**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 ***Leaning Areas*** and ***General Capabilities:******Learning Area***[Science Inquiry Skills](https://www.australiancurriculum.edu.au/f-10-curriculum/science/?year=12005&year=12006&year=12007&year=12008&strand=Science+Inquiry+Skills&capability=ignore&capability=Literacy&capability=Numeracy&capability=Information+and+Communication+Technology+%28ICT%29+Capability&capability=Critical+and+Creative+Thinking&capability=Personal+and+Social+Capability&capability=Ethical+Understanding&capability=Intercultural+Understanding&priority=ignore&priority=Aboriginal+and+Torres+Strait+Islander+Histories+and+Cultures&priority=Asia+and+Australia%E2%80%99s+Engagement+with+Asia&priority=Sustainability&elaborations=true&elaborations=false&scotterms=false&isFirstPageLoad=false) (Science Learning Area)[Inquiry and skills](https://www.australiancurriculum.edu.au/f-10-curriculum/humanities-and-social-sciences/hass/?year=12101&year=12102&year=12103&strand=Inquiry+and+skills&capability=ignore&capability=Literacy&capability=Numeracy&capability=Information+and+Communication+Technology+%28ICT%29+Capability&capability=Critical+and+Creative+Thinking&capability=Personal+and+Social+Capability&capability=Ethical+Understanding&capability=Intercultural+Understanding&priority=ignore&priority=Aboriginal+and+Torres+Strait+Islander+Histories+and+Cultures&priority=Asia+and+Australia%E2%80%99s+Engagement+with+Asia&priority=Sustainability&elaborations=true&elaborations=false&scotterms=false&isFirstPageLoad=false) (Humanities and Social Sciences)***General Capability***[Critical and Creating Thinking](https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/critical-and-creative-thinking/) General Capability[Information and Communication Technologies](https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/information-and-communication-technology-ict-capability/) General Capabilities |

**Curriculum Links**

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| **Science Learning Area** |
| **Science Inquiry** |
| **Year 5****Questioning and predicting**With guidance, pose clarifying questions and make predictions about scientific investigations [(ACSIS231)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS231)**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 [(ACSIS086)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS086)**Processing and analysing data and information**Compare data with predictions and use as evidence in developing explanations [(ACSIS218)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS218)**Evaluating**Reflect on and suggest improvements to scientific investigations [(ACSIS091)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS091)**Communicating**Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts [(ACSIS093)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS093) | **Year 6****Questioning and predicting**With guidance, pose clarifying questions and make predictions about scientific investigations [(ACSIS232)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS232)**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 [(ACSIS103 )](http://www.scootle.edu.au/ec/search?accContentId=ACSIS103)**Processing and analysing data and information**Compare data with predictions and use as evidence in developing explanations [(ACSIS221](http://www.scootle.edu.au/ec/search?accContentId=ACSIS221)**Evaluating**Reflect on and suggest improvements to scientific investigations [(ACSIS108)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS108)**Communicating**Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts (ACSIS110)  | **Year 7****Questioning and predicting**Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge [(ACSIS124 )](http://www.scootle.edu.au/ec/search?accContentId=ACSIS124)**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 [(ACSIS125)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS125)**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 [(ACSIS130)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS130)**Evaluating*** Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements [(ACSIS131)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS131)
* Use scientific knowledge and findings from investigations to evaluate claims based on evidence [(ACSIS132](http://www.scootle.edu.au/ec/search?accContentId=ACSIS132))

**Communicating**Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate [(ACSIS133)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS133) | **Year 8****Questioning and predicting**Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge [(ACSIS139](http://www.scootle.edu.au/ec/search?accContentId=ACSIS139))**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 [(ACSIS140)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS140)**Processing and analysing data and information*** 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 [(ACSIS144](http://www.scootle.edu.au/ec/search?accContentId=ACSIS144))
* Summarise data, from students’ own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions based on evidence [(ACSIS145](http://www.scootle.edu.au/ec/search?accContentId=ACSIS145))

**Evaluating**Reflect on scientific investigations including evaluating the quality of the data collected, and identifying improvements [(ACSIS146](http://www.scootle.edu.au/ec/search?accContentId=ACSIS146))Use scientific knowledge and findings from investigations to evaluate claims based on evidence [(ACSIS234)](http://www.scootle.edu.au/ec/search?accContentId=ACSIS234)**Communicating**Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate [(ACSIS148](http://www.scootle.edu.au/ec/search?accContentId=ACSIS148)) |

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| **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](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI096))
* Sequence information about people’s lives, events, developments and phenomena using a variety of methods including timelines [(ACHASSI097](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI097))

**Analysing*** Examine primary sources and secondary sources to determine their origin and purpose [(ACHASSI098](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI098))
* Examine different viewpoints on actions, events, issues and phenomena in the past and present [(ACHASSI099)](http://www.scootle.edu.au/ec/search?accContentId=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)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI100)

**Evaluating and reflecting*** Evaluate evidence to draw conclusions [(ACHASSI101](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI101))
* Work in groups to generate responses to issues and challenges [(ACHASSI102)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI102)
* Use criteria to make decisions and judgements and consider advantages and disadvantages of preferring one decision over others [(ACHASSI103](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI103))
* Reflect on learning to propose personal and/or collective action in response to an issue or challenge, and predict the probable effects [(ACHASSI104](http://www.scootle.edu.au/ec/search?accContentId=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)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI105) | **Year 6****Questioning**Develop appropriate questions to guide an inquiry about people, events, developments, places, systems and challenges [(ACHASSI122)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI122)**Researching*** Locate and collect relevant information and data from primary sources & secondary sources [(ACHASSI123)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI123)
* Organise and represent data in a range of formats including tables, graphs and large- and small-scale maps, using discipline -appropriate conventions [(ACHASSI124)](http://www.scootle.edu.au/ec/search?accContentId=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 )](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI129)**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)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI133) | **Year 7****Questioning**Construct significant questions and propositions to guide investigations about people, events, developments, places, systems and challenges [(ACHASSI152)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI152)**Researching*** Apply a methodology to locate and collect relevant information and data from a range of primary sources and secondary sources [(ACHASSI153)](http://www.scootle.edu.au/ec/search?accContentId=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)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI154)

**Analysing*** Examine primary sources and secondary sources to determine their origin, purpose and reliability [(ACHASSI156 - Scootle )](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI156)
* Analyse primary sources and secondary sources to identify values and perspectives on people, actions, events, issues and phenomena, past and present [(ACHASSI157)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI157)

**Evaluating and reflecting*** Evaluate and synthesise evidence to draw conclusions [(ACHASSI159)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI159)
* Develop and use criteria to make informed decisions and judgements [(ACHASSI161)](http://www.scootle.edu.au/ec/search?accContentId=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)](http://www.scootle.edu.au/ec/search?accContentId=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)](http://www.scootle.edu.au/ec/search?accContentId=ACHASSI163) |

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| **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 |

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| **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 |

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| **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 |

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| **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**

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| **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.  |

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| **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**](http://researchsafari.weebly.com/graphic-organisers.html) **to write your notes**

Sometimes using a structured [*note making*](http://researchsafari.weebly.com/notemaking.html) *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.

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| A picture containing text, antenna  Description automatically generated | Diagram, venn diagram  Description automatically generated | Diagram  Description automatically generated | Table  Description automatically generated |
| **Fishbone Diagram** | **Venn Diagram** | **Flow Chart** | **Matrix** |
| Shape, rectangle  Description automatically generated | Diagram  Description automatically generated | Shape  Description automatically generated | Chart  Description automatically generated with medium confidence |
| **T Chart** | **Consequence Chart** | **Web Map** | **Cause / Effect** |
| There are many other [*graphic organisers*](http://researchsafari.weebly.com/graphic-organisers.html) that you can use to organise your information as you do your research. Follow this link to [Research Safari](http://researchsafari.weebly.com/graphic-organisers.html)  to download copies of the organisers and look for others. |