

Australian curriculum science inquiry skills sequence

	Foundation	Year 1 -2	Year 3-4	Year 5-6	Year 7-8	Year 9-10
<b>Questioning &amp; predicting</b>	<ul style="list-style-type: none"> <li>respond to questions about familiar objects &amp; events</li> </ul>	<ul style="list-style-type: none"> <li>respond to &amp; pose questions</li> <li>make predictions about familiar objects &amp; events</li> </ul>	<ul style="list-style-type: none"> <li>with guidance, identify questions in familiar contexts</li> <li>predict based on prior knowledge</li> </ul>	<ul style="list-style-type: none"> <li>with guidance, pose questions to clarify practical problems or inform a scientific investigation, &amp; predict what the findings of an investigation might be</li> </ul>	<ul style="list-style-type: none"> <li>identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge</li> </ul>	<ul style="list-style-type: none"> <li>formulate questions or hypotheses that can be investigated scientifically</li> </ul>
<b>Planning &amp; conducting</b>	<ul style="list-style-type: none"> <li>explore &amp; observe using senses</li> </ul>	<ul style="list-style-type: none"> <li>participate in guided investigations to explore &amp; answer questions</li> <li>manipulate materials, test ideas, access information sources</li> <li>use information measurements to collect &amp; record observations</li> <li>use digital technology</li> </ul>	<ul style="list-style-type: none"> <li>suggest ways to plan &amp; conduct investigations to find answers</li> <li>safely use materials, tools &amp; equipment to make &amp; record observations using formal measurements &amp; digital technologies</li> </ul>	<ul style="list-style-type: none"> <li>with guidance, plan appropriate methods</li> <li>decide which variables should be changed and measured</li> <li>accurately observe, measure &amp; record data using digital technologies</li> <li>safely use equipment, identify risks</li> </ul>	<ul style="list-style-type: none"> <li>collaboratively &amp; individually plan &amp; conduct fieldwork &amp; experiments</li> <li>follow safety &amp; ethical guidelines</li> <li>in fair tests, measure &amp; control variables</li> <li>select equipment to collect data with accuracy appropriate to the task</li> </ul>	<ul style="list-style-type: none"> <li>plan, select &amp; use appropriate investigation methods, including field work &amp; laboratory experimentation, to collect reliable data; assess risk &amp; address ethical issues</li> <li>select &amp; use appropriate equipment, including digital technologies, to systematically &amp; accurately collect &amp; record data</li> </ul>
<b>Processing &amp; analysing data &amp; information</b>	<ul style="list-style-type: none"> <li>discuss observations</li> <li>represent ideas through drawing</li> </ul>	<ul style="list-style-type: none"> <li>use methods to sort information including drawings and provided tables</li> <li>through discussion, compare observations with predictions</li> </ul>	<ul style="list-style-type: none"> <li>use a range of methods including tables &amp; simple column graphs to represent data &amp; identify patterns &amp; trends</li> <li>compare results with predictions suggesting possible reasons for findings</li> </ul>	<ul style="list-style-type: none"> <li>construct &amp; use a range of representations, including tables &amp; graphs, to represent &amp; describe observations, patterns or relationships in data using digital technologies</li> <li>compare data with predictions &amp; use as evidence to develop explanations</li> </ul>	<ul style="list-style-type: none"> <li>construct and use range of representations including graphs, keys, models to represent &amp; analyse patterns or relationships</li> <li>summarise data from investigation &amp; secondary sources</li> <li>use scientific understanding to identify relationships &amp; draw conclusions</li> </ul>	<ul style="list-style-type: none"> <li>analyse patterns &amp; trends</li> <li>describe relationships between variables &amp; identify inconsistencies</li> <li>use knowledge of scientific concepts to draw conclusions consistent with evidence</li> </ul>
<b>Evaluating</b>	na	<ul style="list-style-type: none"> <li>compare observations with those of others</li> </ul>	<ul style="list-style-type: none"> <li>reflect in investigation, including whether a test was fair or not</li> </ul>	<ul style="list-style-type: none"> <li>suggest improvements to method</li> </ul>	<ul style="list-style-type: none"> <li>reflect on method</li> <li>evaluate quality of data</li> <li>identify improvements</li> <li>use scientific knowledge &amp; findings from investigations to evaluate claims</li> </ul>	<ul style="list-style-type: none"> <li>evaluate conclusions, including identify sources of uncertainty &amp; possible alternative explanations</li> <li>describe ways to improve quality of data</li> <li>critically analyse the validity of information in secondary sources &amp; evaluate the approaches used to solve problems</li> </ul>
<b>Communicating</b>	Share observations & ideas	Represent & communicate observations & ideas through oral, written, drawing, role play	Represent & communicate using diagrams, physical representations, reports	Communicate ideas, explanations & processes using multi-modal texts	Communicate ideas, findings & solutions to problems using scientific language & representations using digital technologies	Communicate scientific ideas & information for a particular purpose, including constructing evidence-based arguments & using appropriate scientific language, conventions & representations

Australian curriculum history skills sequence

	Foundation - Year 2	Year 3-4	Year 5-6	Year 7- 8	Year 9-10
<b>Chronology, terms &amp; concepts</b>	<ul style="list-style-type: none"> <li>sequence familiar objects &amp; events</li> <li>distinguish between past, present &amp; future</li> </ul>	<ul style="list-style-type: none"> <li>sequence historical people &amp; events</li> <li>use historical terms</li> </ul>	<ul style="list-style-type: none"> <li>sequence historical people &amp; events</li> <li>use historical terms &amp; concepts</li> </ul>	<ul style="list-style-type: none"> <li>sequence historical people &amp; events</li> <li>use historical terms &amp; concepts</li> </ul>	<ul style="list-style-type: none"> <li>sequence events chronologically to demonstrate the relationship between events in different periods &amp; places</li> <li>use historical terms &amp; concepts</li> </ul>
<b>Historical questions &amp; research</b>	<ul style="list-style-type: none"> <li>pose questions using sources provided</li> </ul>	<ul style="list-style-type: none"> <li>pose a range of questions about the past</li> <li>identify sources</li> </ul>	<ul style="list-style-type: none"> <li>identify questions to inform an historical inquiry</li> <li>identify &amp; locate a range of relevant sources</li> </ul>	<ul style="list-style-type: none"> <li>identify questions about the past to inform an historical inquiry</li> <li>identify &amp; locate relevant sources using ICT &amp; other methods</li> </ul>	<ul style="list-style-type: none"> <li>identify &amp; select different kinds of questions about the past to inform historical inquiry</li> <li>evaluate &amp; enhance these questions</li> <li>identify &amp; locate relevant sources using ICT &amp; other methods</li> </ul>
<b>Analysis &amp; use of sources</b>	<ul style="list-style-type: none"> <li>explore a range of sources</li> <li>identify &amp; compare features of objects from the past &amp; present</li> </ul>	<ul style="list-style-type: none"> <li>locate relevant information from sources provided</li> </ul>	<ul style="list-style-type: none"> <li>locate information related to inquiry questions in a range of sources</li> <li>compare information from a range of sources</li> </ul>	<ul style="list-style-type: none"> <li>identify the origin &amp; purpose of primary &amp; secondary sources</li> <li>locate, select &amp; use information from a range of sources as evidence</li> <li>draw conclusions about the usefulness of sources</li> </ul>	<ul style="list-style-type: none"> <li>identify the origin, purpose &amp; context of primary &amp; secondary sources</li> <li>process &amp; synthesise information from a range of sources for use as evidence in an historical argument</li> <li>evaluate the reliability &amp; usefulness of primary &amp; secondary sources</li> </ul>
<b>Perspectives &amp; interpretations</b>	<ul style="list-style-type: none"> <li>explore a point of view</li> </ul>	<ul style="list-style-type: none"> <li>identify different points of view</li> </ul>	<ul style="list-style-type: none"> <li>identify points of view in the past &amp; present</li> </ul>	<ul style="list-style-type: none"> <li>identify &amp; describe points of view, attitudes &amp; values in primary &amp; secondary sources</li> </ul>	<ul style="list-style-type: none"> <li>identify &amp; analyse the perspectives of people from the past</li> <li>identify &amp; analyse different historical interpretations (including student's own)</li> </ul>
<b>Explanation &amp; communication</b>	<ul style="list-style-type: none"> <li>develop a narrative</li> <li>communicate using oral, graphic, written, role play &amp; digital technologies</li> </ul>	<ul style="list-style-type: none"> <li>develop historical texts, particularly narratives</li> <li>communicate using oral, graphic, written &amp; digital technologies</li> </ul>	<ul style="list-style-type: none"> <li>develop historical texts, particularly narratives &amp; descriptions which incorporate source material</li> <li>communicate using oral, graphic, written &amp; digital technologies</li> </ul>	<ul style="list-style-type: none"> <li>develop historical texts, particularly narratives &amp; explanations that use evidence from a range of sources</li> <li>communicate using oral, graphic, written &amp; digital technologies</li> </ul>	<ul style="list-style-type: none"> <li>develop historical texts, particularly explanations &amp; historical arguments that use evidence from a range of sources that are references</li> <li>communicate using oral, graphic, written &amp; digital technologies</li> </ul>

**Draft Australian curriculum geography inquiry skills sequence**

	<b>F</b>	<b>Year 1-2</b>	<b>Year 3-4</b>	<b>Year 5-6</b>
<b>Observing &amp; questioning</b>	<p>Pose questions about place, space &amp; environment</p> <ul style="list-style-type: none"> <li>individual &amp; collective opportunities to ask questions about their world &amp; respond to stimulus that builds curiosity</li> <li>respond to questions posed about place, space &amp; environments</li> <li>talk about what they already know or think about the topic of inquiry, &amp; what they want to learn &amp; identify questions that will enable students to build from prior learning &amp; understanding</li> </ul>	<p>Pose &amp; respond to several questions for an inquiry, based on a variety of question stems &amp; stimulus</p> <ul style="list-style-type: none"> <li>form questions about a stimulus based on question stems such as what, when, where, how, why, what impact, could it happen again, how should it be, what can we do, how do you think others feel, what if, how many?</li> <li>record their current knowledge &amp; opinion about the topic &amp; discussing what they want to learn</li> </ul>	<p>Pose questions about place, space or environment &amp; make some predictions about their answer</p> <ul style="list-style-type: none"> <li>record existing knowledge &amp; opinions about the topic, &amp; discussing what they want to learn</li> <li>consider how things are now, how they change over time &amp; what they might be like in the future</li> </ul> <p>Determine which questions prompt geographical inquiry</p> <ul style="list-style-type: none"> <li>sort a range of questions for an inquiry into geographical &amp; non-geographical questions</li> <li>consider &amp; ask about the geographical aspects of a topic of inquiry, then posing further questions</li> </ul>	<p>Pose geographical questions that range in complexity &amp; guide deep inquiry then speculate on their answers</p> <ul style="list-style-type: none"> <li>record existing knowledge &amp; opinions about the topic, &amp; discussing what they want to learn</li> <li>form &amp; evaluate questions from given question stems, then speculate on what their findings might be &amp; explain their ideas or forming a hypothesis</li> <li>discuss the geographical aspects of an inquiry topic before posing questions</li> </ul>
<b>Planning, collecting &amp; evaluating</b>	<p>Observe familiar places &amp; explore other information sources</p> <ul style="list-style-type: none"> <li>participate in fieldwork that requires observing &amp; identifying features of the local place such as plants, animals or the layout of a place</li> <li>use a range of secondary sources to play &amp; increase background knowledge of place, space &amp; environment for example, through puzzles, digital &amp; multimedia applications</li> <li>make observations on the layout of a classroom or play area, or the arrangement at furniture home for different purposes</li> </ul> <p>Collect information about the</p>	<p>Participate in a guided inquiry, using a range of information sources</p> <ul style="list-style-type: none"> <li>use fieldwork within &amp; beyond the local area to observe features, for example, the number &amp; size of shops &amp; services, types of plants &amp; animals &amp; uses of land</li> <li>use a range of geographical tools to develop skills &amp; build background knowledge, locate &amp; learn about a place, research an issue</li> <li>record information about familiar places on simple plans &amp; maps, using pictorial symbols or colour, for example, to indicate on a map the places they have been in the local area or creating a plan for a new park</li> </ul> <p>Collect information about the local area</p> <ul style="list-style-type: none"> <li>using fieldwork to identify the number of people who use different school entrances or to measure &amp; record rainfall &amp; temperature</li> </ul>	<p>Suggest some inquiry sources &amp; use a range of oral, graphic, written &amp; digital information sources, including spatial technologies where appropriate</p> <ul style="list-style-type: none"> <li>build background knowledge to locate &amp; learn about a place, or research an issue using geographical tools &amp; skills</li> </ul> <p>Select appropriate geographical methodologies to collect data, including following protocols for consultation with local Aboriginal communities &amp;/or Torres Strait Islander communities</p> <ul style="list-style-type: none"> <li>identify methods for collecting, recording &amp; describing data obtained through observation, fieldwork, surveys &amp; map interpretation, for example, identifying &amp; labelling features from maps, satellite images &amp; photographs</li> </ul> <p>Use appropriate materials, geographical tools or equipment to collect data or observations, using formal measurements &amp; digital technologies &amp; spatial technologies as appropriate</p>	<p>Identify a variety of information sources that will be used for inquiry, considering their validity</p> <ul style="list-style-type: none"> <li>create a plan for the inquiry &amp; consider how to complete the inquiry effectively for example, establishing a clear purpose or goal for the inquiry, giving individual responsibilities in a group, deciding when drafts will be reviewed</li> <li>build background knowledge &amp; learn about a place or researching an issue using geographical tools &amp; skills</li> <li>examine information sources for their authorship, time of production, background context, perspective &amp; bias</li> </ul> <p>Identify &amp; create appropriate materials, geographical tools or equipment to collect data or observations, using formal measurements &amp; digital &amp; spatial technologies as appropriate</p> <ul style="list-style-type: none"> <li>select methods to collect data then designing tools such as; surveys, interviews or spreadsheets to gather data</li> <li>collect or find &amp; manage data over time, for example, comparing census data across years, reviewing population data to show growth, working out a distance from a scale on a map, collecting media coverage of an issue etc</li> </ul>

	<p>school or favourite place in the local area</p> <ul style="list-style-type: none"> <li>collecting &amp; recording information about how different parts of the school are used, for example, areas that are used for physical activities, for storage or for reading</li> </ul>	<ul style="list-style-type: none"> <li>gather information about life in other places, for example online data about weather &amp; population</li> <li>undertake a class survey to identify different points of view about place, space or environment, for example, the best location for a new piece of playground equipment</li> </ul>	<ul style="list-style-type: none"> <li>complete actual &amp; virtual fieldwork to generate data, such as designing &amp; using surveys, using video footage to observe another place, gathering information about other Australian places by communicating with students who live there</li> <li>design ways to collect information or test theories, for example, build a device to measure rainfall overnight, plot places on an outline map to show places that the class has visited</li> </ul>	<ul style="list-style-type: none"> <li>consider weaknesses with data collection methods &amp; reliability of data</li> </ul> <p>Select appropriate geographical methodologies to collect data, including following protocols for consultation with local Aboriginal communities &amp;/or Torres Strait Islander communities</p> <ul style="list-style-type: none"> <li>identify methods for collecting, recording &amp; describing data obtained through observation, fieldwork, surveys &amp; map interpretation, for example, identifying &amp; labelling features from maps, satellite images &amp; photographs</li> </ul>
<p><b>Processing, analysing, interpreting &amp; concluding</b></p>	<p>Share &amp; sort observations &amp; information</p> <ul style="list-style-type: none"> <li>use pictures, images or sounds to represent features of the local place &amp; classify them as natural features or built features</li> <li>create a class chart of favourite places in the school or local area</li> </ul> <p>Understand that space is arranged in different ways</p> <ul style="list-style-type: none"> <li>represent spatial arrangements using toys, models, tracing around objects or drawing picture symbols on picture maps</li> <li>compare different spatial arrangements in relation to their purpose, for example, how the classroom looks when set up for different activities</li> <li>use directional language to describe spatial arrangements, such as how to get from the classroom door to the book corner</li> </ul>	<p>Sort information &amp; identify patterns</p> <ul style="list-style-type: none"> <li>collate data &amp; drawing graphs, for example, column, bar or picture graphs, surveying people to see how far they will travel for different activities</li> <li>use pictures &amp; maps or writing points to compare &amp; contrast life in different places</li> <li>plot features of places or environments on outline maps &amp; interpreting maps to identify patterns or relationships, for example, there are more shops near bigger populations, hottest places are near the equator</li> </ul> <p>Draw conclusions based on their investigations &amp; share these conclusions</p> <ul style="list-style-type: none"> <li>pose generalisations, based on their investigation, for example, young children use the play equipment more than the oval, distant places are connected by highways</li> <li>consider reasons for what they have found, for example, why people, plants or animals live in a particular area, why we have a particular number of shops in a local area</li> <li>suggest consequences based on what they have found, for example, if we empty the</li> </ul>	<p>Sort information &amp; data &amp; look for relationships or patterns, using maps &amp; spatial technologies as appropriate</p> <ul style="list-style-type: none"> <li>create maps or adding to outline maps, to show specific features &amp; use geographical conventions of cardinal compass points, symbols &amp; colour codes</li> <li>create spreadsheets, graphs, diagrams or maps from data &amp; annotating what the data means</li> </ul> <p>Draw conclusions based on their investigations &amp; share these conclusions</p> <ul style="list-style-type: none"> <li>compare &amp; contrast information about Australian environments</li> <li>examine the cause &amp; effect relationships to explain how a place or an environment has changed over time or might change in the future, under different conditions, for example, what will it look like if we continue using a particular resource</li> </ul>	<p>Manage data &amp; information collected &amp; look for patterns or relationships</p> <ul style="list-style-type: none"> <li>convert data into a useful form, such as a spreadsheet, display, graph, distribution map then making decisions informed by trends in data or information</li> <li>create or add to maps, (such as grid maps), including a scale &amp; demonstrating specific features or relationships</li> <li>use tables or charts to compare information from different information sources</li> </ul> <p>Combine data &amp; information to draw &amp; share conclusions, considering their impacts</p> <ul style="list-style-type: none"> <li>explain a situation in terms of cause &amp; effect &amp; suggesting &amp; evaluating possible future scenarios, giving reasons for their preferred options</li> <li>consider their findings or conclusions &amp; identify the probable reactions &amp; responses of those who hold other viewpoints</li> </ul>

		bins more often, there will be less litter		
<b>Communicating</b>	<p>Share observations &amp; ideas</p> <ul style="list-style-type: none"> <li>present observations or ideas using a given variety of oral, graphic, written or digital communication methods</li> </ul>	<p>Present findings, using appropriate communication methods, geographical tools &amp; skills &amp; geographical vocabulary</p> <ul style="list-style-type: none"> <li>present observations or ideas using a variety of oral, graphic, written or digital communication methods</li> <li>use geographical vocabulary, including positional language, or the specific name for a type of map</li> </ul>	<p>Present &amp; compare findings, choosing an appropriate communication method for a particular audience using geographical tools &amp; skills &amp; geographical vocabulary</p> <ul style="list-style-type: none"> <li>discuss the audience for their inquiry &amp; presenting observations or ideas using a specific variety of oral, graphic, written or digital communication methods using geographical vocabulary including terms such as 'location', 'relative', 'cause &amp; effect', 'observation', 'data', 'conclusions', 'sustainability', or positional language or the specific name for a type of map</li> </ul>	<p>Present findings, choosing an appropriate communication method for more than one audience, using appropriate geographical tools &amp; geographical vocabulary</p> <ul style="list-style-type: none"> <li>present findings using a specific variety of oral, graphic, written or digital communication methods that engage the target audiences, for example a poster for the wall &amp; a role play for a younger class, a plan for a house that uses sustainable energy with supporting information in text</li> <li>use positional language, directions, the name of a type of map &amp; using terms such as 'scale' 'location', 'relative', 'cause &amp; effect', 'evidence', 'consequence' 'observation', 'data', 'conclusions', 'sustainability', 'latitude &amp; longitude'</li> </ul>
<b>Reflecting &amp; responding</b>	<p>Recognise the stages of the inquiry process</p> <ul style="list-style-type: none"> <li>discuss what they have learnt through their inquiry, such as through keeping a class journal at each stage of the inquiry, creating a or audio diary as a class or building a photo-story</li> </ul> <p>Reflect on their learning &amp; ask further questions</p> <ul style="list-style-type: none"> <li>demonstrate what they have learned &amp; what else they would like to know for example, by showing a class display or sharing work samples</li> </ul>	<p>Review their inquiry process in order to identify ways of improving the process for next time</p> <ul style="list-style-type: none"> <li>review each stage of the inquiry process through an account or a talk or a journal &amp; discuss what they did, what they enjoyed or learned from during the process</li> </ul> <p>Review their learning &amp; determine what they could do next</p> <ul style="list-style-type: none"> <li>reflect on how understanding &amp; knowledge has changed through the inquiry, &amp; share this with other students</li> <li>plan individual or collective action based on what has been learned for example make a display in the classroom, make posters about litter for the school, make a personal choice to recycle, plan more research on the topic</li> </ul>	<p>Reflect on the quality of the inquiry</p> <ul style="list-style-type: none"> <li>being guided in asking questions about each inquiry stage &amp; whether it was effective, for example What worked?, Did we ask the right questions?, Did we need more information?</li> <li>suggest improvements to the process for next time or to find more information</li> </ul> <p>Reflect on what has been learned &amp; what they could do as a result</p> <ul style="list-style-type: none"> <li>plan action that is needed to respond to their inquiry &amp; how it could be done, for example, identify further information that could be collected, ask questions for a related inquiry, design a personal action plan, suggest community projects</li> <li>identify cause &amp; effect of their suggested action or inaction on an issue</li> </ul>	<p>Reflect on the quality of inquiry</p> <ul style="list-style-type: none"> <li>use critical questions to reflect on each stage of the inquiry &amp; reflect on the inquiries of others to learn about the process for example, What worked?, How could it be improved?</li> <li>suggest &amp; plan improvements to the process or product of their inquiry for next time</li> </ul> <p>Reflect on what has been learned, feelings about conclusions &amp; what should happen as a result</p> <ul style="list-style-type: none"> <li>determine whether action is needed &amp; suggest action plans at personal, local, regional, national &amp; global scales</li> <li>reflect on learning &amp; opinions &amp; compare this with the views of others , then consider how this has changed during the inquiry</li> </ul>

	<b>Year 7-8</b>	<b>Year 9-10</b>
<b>Observing &amp; questioning</b>	<p>Determine a focus for the inquiry within an area of interest, for example, make a prediction or develop a key question</p> <ul style="list-style-type: none"> <li>consider an area of study or current event to generate ideas, for an inquiry, such as, describing their response developing an inquiry question from that</li> <li>distinguish between geographical &amp; other kinds of questions, for example, 'so what' questions about effects, 'what ought' questions about what should happen, 'what might happen' questions about the future, &amp; 'what if' questions about alternatives in a geographical context</li> </ul> <p>Develop &amp; evaluate questions through perspectives of place, space &amp; environment &amp; other relevant concepts</p> <ul style="list-style-type: none"> <li>develop questions relevant to an area of study or current event that explore place, space &amp; environment perspectives relevant to an area of study or current event</li> <li>evaluate the questions for their capacity to explore place, space &amp; environmental perspectives</li> </ul>	<p>Determine a focus for the inquiry, for example, propose a hypothesis or develop a series of questions that are inclusive of the concepts including place, space &amp; environment</p> <ul style="list-style-type: none"> <li>consider current events to generate ideas for an inquiry</li> <li>identify questions framework using questioning conventions, for example, spatial association questions, ICT based questions &amp; values questions, in order to inform geographical inquiry</li> </ul> <p>Evaluate questions in terms of their ability to examine place, space, environment &amp; other concepts</p> <ul style="list-style-type: none"> <li>select or generate inquiry questions using a question framework that, for example, explores stakeholder views, alternative responses &amp; decision making</li> <li>justify a selection of inquiry questions in terms of their feasibility, representation of geographical perspectives &amp; balance</li> </ul>
<b>Planning, collecting &amp; evaluating</b>	<p>Determine a purpose &amp; operational scale &amp; then design the sequence of the geographical inquiry</p> <ul style="list-style-type: none"> <li>consider what answers or explanations are needed, &amp; at what scale, for example at the local or global scales</li> </ul> <p>Design the inquiry &amp; develop a plan to determine which data will be needed &amp; to locate this data from fieldwork, library &amp; online research using spatial technologies, maps, statistics, photographs &amp; other images</p> <ul style="list-style-type: none"> <li>determine how data will be collected, including whether fieldwork will be undertaken, which techniques will be used &amp; the appropriateness of data collection processes, for example, designing survey &amp; questionnaire instruments &amp; deciding sample size &amp; feasibility</li> <li>use a range of geographical tools &amp; skills to gather data, for example, weather instruments, synoptic maps &amp; charts or satellite images to represent the weather or causes of precipitation in a particular area</li> </ul> <p>Select appropriate geographical methodologies to collect, organise &amp; store data, including following protocols for consultation with local Aboriginal communities &amp;/or Torres Strait Islander communities</p> <ul style="list-style-type: none"> <li>identify methods for collecting, recording &amp; describing data obtained through observation, fieldwork, surveys &amp; map interpretation, for example, identifying &amp; labelling</li> </ul>	<p>Determine a purpose &amp; operational scale of the geographical inquiry &amp; independently design the inquiry</p> <ul style="list-style-type: none"> <li>plan how to combine quantitative &amp; qualitative methods of collecting &amp; analysing data</li> </ul> <p>Independently design the inquiry to identify &amp; locate data using fieldwork, library &amp; online research, spatial technologies, maps, statistics, photographs &amp; other images</p> <ul style="list-style-type: none"> <li>collect primary data &amp; secondary data, including fieldwork techniques such as interviewing, surveys, observation, taking photographs, annotating maps &amp; l&amp; use surveys</li> <li>determine which information sources will provide relevant, reliable &amp; representative data &amp; address issues, for example, use another collection method such as a survey or soil testing</li> </ul> <p>Select appropriate geographical methodologies to collect, organise &amp; store data, including following protocols for consultation with the local Aboriginal communities &amp;/or Torres Strait Islander communities</p> <ul style="list-style-type: none"> <li>identify methods for collecting, recording &amp; describing data obtained through observation, fieldwork, surveys &amp; map interpretation, for example, identifying &amp; labelling features from maps, satellite images &amp; photographs</li> <li>determine how best to organise &amp; structure data, for example, designing data capture</li> </ul>

	<p>features from maps, satellite images &amp; photographs</p> <ul style="list-style-type: none"> <li>determine how best to organise &amp; structure data, for example, designing data capture sheets for later retrieval</li> </ul> <p>Assess the effectiveness of methodology &amp; suitability of collected data</p> <ul style="list-style-type: none"> <li>ask questions of the data relating to the source, the author, the purpose, the motives, the intended audience, &amp; accessibility</li> </ul>	<p>sheets for later retrieval</p> <p>Evaluate data &amp; collection methods for reliability &amp; representation &amp; make necessary adjustments</p> <ul style="list-style-type: none"> <li>listen to arguments &amp; opinions from a wide spectrum of people to represent a range of viewpoints on a geographical issue</li> <li>identify ethical ways to access information that is representative &amp; inclusive of place, space &amp; environment</li> <li>reflect on the appropriateness of data collection processes</li> </ul>
<p><b>Processing, analysing, interpreting &amp; concluding</b></p>	<p>Select appropriate geographical techniques to retrieve &amp; interrogate data</p> <ul style="list-style-type: none"> <li>use diagrams, statistics &amp; mapping skills to represent data</li> <li>sort data for later retrieval &amp; interpretation, for example, constructing climate graphs &amp; tables to use to interpret mean, median &amp; variability of rainfall for individual stations to forecast climate patterns</li> </ul> <p>Analyse different sources of data to identify relationships, trends, patterns, anomalies &amp; generalisations</p> <ul style="list-style-type: none"> <li>compare &amp; contrast primary data &amp; secondary data to identify patterns, trends &amp; geographical relationships</li> <li>use mental maps to organize information about people, places &amp; environments in a spatial context</li> </ul> <p>Synthesise data &amp; develop conclusions in response to the inquiry, for example, a prediction or a key finding</p> <ul style="list-style-type: none"> <li>select &amp; use appropriate graphical techniques to present data in maps, statistics, photographs &amp; other images, for example drawing sketch maps of their neighbourhood following geographical conventions or constructing population profiles</li> <li>interpret soil moisture budgets to inform own garden project or a fieldwork report to advise farmers in their local area</li> </ul> <p>Propose alternatives, strategies or solutions to the inquiry &amp; make decisions on a course of action</p> <ul style="list-style-type: none"> <li>demonstrate how the inquiry considers the interests of other people including in the Australian context, those of Aboriginal Peoples &amp;/or Torres Strait Islander Peoples</li> <li>make recommendations, for example, of ways to improve the use of water in student's</li> </ul>	<p>Select appropriate geographical methodologies to organise &amp; record relevant data for synthesis, storage &amp; retrieval using ICT &amp; other methods following geographical conventions</p> <ul style="list-style-type: none"> <li>collate Census data &amp; record using ICT &amp; spatial technologies in formats such as annotated maps, graphs &amp; table</li> <li>represent data in a range of formats, for example, recording data from fieldwork using spatial technologies, using computer mapping software to create statistical &amp; other maps for later use, constructing graphs &amp; tables</li> </ul> <p>Analyse data to identify &amp; explain order, diversity, trends, patterns, anomalies &amp; generalisations</p> <ul style="list-style-type: none"> <li>analyse data to identify cause &amp; effect relationships, order, diversity, trends, patterns &amp; anomalies to develop generalisations</li> <li>interpret analysis from primary data &amp; secondary data, including various types of maps; weather, political, topographic maps, thematic, relief maps, diagrammatic &amp; choropleth to identify trends, patterns &amp; geographical relationships</li> </ul> <p>Synthesise data &amp; draw conclusions that link to the focus of the inquiry</p> <ul style="list-style-type: none"> <li>synthesise data &amp; testing conclusions in response to the inquiry, for example, prove or disprove the hypothesis, form conclusions by accounting for opposing evidence</li> </ul> <p>Evaluate alternatives by applying criteria &amp; make a recommendation on a course of action</p> <ul style="list-style-type: none"> <li>demonstrate how the inquiry considers a selection of interests of other people including in the Australian context, those of Aboriginal Peoples &amp; Torres Strait Islander Peoples</li> </ul>

	local context	
<b>Communicating</b>	<p>Develop geographical texts using appropriate geographical vocabulary, concepts &amp; geographical conventions to communicate effectively in one or more of the following forms: written, oral, visual &amp; graphic</p> <ul style="list-style-type: none"> <li>incorporate appropriate geographical methodologies &amp; observing geographical conventions, including maps, tables, statistics, photographs &amp; other visual representations</li> <li>determine how to use data to support findings, including the use of ICTs to present data in maps, statistics, photographs &amp; other images</li> </ul>	<p>Develop a range of geographical texts such as written, oral, visual &amp; graphic, based on data from primary sources &amp; secondary sources using appropriate graphical techniques, including spatial technologies, maps, statistics, photographs</p> <ul style="list-style-type: none"> <li>develop a logically structured argument, supported by data from primary sources &amp; secondary sources &amp; incorporating a range of visual forms such as maps, a flow chart &amp; population profiles</li> </ul> <p>Determine how to incorporate data to support findings, including the use of ICTs to present maps, statistics, photographs &amp; other images</p> <ul style="list-style-type: none"> <li>write a field report incorporating geographic conventions in the presentations of data &amp; information in maps, diagrams, tables &amp; statistics within geographical texts, for example synoptic maps &amp; charts, cross sections &amp; graphs depicting survey data</li> </ul> <p>Use appropriate geographical vocabulary, concepts &amp; geographical conventions to communicate effectively</p> <ul style="list-style-type: none"> <li>give an oral presentation supported by data in maps, statistics, photographs &amp; other images, &amp; spatial technologies data incorporating appropriate graphical techniques &amp; geographical conventions</li> </ul>
<b>Reflecting &amp; responding</b>	<p>Reflect on the inquiry process, including a review of all methods of collection, retrieval, analysis &amp; presentation of data &amp; examine conclusions, &amp; if necessary revisit earlier phases with further questions or change techniques</p> <ul style="list-style-type: none"> <li>reflect on what is still unclear about what has been investigated, &amp; decide how to address this</li> <li>relate findings of an investigation to existing knowledge, to construct new understandings &amp; refine questions</li> </ul> <p>Select key findings from an inquiry to inform decisions on how to best respond to the question, issue or problem &amp; where appropriate, plan for action.</p> <ul style="list-style-type: none"> <li>determine key findings based on evidence about question, issue or problem &amp; justify this in terms of data or evidence</li> <li>use key findings to inform the objectives of action plan, before making decisions about actions</li> <li>empathise with the opinions &amp; viewpoints of others, to inform if &amp; how action should be taken</li> <li>evaluate the influence of personal values &amp; attitudes on decisions about actions</li> </ul>	<p>Appraise the effectiveness of the inquiry process &amp; its findings, including a review of all methods of collection, retrieval, analysis &amp; presentation of data</p> <ul style="list-style-type: none"> <li>identify the probable reactions &amp; responses of those who hold other viewpoints</li> <li>understand how observations &amp; interpretations of the world are influenced by who we are &amp; what we already think</li> </ul> <p>Plan how an inquiry could be improved</p> <ul style="list-style-type: none"> <li>revisit the purpose of the inquiry in order to appraise what has been achieved, &amp; address what was not attended to</li> <li>relate key findings to existing knowledge to develop revised explanations</li> </ul> <p>Use decision-making methods to decide between the most appropriate plan for action as an individual or part of a group</p> <ul style="list-style-type: none"> <li>evaluate alternative possibilities before deciding on any action, for example how sustainability can influence actions</li> </ul>