities

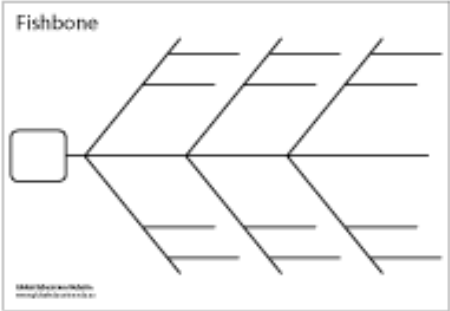
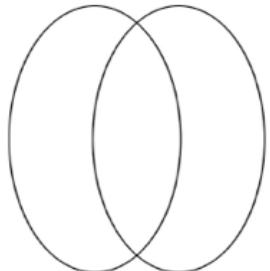
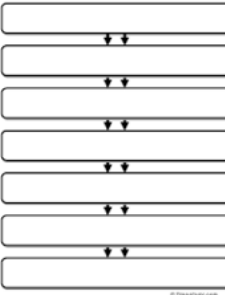
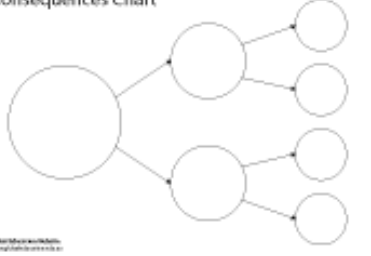
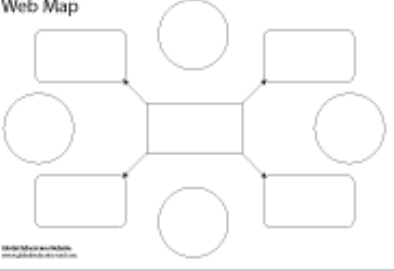
Sustainability Cross-Curriculum Priority	
Systems	
OI.1	The biosphere is a dynamic system providing conditions that sustain life on Earth.
OI.2	All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.
OI.3	Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems.
Futures	
OI.7	Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.
OI.8	Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgements based on projected future economic, social and environmental impacts.
OI.9	Sustainable futures result from actions designed to preserve and/or restore the quality and uniqueness of environments.

Aboriginal and Torres Strait Islander Histories and Cultures Cross-Curriculum Priority	
Country / Place	
OI.2	Aboriginal and Torres Strait Islander communities maintain a special connection to and responsibility for Country/Place.
OI.3	Aboriginal and Torres Strait Islander Peoples have holistic belief systems and are spiritually and intellectually connected to the land, sea, sky and waterways.
Culture	
OI.5	Aboriginal and Torres Strait Islander Peoples' ways of life are uniquely expressed through ways of being, knowing, thinking and doing.

GRAPHIC ORGANISERS

Using Graphic Organisers to write your notes

Sometimes using a structured *note making sheet* called a “Graphic Organiser” can you’re your students organise their information as they do Their research. This will help them at the stage where they need to write their report or develop their presentation. Here are some graphic organisers that they may find useful.

 <p>Fishbone</p> <p>© 2008 Mind Garden Inc. All rights reserved. www.graphic-organizers.com</p>	<p>Name: _____ Date: _____</p> <p>Venn Diagram</p> <p>Directions: In the two outer areas list the characteristics of two issues. In the middle area list their shared characteristics.</p>  <p>© Freeology.com</p>	<p>Name: _____ Date: _____</p> <p>Flow Chart</p> <p>Directions: Chart the events that lead to others.</p>  <p>© Freeology.com</p>	<p>Name: _____ Date: _____</p> <p>Process Grid</p> <p>Topic: _____</p> <table border="1" data-bbox="1680 534 2049 742"> <thead> <tr> <th>Effect</th> <th>Description</th> <th>Results or Outcomes</th> <th>Other Interesting Facts</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>© Freeology.com</p>	Effect	Description	Results or Outcomes	Other Interesting Facts																
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<p>There are many other <i>graphic organisers</i> that you can use to organise your information as you do your research. Follow this link to Research Safari_ to download copies of the organisers and look for others.</p>																							