Inquiry skills in the Australian Curriculum v6: A bird's-eye view

By Mandy Lupton

Biography
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The Australian Curriculum is a living document, and developing, implementing and evaluating it is a major logistical exercise. Teacher librarians are likely to be the only staff member in the school with a bird's-eye view of the curriculum.

Abstract
This paper presents an analysis of inquiry skills in the Australian Curriculum version 6. It juxtaposes the inquiry skills strands in the scope and sequence of Science, History, Geography, Economics and Business, and Civics and Citizenship with the Critical and Creative Thinking and Information and Communication Technology general capabilities. In doing so, it reveals the extent of inquiry skills embedded in the Australian Curriculum and identifies some misalignments and omissions.

Introduction
The skills, knowledge and information practices associated with inquiry learning are embedded in the Australian Curriculum version 6 in the skills strands of Science, History, Geography, Economics and Business, Civics and Citizenship and in the Critical and Creative Thinking (CCT) and Information and Communication Technology (ICT) general capabilities. This distributed approach has made it difficult to create a 'bird's-eye' view of the scope and sequence of the inquiry learning process. In this paper I present an analysis of the bird's-eye view. In doing so, I have found that the distribution and weighting of inquiry elements has led to possible omissions and misalignment across year levels and subject areas.

To frame this analysis, it is necessary to understand inquiry learning as a pedagogy and its three main elements: 1) questioning frameworks, 2) information literacy and 3) the research cycle.

Questioning frameworks
Inquiry learning is based on asking a range of different questions at points throughout the inquiry process. Inquiry questioning frameworks have three main purposes: 1) to generate focus questions, 2) to evaluate information and data, and 3) to evaluate the process of inquiry.

Generative question frameworks include essential questions (Wiggins and McTighe 2005; Wiggins 2007) such as 'Why is war necessary?' and 'What makes a great person/leader?'(Wilhelm 2007, pp. 41–74). Generative questions can be highly disciplinary, for instance, 'How do our various body systems interact?' (Science) and 'What are the common factors in the rise and fall of powerful nations?' (History) (Wiggins and McTighe 2005, pp. 105–125).

Evaluative questions are used to evaluate information and data. These can be discipline-specific or general. Teacher librarians are accustomed to working with students to evaluate information using generic rubrics that require students to check the currency, provenance, authority and usefulness of information. Discipline-specific evaluative questions involve interrogating primary

and secondary sources. Examples include questions to interrogate a primary source in History (Loewen c2010) and generic questions relating to the critical evaluation of information that could apply across discipline areas (Rheingold 2009).

Process questions evaluate and inform each stage of the inquiry. A number of inquiry and information literacy models include questions to ask at each stage of the process, including the *Inquiry Circle* (Gourley 2008), the *Information Process* (NSW Department of Education and Training 2007) and the Inquiry Process (Brunner nd).

Information literacy

Information literacy includes finding, accessing, organising, evaluating, creating and using information (Australian School Library Association 1994; Australian Library and Information Association 2006). A number of information literacy and information seeking models are used in Australian schools, including The *Big6* (Eisenberg and Berkowitz 2012), the *Information Search Process* (ISP) (Kuhlthau 1991; Kuhlthau, Maniotes & Caspari 2007), the *Information Process* (NSW Department of Education and Training 2007) and the *Information Literacy Process* (Ryan & Capra 2001).

Research cycle

A research cycle is based around gathering information and data to answer a research question. It involves iterative cycles of planning, acting, observing and evaluating (McTaggart 1991). The research cycle is seen in a range of cyclic inquiry and information literacy models where it is acknowledged that the research process consists of iterations of asking questions and gathering information.

The research cycle is exemplified by Gourley's *Inquiry Cycle* model (2008). The *Inquiry Cycle* is an amalgamation of three models from Murdoch (2010), Stripling (2003) and Branch and Oberg (2005). It is also clearly influenced by Kuhlthau (1991). It includes the stages of Tuning In, Finding Out, Sorting Out, Making Conclusions and Taking Action (see graphic at Gourley 2012).

For this paper, the focus is primarily on two of the three elements: questioning frameworks and information literacy. The research cycle is implied rather than explicit within the Australian Curriculum. It should be noted that a range of inquiry and information literacy models could be used successfully in conjunction with the inquiry skills strands in the Australian Curriculum.

Analysis of inquiry in the Australian Curriculum v6

Methodology

Document analysis was the qualitative methodology chosen for this research. Selected Australian Curriculum documents became the data source from which I identified patterns, themes and categories (Bowen 2009). I chose pre-existing themes from the inquiry pedagogy literature and analysed the data for these themes.

The first stage of the analysis involved creating a large table where the content descriptors from the Science (ACARA 2014j), History (ACARA 2014e; ACARA 2014g; ACARA 2014h), Geography (ACARA 2014id; ACARA 2014hi), Economics and Business (ACARA 2014c), Civics and Citizenship (ACARA 2014a) skills strands and CCT (ACARA 2014b) and ICT (ACARA 2014f) general capabilities were juxtaposed with the year level content descriptors as published in the Australian Curriculum version 6 (ACARA 2014k). I did not include subject areas such as English and Mathematics because they made no mention of inquiry. In terms of CCT and ICT, I included only those aspects of the content descriptors that were clearly related to inquiry. I categorised the skills and information practices into the following themes: questions, guidance (by the teacher), collecting and evaluating data and information, using data and information, evaluating and reflecting on the inquiry process and communicating. These themes were recognisable as being inquiry stages in accordance with the inquiry and information literacy models mentioned earlier.

I chose *guidance* (by the teacher) as an element of analysis due to prominent models of inquiry learning pedagogy including guidance as a component of the model. For instance, Kuhlthau's Guided Inquiry (Kuhlthau, Maniotes & Caspari 2007; Kuhlthau, Maniotes & Caspari 2012) is a model used extensively by teacher librarians, while guided inquiry in science belongs to a continuum from *structured inquiry* (teacher directed) to *guided inquiry* (combination of student and teacher directed), to *open inquiry* (entirely student directed) (National Research Council 2000; Bell, Smetana & Binns 2005).

The second stage of the analysis involved coding content descriptors within the themes, identifying references to:

- Asking questions
- Explicit mention of guidance from the teacher
- Searching, identifying, locating and organising information
- Evaluation of information and data
- Acknowledgement of sources

The third stage of the analysis involved extracting the coded content descriptors into separate tables to show the relationship between year levels and the developmental sequence.

Findings and discussion

Analysis of the similarities and differences between subject areas, general capabilities and year levels, in relation to the codes described, revealed a number of misaligned skills and some significant omissions. These findings raise questions concerning the aspects of the inquiry process that are regarded as generic, that is, applicable across disciplines, versus those aspects that are discipline-specific (particular disciplinary information practices).

Stages of skills and general capabilities

Table 1 represents the inquiry stages listed in Science, History, Geography, Economics and Business, Civics and Citizenship, CCT and ICT alongside the general themes. I have not included Senior Science in Table 1 because the Senior Science curriculum departs from the generic stages and presents the stages with subject-specific content relating to the field of science, for example, Physics, Chemistry, Biology, and Environmental and Earth Science.

As can be seen in Table 1, the stages of inquiry learning are similar across the subject areas and general capabilities selected. However, it should be noted that History and ICT do not have a reflecting stage. This is curious, given that the ability to self-evaluate and reflect is arguably a strong part of lifelong learning and should apply across all disciplines. Inquiry learning should include the evaluation of research cycles, thus allowing students to plan for further cycles.

Table 1: Inquiry stages

Stages	Science F–10	History F–12	Geography F–12	Economics & Business 5–10	Civics & Citizenship 3–10	CCT	ICT
Questions	Questioning & predicting	Historical questions & research	Observing, questioning & planning	Questioning & research	Questioning & research	Pose questions	
Planning & conducting investigations *Collecting & evaluating data and information*	Planning & conducting		Collecting, recording, evaluating and representing			Identify & clarify information & ideas	Define & plan information searches Locate, generate & access data & information
Using data & information	Processing & analysing data & information	Analysis & use of sources	Interpreting, analysing & concluding Reflecting & responding	Interpretation & analysis Economic reasoning, decision-making & application	Analysis, synthesis & interpretation Problem-solving & decision making	Organise & process information	
Evaluating & reflecting on inquiry process	Evaluating	Perspectives & interpretations		Communication & reflection	Communication & reflection	Reflecting on thinking & processes Evaluate procedures & outcomes	
Communicating	Communicating	Explanation & communication	Communicating				Collaborate, share & exchange

Questioning

Posing questions is an essential part of inquiry learning. The verbs related to questioning change at different stages of the sequence in Science, History and Geography. In CCT, the verb stays the same ('pose') but the complexity of the action changes as indicated by the purpose of the question (that is, Year 2 'Pose questions to *identify and clarify issues*').

In juxtaposing the sequence in these subjects (see Table 2), it is apparent that different questioning verbs are used across the subject areas in the same year, for instance in Year 3 students 'identify' questions in Science, 'pose' questions in History and 'develop' questions in Geography. The sequence within a subject area also changes. For instance, in Science students 'pose', 'identify', 'formulate', and 'construct', in History they 'pose', 'identify', 'formulate' and 'frame', while in Geography they 'pose', 'develop' and 'formulate'. Science switches between the verbs, for example, Year 1 — 'pose', Year 3 — 'identify', Year 5 — 'pose', Year 7 — 'identify', Year 9 — 'formulate', Year 12 — 'identify' and 'construct'.

It is not clear why there is a difference in nomenclature within and between subject areas. It is possible that the verbs relate to a different level of cognitive complexity; however, if this is the case then the verbs should not revert as in the case of Science. It could be argued that 'formulate' sounds more scientific and complex than 'pose', but this is not explained in any of the Curriculum documents. Perhaps there are distinct disciplinary differences, or the developers did not agree with the nomenclature of the other subject areas, or perhaps they did not check the usage in other subject areas.

A minor inconsistency that is seen when aligning all the subject areas is the use of different tenses for the verbs. For instance, F–10 Geography and all other subjects use tenseless verbs, for example, 'formulate', 'plan', 'collect' and so on, whereas Senior Geography uses the present tense, for example, 'formulates', 'plans', 'collects'.

Another aspect that is highlighted when the content descriptions are juxtaposed is where disciplinary ways of thinking begin. For instance, in Year 3 Science, students identify questions 'that can be investigated scientifically'. This means they need to start thinking from a scientific perspective. Likewise, in Year 3 Geography, students 'develop geographical questions'. However, it is not until Year 5 History that students 'identify questions to inform an historical inquiry', that is, start thinking from an historical perspective.

Guidance by the teacher

This theme deals with the explicit mention of guidance by the teacher in planning and conducting investigations. Because guidance is explicitly mentioned in Science, it could be assumed that when guidance is *not* mentioned in the other subjects that students are expected to be more self-directed and independent in posing questions and searching for information. However, it is also possible that the developers of the other subjects have simply left this decision up to the teacher.

As seen in Table 3, students in Foundation (that is, Kindergarten (NSW/ACT), Prep (QLD/VIC/TAS), Pre-primary (WA), Transition (NT) and Reception (SA)) Science 'respond' to questions (presumably posed by the teacher) rather than 'pose' them as they do in History and Geography. This raises the question, if students have the ability to pose questions in two subject areas in Foundation, then why can't they do so in Science? Furthermore, Science stipulates guidance until Year 7 in all aspects of the inquiry, whereas the implication inherent in the other subjects

Table 2: Questions

Science	History	Geography	Economics & Business	Civics & Citizenship	CCT
F — **Respond to questions** about familiar objects & events 1 — **Respond to & pose questions**, & make predictions about familiar objects & events	F — **Pose questions** about the past using sources provided	F — Make observations about familiar places & **pose questions** about them 1 — **Pose questions** about familiar & unfamiliar places	N/A	N/A	F — **Pose factual & exploratory questions** based on personal interests & experiences 2 — **Pose questions** to identify & clarify issues, & compare information in their world
3 — With guidance, **identify questions** in familiar contexts that can be investigated scientifically & predict what might happen based on prior knowledge 5 — With guidance, **pose questions** to clarify practical problems or inform a scientific investigation, & predict what the findings of an investigation might be	3 — **Pose a range of questions** about the past 5 — **Identify questions** to inform an historical inquiry	3 — **Develop geographical questions** to investigate 5 — **Develop geographical questions** to investigate & plan an inquiry	N/A 5 — **Develop questions** to guide an investigation of an economic or business issue or event, & gather data & information from observation, print & online sources	3 — **Pose questions** about the society in which they live 5 — **Develop questions** & gather a range of information to investigate the society in which they live	4 — **Pose questions** to expand their knowledge about the world 6 — **Pose questions** to clarify & interpret information & probe for causes & consequences
7 — **Identify questions & problems** that can be investigated scientifically & make predictions based on scientific knowledge 9 — **Formulate questions or hypotheses** that can be investigated scientifically	7 — **Identify a range of questions** about the past to inform a historical inquiry 9 — **Identify & select different kinds of questions** about the past to inform historical inquiry; evaluate & enhance these questions	7 — **Develop geographically significant questions** & plan an inquiry, using appropriate geographical methodologies & concepts 9 — **Develop geographically significant questions** & plan an inquiry that identifies & applies appropriate geographical methodologies & concepts	7 — **Develop questions** about an economic or business issue or event, & plan & conduct an investigation or project 9 — **Develop questions** & hypotheses about an economic or business issue or event, & plan & conduct an investigation	7 — **Develop a range of questions** to investigate Australia's political & legal systems 9 — **Develop, select & evaluate a range of questions** to investigate Australia's political & legal systems	8 — **Pose questions** to probe assumptions & investigate complex issues 10 — **Pose questions** to critically analyse complex issues & abstract ideas
	11 — **Frame questions** to guide inquiry & develop a coherent research plan for inquiry		N/A	N/A	N/A

(no guidance is mentioned) is that students will be self-directed. It is possible that this inconsistency is due to the developers regarding Science investigation as more difficult than in other subject areas.

Guidance by the teacher is explicit in History and CCT in relation to the use of sources. In Foundation, students 'use sources provided', which clearly indicates that the sources are provided by the teacher. As will be seen in Table 4, from Year 1 in History students 'identify sources', implying that they do this independently.

Information literacy

In this section I present my findings in relation to information literacy, starting with finding, accessing, selecting and organising information and moving to evaluating information and acknowledging sources. In order to limit the scope of this paper, I have not addressed using or communicating information.

Finding, accessing, selecting and organising information

Learning to find, access, select and organise information are elements of information literacy that teacher librarians have traditionally seen as their responsibility to develop in students. In Table 4, I have extracted the content descriptors related to information sources and practices. It should be noted that I have not extracted the descriptors related to collecting data by observing or measuring, or using existing data sets as is common in Science and Geography, as these aspects are usually addressed by the class teacher rather than the teacher librarian.

Table 4 presents relevant content descriptors from Science, History,

Table 3: Explicit mention of guidance and use of sources provided by the teacher

Science	History	CCT
1 — Participate in different types of **guided investigations to** explore & answer questions, such as manipulating materials, testing ideas, & accessing information sources	F — Pose questions about the past **using sources provided**	F — Gather similar information or depictions from **given sources**
5 — **With guidance,** plan appropriate investigation methods to answer questions or solve problems		

Geography, Economics and Business, Civics and Citizenship, CCT and ICT. Evaluation of information, a crucial component of information literacy is included, but is also extracted separately later in this paper. Acknowledging sources, while still a component of information literacy has not been included in Table 4 as these elements have been highlighted in Table 5.

Table 4 clearly shows that information literacy is not strongly represented in Science. Accessing information sources is mentioned in Year 1, then not mentioned again until Year 9 when critical evaluation of secondary sources is addressed. In Year 11, students collect primary and secondary *data* rather than information, and they 'interpret a range of scientific and media texts'. However, there is no reference to finding or selecting these texts. It seems that the Science curriculum is focused on the experimental method as the only form of inquiry, rather than including information inquiry (Lupton 2012). By contrast, in History, Geography, Economics and Business, and Civics and Citizenship students engage with information throughout the inquiry stages by collecting, selecting, evaluating and analysing a range of sources.

Acknowledging sources

Teaching students to acknowledge and reference sources is a major focus for teacher librarians. Extracting the content descriptors relating to acknowledging and referencing exposes the lack of this element in the inquiry skills descriptors. As can be seen in Table 5, acknowledging and referencing sources is not mentioned in Science, Geography, and Economics and Business. This is a major omission from the scope and sequence of inquiry in these subject areas. Furthermore, acknowledging sources is not mentioned in History until Year 7, despite teacher librarians' common practice of teaching citing and referencing from lower primary. It is of interest to note that the ICT general capability addresses acknowledging sources from Year 2, with citing and referencing from Year 4. However, this is only in relation to digital sources. Here we have the situation where *digital* sources are acknowledged from Year 2, whereas non-digital sources are not addressed until Year 7 in History only.

Evaluating information

Similar to acknowledging and referencing sources, evaluation of information is a major focus of the teacher librarian's role in developing information literacy. Table 6 maps the descriptors associated with the evaluation of information in the subject areas and general capabilities chosen.

In order to evaluate information in a general capability, students must engage with information in a subject area. The general capabilities do not exist as subject areas in their own right. The subject areas necessarily have different foci in terms of evaluation criteria that are related to disciplinary information and data practices. These criteria should be articulated in the inquiry skills strands of the subject areas.

Evaluation is first mentioned in ICT in Year 2 in relation to explaining the 'usefulness' of information. *Usefulness* implies criteria for making judgements about information and data. *Usefulness* is mentioned in Year 5 Geography and Year 7 History. Evaluation of information in Science is not mentioned until Year 9. Again, there is a clear lack of alignment between the subject areas and general capabilities. It is possible that it is cognitively more difficult to judge *usefulness* in History (Year 7) than in Geography (Year 5) or that the types of sources used in the various subject areas are so different that *usefulness* consideration cannot begin until Year 7 in History. Furthermore, *usefulness* in History may not be the same as *usefulness* in Geography. However, a reading of the scope and sequence in Table 6 demonstrates that students are expected to be able to make judgements on *usefulness* in ICT in Year 2 without a corresponding acknowledgement in a subject area. Of course, the general capabilities are designed to work across all of the subject areas, including those that have not yet been developed or published, but unfortunately this alignment is not seen in the existing published curricula.

Consideration of the 'suitability' of information is introduced in ICT in Year 6 using 'given criteria', which progresses to using the students' 'own criteria' in Year 8. In Year 10 ICT, students are expected to 'develop and use criteria systematically to evaluate the *quality*, *suitability* and *credibility*' [my emphasis] of information.

In terms of more specific evaluation criteria, 'reliability' is first mentioned in Year 7 Geography, Year 9 History, and Year 10 CCT, while 'validity' is mentioned in Year 8 CCT, Year 9 Science and Year 12 Geography. 'Bias' is mentioned in Year 9 Geography and Year 10 CCT and analysis of 'interpretation' (which presumably incorporates bias) is mentioned in Year 12 History.

Conclusion

This analysis of the Australian Curriculum has illustrated that the elements of inquiry learning are not aligned across subjects and year levels and have some glaring omissions. The most prominent of these is in relation to the evaluation of information and the acknowledgement of sources. Furthermore, aspects such as different nomenclature for asking questions and use of different tense in verbs detract from the coherence of the inquiry strands. This analysis also demonstrates that Science skills related to inquiry learning are severely limited in relation to information literacy.

It is apparent that the general capabilities do not necessarily align with the subject areas and that the subject areas do not necessarily align with each other. This may be due to differences in disciplinary inquiry and information practices, or it might simply be due to the different areas of the curriculum being developed in isolation. In order to investigate this, I consulted

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Table 4: Finding, selecting & organising information

Science	History	Geography	Economics & Business	Civics & Citizenship	CCT	ICT
1 — Participate in different types of guided investigations to explore & answer questions, such as manipulating materials, testing ideas, & accessing information sources	F — Pose questions about the past using sources provided; explore a range of sources about the past	F — Record geographical data & information collected by observation 1 — Collect & record geographical data & information, for example, by observing, by interviewing, or from sources such as photographs, plans, satellite images, story books & films	N/A	N/A	F — Gather similar information or depictions from given sources 2 — Organise information based on similar or relevant ideas from several sources	F — Use ICT to identify where information is located; use icons to locate or generate required information; explain how located data or information was used 2 — Use ICT to identify, record & classify textual & graphic information to show what is known & what needs to be investigated; locate information from a given set of digital sources; explain the usefulness of located data or information
	3 — Identify sources; locate relevant information from sources provided 5— Identify & locate a range of relevant sources; locate information related to inquiry questions in a range of sources	3 — Collect & record relevant geographical data & information, for example, by observing by interviewing, conducting surveys, measuring, or from sources such as maps, photographs, satellite images, the media & the internet 5 — Collect & record relevant geographical data & information, using ethical protocols, from primary & secondary sources, for example, people, maps, plans, photographs, satellite images, statistical sources & reports; evaluate sources for their usefulness & represent data in different forms, for example, maps, plans, graphs, tables, sketches & diagrams	N/A 5 — Develop questions to guide an investigation of an economic or business issue or event, & gather data & information from observation, print & online sources; sort data & information into categories	3 — Distinguish facts from opinions in relation to civics & citizenship topics & issues 5 — Use & evaluate a range of information to develop a point of view	4 — Collect, compare & categorise facts & opinions found in a widening range of sources 6 — Analyse, condense & combine relevant information from multiple sources	4 — Use ICT to plan an information search or generation of information, recognising some pattern within the information; locate, retrieve or generate information from a range of digital sources; explain why located data or information was selected 6 — Use a range of ICT to identify & represent patterns in sets of information & to pose questions to guide searching for, or generating, further information; locate, retrieve or generate information using search engines & simple search functions & classify information in meaningful ways; assess the suitability of data or information using a range of appropriate given criteria

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Table 4: Finding, selecting & organising information (continued)

Science	History	Geography	Economics & Business	Civics & Citizenship	CCT	ICT
	7 — Identify & locate relevant sources, using ICT & other methods; identify the origin & purpose of primary & secondary sources; locate, compare, select & use information from a range of sources as evidence draw conclusions about the usefulness of sources	7 — Collect, select & record relevant geographical data & information, using ethical protocols, from appropriate primary & secondary sources; evaluate sources for their reliability & usefulness & represent data in a range of appropriate forms, for example, climate graphs, compound column graphs, population pyramids, tables, field sketches & annotated diagrams, with & without the use of digital & spatial technologies	7 — Gather relevant data & information from a range of digital, online & print sources	7 — Identify, gather & sort information & ideas from a range of sources	8 — Critically analyse information & evidence according to criteria such as validity & relevance	8 — Use a range of ICT to analyse information in terms of implicit patterns & structures as a basis to plan an information search or generation; locate, retrieve or generate information using search facilities & organise information in meaningful ways; assess the suitability of data or information using appropriate own criteria
9 — Critically analyse the validity of information in secondary sources & evaluate the approaches used to solve problems	9 — Identify & locate relevant sources, using ICT & other methods, Identify the origin, purpose & context of primary & secondary sources; evaluate the reliability & usefulness of primary & secondary sources	9 — Collect, select, record & organise relevant geographical data & information, using ethical protocols, from a range of appropriate primary & secondary sources; evaluate sources for their reliability, bias & usefulness, & represent multi-variable data in a range of appropriate forms, for example, scatter plots, tables, field sketches & annotated diagrams, with & without the use of digital & spatial technologies; represent the spatial distribution of geographical phenomena by constructing special purpose maps that conform to cartographic conventions, using spatial technologies as appropriate; evaluate multi-variable data & other geographical information using qualitative & quantitative methods, & digital & spatial technologies as appropriate, to make generalisations & inferences, propose explanations for patterns, trends, relationships & anomalies, & predict outcomes	9 — Gather relevant & reliable data & information from a range of digital, online & print sources	9 — Identify, gather & sort information & ideas from a range of sources & reference as appropriate; critically evaluate information & ideas from a range of sources in relation to civics & citizenship topics & issues	10 — Critically analyse independently sourced information to determine bias & reliability	10 — Select & use a range of ICT independently & collaboratively, analyse information to frame questions & plan search strategies or data generation; use advanced search tools & techniques or simulations & digital models to locate or generate precise data & information that supports the development of new understandings; develop & use criteria systematically to evaluate the quality, suitability & credibility of located data or information & sources

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Table 4: Finding, selecting & organising information (continued)

Science	History	Geography	Economics & Business	Civics & Citizenship	CCT	ICT
11 — Interpret a range of scientific & media texts, & evaluate processes, claims & conclusions by considering the quality of available evidence; & use reasoning to construct scientific arguments	11 — Identify, locate & organise relevant information from a range of primary & secondary sources, Identify the origin, purpose & context of historical sources; evaluate the reliability, usefulness & contestability of sources to develop informed judgements that support a historical argument Analyse, interpret & synthesise evidence from different types of sources to develop & sustain a historical argument; analyse & account for the different perspectives of individuals & groups in the past; evaluate critically different historical interpretations of the past, how they evolved, & how they are shaped by the historian's perspective; evaluate contested views about the past to understand the provisional nature of historical knowledge & to arrive at reasoned & supported conclusions	11 — Collects geographical information incorporating ethical protocols from a range of primary & secondary sources; records observations in a range of graphic representations using spatial technologies & information & communication technologies; evaluates the reliability, validity & usefulness of geographical sources & information Analyses geographical information & data from a range of primary & secondary sources & a variety of perspectives to draw reasoned conclusions & make generalisations, identifies & analyses trends & patterns, infers relationships, & makes predictions & inferences; applies generalisations to evaluate alternative responses to geographical issues at a variety of scales	N/A	N/A	N/A	N/A

the guides developed by the Australian Curriculum and Assessment Reporting Authority for curriculum developers (ACARA 2009; ACARA 2010) and the Shape of the Australian Curriculum overview document (ACARA 2012). I found that there is no aim or instruction in any of these documents encouraging developers to check alignment across subject areas and general capabilities.

Students experience the curriculum as a whole, not as separate subject areas and capabilities. For instance, it follows that if students have the capacity to pose questions in History, Geography and CCT in Foundation, then they should also have the capacity to pose questions in Science. The disciplinary difference would be the way that the questions are investigated and the type of questions posed. The 'bird's-eye' view of the curriculum presented here indicates that areas of the Australian Curriculum selected for analysis are lacking an across-the-curriculum approach to inquiry learning. This is inconsistent with a whole-school inquiry approach that many Australian schools have already implemented.

The Australian Curriculum is a living document, and developing, implementing and evaluating it is a major logistical exercise. It is inevitable that omissions and misalignments will occur. Teacher librarians are likely to be the only staff member in the school with a bird's-eye view of the curriculum. The concerns identified in this paper should be exploited to open conversations at school level, thereby positioning teacher librarians as curriculum consultants, particularly in relation to inquiry learning pedagogy.

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Table 5: Acknowledging & referencing sources

Science	History	Geography	Economics & Business	Civics & Citizenship	ICT
			N/A	N/A	2 — **Recognise ownership** of digital products that others produce and that what they create or provide can be used or misused by others
			N/A		4 — **Acknowledge** when they use digital products created by someone else, & **start to indicate the source** 6 — Identify the legal obligations regarding the ownership & use of digital products & **apply some referencing conventions**
	7 — Develop texts, particularly descriptions and explanations that use evidence from a **range of sources that are acknowledged** 9 — Develop texts, particularly descriptions and discussions that use evidence from a **range of sources that are referenced**			9 — Identify, gather and sort information and ideas from a range of sources and **reference as appropriate**	8 — **Apply practices** that comply with legal obligations regarding the ownership & use of digital products resources 10 — Identify and describe ethical dilemmas and consciously **apply practices** that protect intellectual property
	11 — **Apply appropriate referencing techniques** accurately & consistently				

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Table 6: Evaluating information

Science	History	Geography	Economics & Business	Civic & Citizenship	CCT	ICT
			NA	NA		2 — **Explain the usefulness of located data or information**
		5 — **Evaluate sources for their usefulness** & represent data in different forms, for example, maps, plans, graphs, tables, sketches & diagrams		3 — **Distinguish facts from opinions** in relation to civics & citizenship topics & issues 5 — Use & **evaluate a range of information** to develop a point of view	4 — Collect, compare & **categorise** facts & opinions found in a widening range of sources 6 — Analyse, condense & combine **relevant** information from multiple sources	4 — **Explain why located data or information was selected** 6 — **Assess the suitability of data or information using a range of appropriate given criteria**
7 — **Critically analyse the validity of information in secondary sources** & evaluate the approaches used to solve problems	7 — Locate, compare, select & use information from a range of sources as evidence **draw conclusions about the usefulness of sources** 9 — **Evaluate the reliability & usefulness of primary & secondary sources**	7 — **Evaluate sources for their reliability & usefulness** & represent data in a range of appropriate forms, for example, climate graphs, compound column graphs, population pyramids, tables, field sketches & annotated diagrams, with & without the use of digital & spatial technologies 9 — **Evaluate sources for their reliability, bias & usefulness**, & represent multi-variable data in a range of appropriate forms, for example, scatter plots, tables, field sketches & annotated diagrams, with & without the use of digital & spatial technologies; Represent the spatial distribution of geographical phenomena by constructing special purpose maps that conform to cartographic conventions, using spatial technologies as appropriate; **Evaluate multi-variable data & other geographical information** using qualitative & quantitative methods, & digital & spatial technologies as appropriate, to make generalisations & inferences, propose explanations for patterns, trends, relationships & anomalies, & predict outcomes	7 — Gather **relevant** data & information from a range of digital, online & print sources 9 — Gather **relevant & reliable** data & information from a range of digital, online & print sources	9 — **Critically evaluate** information & ideas from a range of sources in relation to civics & citizenship topics & issues	8 — **Critically analyse information & evidence according to criteria such as validity & relevance** 10 — **Critically analyse independently sourced information to determine bias & reliability**	8 — **Assess the suitability of data or information using appropriate own criteria** 10 — **Develop & use criteria systematically to evaluate the quality, suitability & credibility of located data or information & sources**

Table 6: Evaluating information (continued)

Science	History	Geography	Economics & Business	Civic & Citizenship	CCT	ICT
	11 — **Evaluate the reliability, usefulness & contestability** of sources to develop informed judgements that support a historical argument	11 — **Evaluates the reliability, validity & usefulness** of geographical sources & information	N/A	N/A	N/A	N/A

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Lyon Declaration on Access to Information and Development

The ASLA Board is pleased to announce that we have signed the Lyon Declaration on Access to Information and Development, coordinated by the International Federation of Library Associations and Institutions (IFLA) on behalf of the membership.

The United Nations is negotiating a new development agenda to succeed the Millennium Development Goals. The agenda will guide all countries on approaches to improving people's lives, and outline a new set of goals to be reached during the period 2016–2030.

The post-2015 development agenda ensures that everyone has access to, and is able to understand, use and share the information that is necessary to promote sustainable development and democratic societies.

The Lyon Declaration is the information profession's response to this agenda.

The full declaration is available at: http://www.lyondeclaration.org