The Inquiry Process in the Australian Curriculum using the BIG 6

Critical and creative thinking
In the Australian Curriculum, students develop capability in critical and creative thinking as they learn to generate and evaluate knowledge, clarify concepts and ideas, seek possibilities, consider alternatives and solve problems. Critical and creative thinking are integral to activities that require students to think broadly and deeply using skills, behaviours and dispositions such as reason, logic, resourcefulness, imagination and innovation in all learning areas at school and in their lives beyond school.

Organising elements
The Critical and creative thinking learning continuum is organised into four interrelated elements, each detailing differing aspects of thinking. The elements are not a taxonomy of thinking. Rather, each makes its own contribution to learning and needs to be explicitly and simultaneously developed.
- Inquiring – identifying, exploring and organising information and ideas
- Generating ideas, possibilities and actions
- Reflecting on thinking and processes
- Analysing, synthesising and evaluating reasoning and procedures

The BIG6 has been established at Mount Lilydale Mercy College and staff and students follow the processes outlined when undergoing Inquiry Learning and Research Tasks.
1. Task Definition

1.1 Define the learning task
1.2 Develop and refine a range of questions to frame the search for new understanding.
1.3 Identify information needed in order to complete the task (to solve the information problem).
1.4 Display initiative and engagement by posing questions and investigating the answers beyond the collection of superficial facts.

Using concept mapping and graphic organizers

Students often need guidance to refine their inquiry in terms appropriate to the assignment. They may try to tackle a subject that is too broad or too narrow. Concept maps are a useful visual tool to establish hierarchical and interlinking relationships. There are many graphic organizers that will help students visualize their thinking and brainstorming process.

Advanced Activities:

Create essential inquiry questions to promote deep and enduring understanding and guide inquiry.
2. Information Seeking Strategies

2.1 Determine the range of possible sources (brainstorm).

2.2 Find, evaluate, and select appropriate sources to answer questions.

2.3 Evaluate the different possible sources to determine priorities (select the best sources).

2.4 Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.

2.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.

Subject Guides

Students are often frustrated when a search engine retrieves overwhelming amounts of irrelevant information. We encourage students to use guides of evaluated resources. Some good starting points for educators and students are Mount Lilydale Mercy College Library Homepage with access to quality online resources via Libguides, The College Library Catalogue, which provides an overview of all resources including website, print materials, audio visual materials and eBooks.

Evaluating web sites

Because anyone can publish on the world wide web, it is critically important that students learn to evaluate web sites for authority, accuracy, relevance, currency, and objectivity.

Visit Mount Lilydale Mercy College Libguides


See Kathy Schrock's extensive list of presentations and tools to evaluate web sites: Critical Evaluation of Information.
3. Location and Access

Key Word Searching
You may find it helpful to make a list of the key words that will help you find the information you need about your research topic. They are called "key words" because they can "unlock" the doors that will lead you to useful information.

When will I use them?
You will use them when searching through books (using indexes) and through electronic sources (using search screens in online reference sources or search tools such as search engines or directories).

Why do I need to do it?
If you have good key words, you'll find the kind of information you want faster.

What are "good key words"?
Good key words are the important words or short phrases that specifically describe your topic and closely related topics.

Using Non Fiction Texts

How is the information in the source organised? Look for the index, glossary and table of contents.
Is it in alphabetical order like a dictionary or encyclopaedia?
Or is there an index or table of contents you can use to find the pages you need?
How will I know what to look for in the sources? Go back to your list of key words or key phrases. These are the words you will use to look up information in the sources.
When using books look at the index at the back of the book or table of contents at the front of the book for your topic and keywords. When using Encyclopedias use the index volume (usually the last volume in the set) for the topic and keywords.
Nonfiction books are organized according to the Dewey Decimal System, which classifies information using the following call numbers:

<table>
<thead>
<tr>
<th>000-099 General Works</th>
<th>500-599 Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-199 Philosophy</td>
<td>600-699 Technology</td>
</tr>
<tr>
<td>200-299 Religion</td>
<td>700-799 Fine Arts/Recreation</td>
</tr>
<tr>
<td>300-399 Social Sciences</td>
<td>800-899 Literature</td>
</tr>
<tr>
<td>400-499 Language</td>
<td>900-999 History/Geography</td>
</tr>
</tbody>
</table>
DATABASES that the College subscribes to is accessed via LibGuides through locating the Database TAB from the homepage. Reference Web sites that are subscribed to by our library are available through LibGuides (such as Gale, Worldbook Online, etc.) To use these databases type either your topic or keywords in the search box. Try keywords separately and some together. Check the process for each database when you are using them.

FINDING INFORMATION ONLINE

Online resources are numerous and can at times be overwhelming. At Mount Lilydale Mercy College we offer LibGuides a "web 2.0 content management and library knowledge sharing system for sharing resources, content and knowledge collaboratively amongst our college community. The goal of LibGuides is to use Web 2.0 technology to learn, gather, combine and organize information to better serve the school community. We encourage our users to start with LibGuides before searching the web through Google to ensure that students research has been directed with quality resources. However, students do need to know how to search the web and there are search operators which will assist.

Some Search Operators

Narrow down your search results by adding symbols and words to your search called search operators.

When you search using an operator, don't add any spaces between the operator and your query.

Search for an exact word or phrase
"search" Use quotes to search for an exact word or set of words on a web page. This is helpful when searching for song lyrics or a line from a book. But only use this if you're looking for an exact word or phrase, otherwise you'll exclude many helpful results by mistake.

"imagine all the people"

Exclude a word
-search Add a dash (-) before a word or site to exclude all results that include that word. This is especially useful for words with multiple meanings, like Jaguar the car brand and jaguar the animal.

jaguar speed -car

Search within a site or domain

site: Get results only from certain sites or domains. For example, you can find all mentions of "olympics" any .gov websites.

olympics site:.gov

Use Search Tools in Google

<table>
<thead>
<tr>
<th>Web</th>
<th>Images</th>
<th>Maps</th>
<th>News</th>
<th>Videos</th>
<th>More</th>
<th>Search tools</th>
</tr>
</thead>
</table>

Country: Australia Any time All results Clear

Google

www.google.com.au Offers the choice of searching the whole web or web pages from Australia. Also advanced search, image and groups search, news and directory from the Open...
4. Use of Information

4.1 Engage (e.g. read, hear, view, touch) the information in a source.

4.2 Extract relevant information from a source/sources.

4.3 Apply critical-thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge.

4.4 Follow ethical and legal guidelines in gathering and using information.

4.5 Advocate and practice safe, legal, and responsible use of information and technology.

Basic Activities: extract information from a source

Teach students to distinguish between summarizing, paraphrasing and quoting, from Purdue Online Writing Lab.

Notemaking Activities and Practice

Basic Activities: bibliographic citations

Make sure students understand correct referencing format. See students planners for outlines or for more comprehensive details visit Mount Lilydale Mercy College Reference Guide

5. Synthesis

5.1 Organize information from multiple sources
5.2 Present the information in a variety of ways
5.3 Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use, and assess.
5.4 Interact, collaborate, and publish with peers, experts or others employing a variety of digital environments and media.
5.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.

Basic Activities: Critical Thinking
Encourage the development of critical thinking skills through research projects. In addition to evaluating web resources, students should be engaged in evaluating their own thinking process and applying the information they gather to authentic challenging tasks.

Basic Activities: appropriate product
Student presentations should be appropriate to their topics and their audiences.

Students enjoy a range of presentation tools including PPT, Keynote and Prezi http://prezi.com/

Students are familiar with T.E.E.L. and additional materials are available to assist students with essay writing

Well-designed Web Quests encourage collaborative learning, the thoughtful analysis of Web resources, and the creation of original products. See Tom March's description of "What WebQuests (Really) Are".
6. Evaluation

6.1 Judge the product (effectiveness)
6.2 Judge the inquiry and information problem-solving process (efficiency).
6.3 Assess the processes by which learning was achieved in order to revise strategies and learn more effectively in the future.
6.4 Apply existing knowledge to generate new ideas, products, or processes.
6.5 Exhibit a positive attitude toward using technology that supports collaboration, learning and productivity.

Students evaluation the process..

You should be able to answer “yes” to these questions before you turn in your paper

1. Have you responded to the questions or statements?
2. Does your final paper represent your own ideas and conclusions?
3. Did you give credit to all of your sources in a reference list?
4. Does your reference list follow the Harvard format?
5. Is your paper complete and does it include a title page with heading information (title, your name, your teacher’s name, date, etc.)

6. If your teacher requests these, did you include your notes, copies of each draft, and a reference list?
Source documents


ACARA. (n.d.). Information and communication technology (ICT) capability.