

STUDENT GUIDE TO THE INQUIRY PROCESS



ECO621A
Economics



Education and Early
Childhood Development
English Curriculum



2014

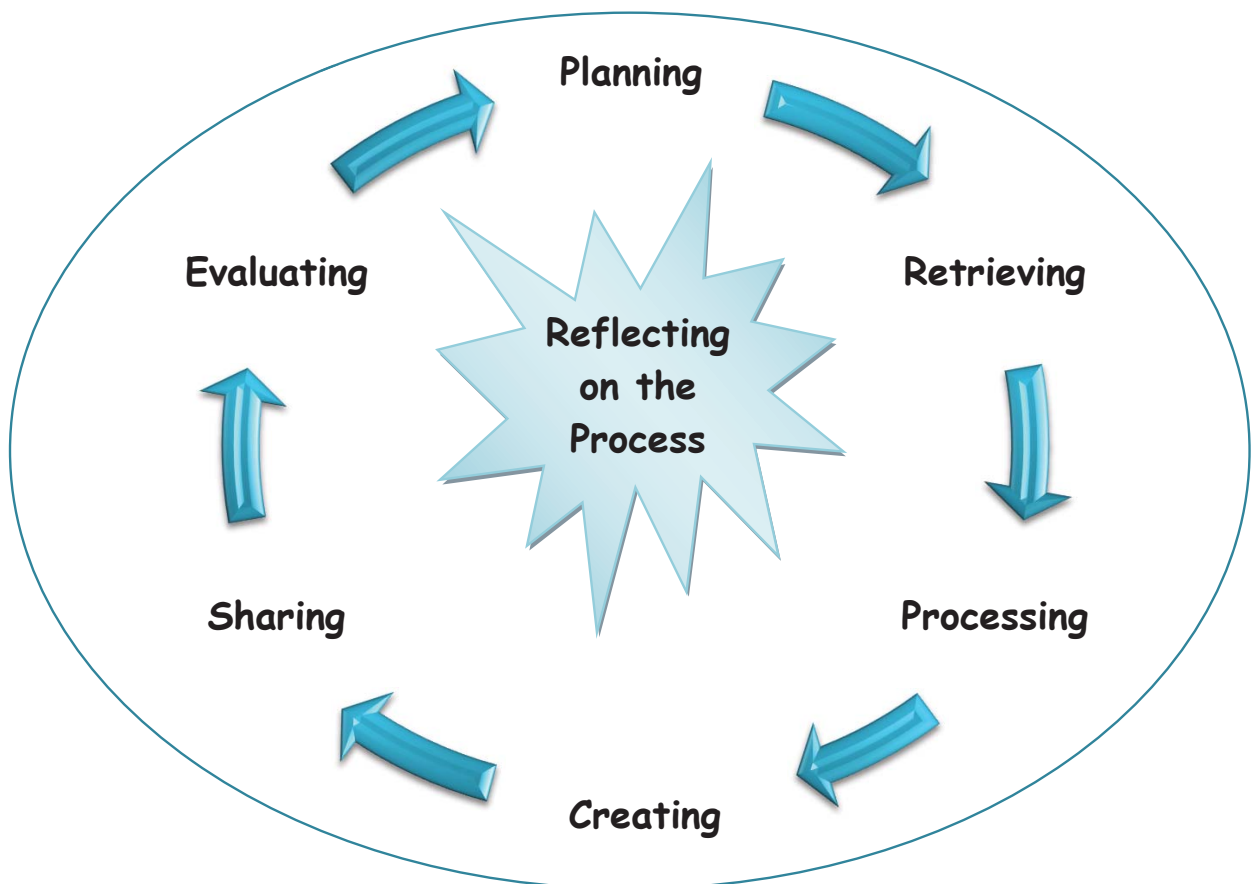
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Student Guide
to the
Inquiry Process
for
ECO621A

STUDENT GUIDE
to the
INQUIRY PROCESS

ECO621A
with
Tips, Guided Practice, and Student Project Planning

Inquiry Model



Selecting a Topic and Planning for Inquiry

Guided Practice

How do I select a topic and plan my inquiry?

Brainstorm ideas and ask questions that interest you. For example, if you want to know more about employment income, then you need to generate a number of questions that are of interest to you. This will help you narrow the focus to something that can be researched, and will answer a question that has not been asked before. Remember, you are trying to find information that answers **your** question, not simply researching someone else's answers. As you conduct your preliminary search for sources, your inquiry question may change or be refined several times. Start with an idea, talk to others, and look through sources (print and non-print) that might help you to formulate some narrower topics for your inquiry.

TIPS: Web Searches

GOOGLE is a search engine, not a website or source that can be cited in your research. It is a good starting place to get ideas, but do not rely exclusively on it for your research. *Wikipedia* may be tempting to use for research, but is not totally reliable as a source. It is known as an open-source site (anyone can add, delete, or edit the information) and therefore may lack the credibility that other sources possess. It should be viewed as a starting point where you can find ideas for additional sources in the bibliography at the end of each article. EBSCO is an on-line database that contains numerous resources—periodicals (magazines), newspapers, government reports, professional journals, and others. Access to this database is simple, and once you know how to use the folder feature, you can organize the articles that you find and keep track of your research findings.

Guided Practice

Enter “employment income” into an on-line search engine. Note how many possible links there are—hence, the need to narrow your topic!

Broad Topic:	employment income
Narrower Topics:	escalating salaries of CEOs, gender-related income disparity, salary caps for professional sports, minimum wage laws
Possible Inquiry Question:	How effective are minimum wage laws?
Possible Sources:	websites, encyclopedias, journals, and other sources that can provide reliable information—a variety of formats
Audience:	class/teacher/community/other
Format of Presentation:	digital presentation, mini-documentary, photo-essay, research paper, oral presentation, talk show simulation
Evaluation Criteria:	teacher and/or student-generated criteria to evaluate product AND process (including “learning to learn skills”)

Project Planner

Selecting a Topic and Planning an Inquiry

What is my broad area of inquiry?

Narrowing the focus...

Some inquiry questions...

Where can I find reliable information sources?

Who will be the audience, and what format will my presentation take?

How will I be evaluated on this inquiry project?

What is my plan and schedule to accomplish this? Include checkpoints.

Start date

Completion date



Retrieving Information

Guided Practice

How do I go about retrieving information for my inquiry?

Searching for information can be a daunting job for even the most experienced of researchers. Stay organized and keep a record of your searches. You will likely need to find these sites again and you will need details for citing your sources. Start by planning out your search. You might assume that the World Wide Web is the best place to begin, but there are lots of alternative options to be explored. On-line searches can be time-consuming and frustrating. Try out encyclopedias, texts, videos, periodicals, and databases such as EBSCO, which are right within reach at school, at home, or in your local library. There are also community sources, such as government records or materials produced by community organizations. Don't forget to ask your teacher-librarian or teacher!

TIPS: Primary and Secondary Sources

Primary sources are first-hand materials such as novels, letters, diary or journal entries, autobiographies, speeches, personal interviews, first-hand accounts of events, photographs, paintings, or other original works. Secondary sources include all second-hand accounts or materials that have been interpreted by others: movie and book reviews, textbooks, translations, encyclopedia articles, historical accounts (written by someone who was not present at the time of the event), or re-created artifacts or replicas. Sometimes it is difficult to tell if a source is primary or secondary (and it may, in fact, be a bit of both). In the case of web searches, articles on a specific topic with named authors are generally primary sources, but would be considered secondary if it is an interpretation of a previously published work. A good researcher will incorporate a range of both primary and secondary sources into his or her work.

Guided Practice

1. Make a checklist of all the sources where you might find information.
2. Keep detailed records of the sources you find that you intend to use. If a source is not a good match, discard the record to avoid confusion.
3. Look closely at the URL addresses of any websites that you may use—URLs hold clues to reliable sites or ones that may be biased. Enter “minimum wage” into a search engine such as GOOGLE and note the domain tags on the URLs (these are three-letter clues to the origin). For example, “.edu” refers to an educational organization/institution; “.org” refers to a (usually) non-profit or governmental organization; “.gov” refers to _____; and “.com” means the site is _____.
4. Scroll through the first 20-30 hits for “minimum wage” and see how many fit the four categories above: .edu ____; .gov ____; .org ____; .com ____.
5. Sign in to EBSCO and conduct a search for the same topic. Try using filters to see what sources might be suggested. To keep track of your search results, set up a folder system with key words from your search.

Project Planner

Retrieving Information from the Web

URL Note the domain tag and the country of origin: .ca—Canada; .uk—United Kingdom; .us—United States; .au—Australia, etc.	Author Is this the word of an expert author, or simply someone’s personal view? Is there any information on the author at the end of the article or in other websites?	Audience Who is the intended audience of the article? Is it for educational purposes, or is it intended to sell a product or a point of view?	Current Is the site current or dated? When was it last updated, or how long has it existed?	Citation Is there a recommended way of citing material from the site?
Source #1				
Source #2				
Source #3				
Source #4				
Source #5				

Retrieving Information

Guided Practice

How do I know if it is a good source for your inquiry project?

While you may think that you'll never find enough material to complete your project, it's often the complete opposite. Finding sources is one thing—finding **good** sources is a whole other thing. Just as it is important to know a bit about the author and the intended audience, it is essential that the information be relevant to your work.

TIPS: Citing Sources

Avoiding plagiarism can be a tricky when you are selecting information. If you are using data, findings, arguments, or any other information from another source, you must give credit to the source. For example, if you are using statistics about the changes in the minimum wage throughout the different provinces in Canada, or research results about the winners and losers when the minimum wage is increased, you must cite the source. Common knowledge need not be cited (e.g., the current minimum wage on P.E.I.). If you are not sure, check with a teacher or teacher-librarian, or refer to a writing handbook for more guidelines.

Citing sources is done in two ways. The first is a reference to someone else's work that appears within the text of your writing—this is called an “in-text” citation. The second is a works cited page (also called a bibliography) at the end of your paper which lists all of the sources that you have used and referenced in your work. There are different “styles” of citing sources and it is best to check with your teacher and/or teacher-librarian to confirm which style you will be expected to follow. Since ECO621A is considered to be a social science, it will likely be the American Psychological Association (APA) style that you will use. Style guides and handbooks (either print or on-line) will help with the finer details of putting the information in the proper format. Depending on the source of the information (e.g., book, article, on-line database, encyclopedia) there may be differences in the formatting style. It is important to follow the format exactly and pay attention to detail.

The following are examples of how you would cite a resource using APA style:

Works Cited or References:

Main, B., & Gallant, J. (2013). *The impact of minimum wage*. Toronto: Pearson.

In-Text Citations: (Consult a handbook or other guide for additional examples.)

1. Direct quotation:

“A change in the minimum wage can have broad implications for individuals, businesses, and government” (Main & Gallant, 2013, p.11).

2. Paraphrased Text:

Several stakeholders, such as individuals, businesses, and governments, are impacted when the minimum wage changes (Main & Gallant, 2013).

Try citing a book or other information source in APA format using a style guide or website to help.

Project Planner

Processing (evaluating sources)

Inquiry Topic: _____
 Inquiry Question(s): _____

Source Designate as (P) Primary or (S) Secondary	Relevance Score 1-3	Reliability evidence	Timeliness current/dated	Availability easy to find	Bias 1-3	Quantity

Processing Guided Practice

Now what? How do I pull it all together?

By now, you have gathered numerous sources and quantities of information for your inquiry. You have done some weeding, sorted through materials, and already learned quite a bit. Now, it is time to finalize your focus and select the most pertinent information. You may find that you have shifted your focus a bit (or even a lot) as you came across new information or avenues of investigation. That is all part of the inquiry process, and shows that you are constantly evaluating and re-evaluating information. At this point, you may discover that you need to either narrow your focus more, or broaden it somewhat to capture what it is you want to find out about this topic.

TIPS: Note-Making

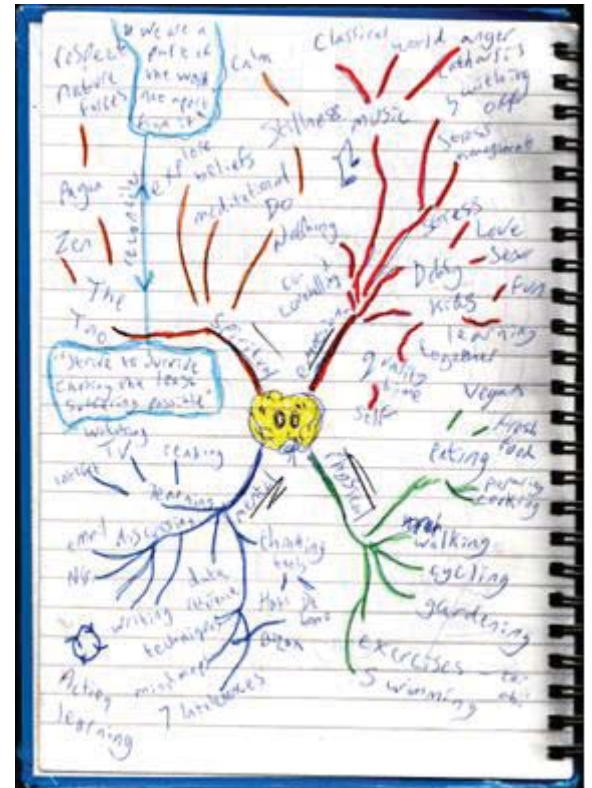
Being able to condense information and make good (not lengthy) notes are skills that will benefit you for a lifetime—but you need practice and patience. Some people like to use a note card system or some other means of organizing their information. Concept maps (see right) are a visual form of note making and can be very detailed. There are several note-making frameworks that can help you to stay organized as you conduct your inquiry and again when it comes time to put all the pieces together into your own work. The main thing is that you stay organized and efficient.

Linear Note-Making

- shopping list style
- quick, traditional method
- may be more difficult to connect related concepts and ideas
- works well for “real-time” information such as a lecture, speech
- can get wordy, long
- works best in a framework

Non-linear or Pattern Note-Making

- strong visual information
- replicates how brain thinks
- easy to connect related concepts
- provides immediate overview
- can look “messy”
- may be more challenging to transfer to linear writing task



Guided Practice: Note-Making Frameworks

1. Select a source of information on a topic such as the minimum wage or a variation of the topic and create a note-making framework that will help you to condense the main ideas into manageable pieces. Don't forget to use strategies such as SQ3R (survey, question, read, recite, and review) to help sort out the information. Ask your teacher and/or teacher-librarian about this and other literacy strategies that can help you be efficient in your inquiry efforts.
2. Using your selected framework, try to reduce the quantity of information by at least half by using key words for main ideas and selecting the most pertinent supporting details or references.
3. Share with a partner to evaluate how well you have summarized your information.

Project Planner

Processing (note-making)

Note-Making Frameworks

Example 1

Topic: Minimum Wage Wars: How a rise in minimum wage can hurt small business

Source:

CBC, <http://www.cbc.ca/player/Radio/The+Current/ID/2429999401/article670332.ece>

First paragraph

Main idea:

A minimum wage hike may hurt businesses.

Examples, supporting ideas, key words

1. Even a small increase in the minimum wage can result in significant additional expenditures for businesses.
2. Profit margins are already thin, and a hike would make doing business much more difficult.
3. Prices on goods and services would need to increase to compensate for the increase in minimum wage.

Example 2

Topic: _____

Source: _____

Recall Column

- key words
- headings
- sub-headings
- dates
- references
- questions or doubts
- ideas for further study

Notes Column

- central ideas that relate directly to content area
- main ideas (use abbreviations and brief phrases)
- brief descriptions or explanations
- direct quotes
- rough diagrams that link to key words in recall column

One of the advantages of being disorderly is that one is constantly making exciting discoveries.”

A.A. Milne, author of *Winnie the Pooh*

Creating Guided Practice

How do I go from data collection to product creation?

Now it really starts to get interesting! You are ready to transform all the factual data that you've collected and started to organize into a product of your own creation. Chances are you've already decided on (or have been given) a particular format for your product. This is where the planning part helps immensely. Think about what components of your research will fit best into the introduction, the main body, and the conclusion. Physically move your written notes around, or use sticky notes to help organize your thoughts. Seeing the information fit together visually is often beneficial. Look for any gaps or areas that may need a bit more attention.

TIPS: Graphic Organizers and End-Products

Using graphic organizers is a good way to sort and organize information that will go into your final product. There are numerous versions of graphic organizers, and it's simply a matter of deciding which one will do the best job for you. For example, if you plan to create a digital slideshow, you might use a storyboard to figure out the sequence of slides in order to select information for each slide. If you are doing a visual display, such as a photo-essay, you might choose to practise with a concept map. An oral presentation or newscast simulation may work better if you use a sequence chart to plan the script or interview. There are many other possibilities for end products:

- brochure, pamphlet, poster, chart;
- report, research paper, essay, editorial, letter;
- panel discussion, debate, speech, oral presentation, song/lyrics;
- drama, movie script, video, digital presentation, web page, audio;
- map, painting, scrapbook, collage, exhibition.

Guided Practice

You are planning to do your project on some aspect of a specific issue around the minimum wage. Decide the format for your end product by thinking about your interests and strengths, and what might be the most effective means of communicating the information that you have gathered and analysed. Which type(s) of graphic organizers will help you? A good way to get organized for these final steps is to use a visual or graphic so that you can see all the pieces and parts together—the big picture, so to speak.

Find three or four examples of visual/graphic organizers that you think might be helpful in organizing your ideas into a final product. Which one seems best suited to your project and learning style?

Project Planner

Creating

Checklist: Getting from data collection to end product.

- I have gathered sufficient data and kept records of my sources.
- I have analysed my data to ensure that it is relevant to my inquiry.
- I have used graphic organizers or some other system to help sort out my data and to analyse my findings.
- I have organized my data into an introduction, main body, and conclusion.
- I know what I want to present as an end product, and how to get there.

Select an effective graphic organizer and show how you would use it for your project.

Sharing

Guided Practice

How will I share my work?

Usually “sharing” work refers to an oral presentation of some sort—something that many people are uncomfortable doing in front of their peers. There are a few things that you can keep in mind to make a more effective presentation. It is not so important to include every written thought that you have put into your project—it is more effective and interesting to your audience if you summarize your findings and present the most important ideas discovered or conclusions reached during your inquiry. Body language is another important aspect of presenting. Try to keep eye contact with your audience as much as possible, and do not get fixated on one person or on one side of the room. Speak clearly and make sure you are not chewing gum!

TIPS: Rubrics

Rubrics are tools that help both students and teachers when it comes to big projects or small tasks. These are usually grids with three to five columns with descriptions of criteria which are used to evaluate a task or a product. Obviously, it is most helpful to the presenter if he or she knows in advance which criteria will be used to evaluate the work and presentation. Students and teachers can create a rubric together at the beginning of a project or use a pre-existing one and adapt the criteria to fit. Rubrics do not have to be complicated, and can be designed to suit every circumstance—whether it is to evaluate part of the inquiry process, such as a group task, or an end product, such as a presentation or exhibit.

Guided Practice

You are tasked with evaluating a poster product that has been created to raise awareness to the effectiveness of the minimum wage. With a partner, or in a small group, create an evaluation rubric that will measure the most significant features of the poster (message, clarity, visual appeal, accuracy of information, variety of sources). Use the template below to get started.

POSTER	Limited	Developing	Proficient	Advanced
References	provides fewer than 3 sources of relevant information, few or no citations	provides 4-6 sources of relevant information, limited variety, most citations accurate	provides 7-10 sources of information, varied, citations accurate	provides more than 10 sources, varied and relevant, all citations accurate
Visual Appeal				
Content/Message				

Project Planner

Sharing

Use the following template to create a rubric for the end product that you have created to present your findings and conclusions. Add more rows if necessary, or make changes to the headings if you wish.

Product to be Evaluated	Limited	Developing	Proficient	Advanced
Newscast Poster Photo Essay PowerPoint				
#1 Product Feature (e.g., clarity of message for viewers)				
#2 Product Feature				
#3 Product Feature				

Evaluating Guided Practice

How do I self-evaluate and reflect on my work?

You have reached the finish line of your inquiry ... or have you? Not really, and that is because an inquiry process is cyclical rather than linear. It is all about thinking and then rethinking about the new information you have uncovered, putting it together with what you already know, and reaching new levels. Although you have learned a lot by the time you reach this stage, you have probably raised some new questions too. Ask yourself about what you have learned, what more you would like to learn, and how you might proceed differently the next time. A good inquiry should lead to more inquiry!

TIPS: Self-Assessment

At this stage it is also important to think about how you learned as well as what you learned. If you worked independently, were you able to stay on task and meet the checkpoint deadlines? What were your strengths and weaknesses, and how can you work on improving some of these skills? If you worked in a group, what did you learn about how you work in that situation, or about the types of tasks that you like or dislike doing? How could you be more effective to the group? A project log is a good way to keep track of ideas and progress during a project and it allows you to reflect back on how far you have come from the launch of the project.

Guided Practice

You have just completed a group project that involved researching and presenting information about the minimum wage. Now it is time to think about how you contributed to the overall project. Fill in the following according to how you think you would in a real-life situation (based upon your previous experience).

I contributed to the group project in the following ways:

1. _____.
2. _____.
3. _____.

In this group, it was hard for me to _____.

I can change this by _____.

I could do the following to make the group more effective:

1. _____.
2. _____.

Project Planner

Evaluating (reflecting)

End-of-Project Self-Assessment

Inquiry project topic: _____	
During the project I completed a number of tasks, including	
<ul style="list-style-type: none">•••	
As a result, I learned the following...	
Subject matter (name the three most important things that you learned)	1. 2. 3.
Working in a group	
Following the inquiry process	
Presenting to an audience (sharing)	
Next time, I would.... What would you do differently next time or what new questions have arisen from your inquiry?	
How I Like to Learn	

SAMPLE RUBRIC for ASSESSMENT of INQUIRY PRODUCT

Assessment criteria for final product (bottom of grid) may be refined to reflect specific project formats (e.g., multimedia presentation, formal research paper, dramatization, visual presentation).

Inquiry Process Criteria		Exemplary	Proficient	Approaching Proficiency	Developing
Planning	Choosing topic, developing thesis, hypothesis, or driving question, and inquiry plan including presentation format and evaluation criteria	Independently explores a variety of topics and foci before deciding on a final selection. Develops a creative, original inquiry question or thesis statement. Inquiry plan is clear and detailed.	Demonstrates independence and critical thinking in selecting topic and narrowing focus. Completes inquiry plan including decisions around format and evaluation.	Requires minimal assistance in selection of topic and in focusing inquiry question. Completes plan and with assistance and is able to independently make most decisions regarding format and evaluation.	Requires significant guidance to select topic and to develop inquiry focus. Needs assistance to lay out plan and make decisions regarding format and evaluation criteria.
Retrieving	Locating and gathering sources, selecting relevant information, and evaluating for bias, validity and reliability	Independently locates a wide variety of sources, evaluates efficiently, and selects most relevant sources out of wide variety for use.	Locates a variety of sources on own. Minimal assistance required to evaluate source material. Uses most pertinent sources for inquiry.	Requires some assistance in locating sources. Variety of sources may be limited. Needs some assistance in evaluating source materials.	Requires significant assistance to locate sources. Selects only one type of source. Difficulty in evaluating source material.
Processing	Establishing a focus for inquiry, recording pertinent information, making connections and inferences, revising plan if necessary	Works independently and demonstrates analytical and high level critical thinking skills. Easily shifts direction if necessary and revises plan accordingly.	Demonstrates an average level of independence and critical thinking when analysing information. Capable of revising inquiry plan if necessary.	Requires some guidance in recording, analysing information and making connections. Hesitant to revise plan or unsure how to revise plan when obstacles occur.	Requires significant assistance in recording information, making connections, and in making inferences. Not sure how or when to edit or revise.
Creating	Organizing information, creating final product, editing and revising	Demonstrates high level of ability in organizing material and creating an innovative final product.	Demonstrates organizational ability and originality in clearly understood format and product. Edits and revises.	Requires moderate assistance in organizing new information into logical, engaging product. Some editing and revising evident.	Requires significant assistance to organize information into new product. Edits are revisions are guided.
Sharing	Presenting new understandings, communicating with audience, demonstrating appropriate behaviour	Easily communicates new understandings using appropriate language and actions. Content knowledge is highly evident.	Demonstrates maturity, clarity of message, and content knowledge in sharing new understandings.	Mostly capable of communicating new understandings in a mature and focused manner. Practises appropriate behaviour.	Experiences difficulty in communicating new understandings or content knowledge. May not demonstrate appropriate actions.
Evaluating	Reflecting on process and product to gain new understanding of learning, transfer of new skills to other situations	Demonstrates high level of understanding of the metacognitive process and how learning transfers.	Uses reflection to critically evaluate learning process and understands how this will transfer to new situations.	Mostly uses reflection to understand how learning transpired and can see how these skills may be transferable to new situations.	Experiences difficulty in making connections between past learning and how this may apply or transfer to new situations.
Final product	Engaging topic, clear focus, original research or perspective-taking, innovative format, or efficient use of medium, meets goal of inquiry project	Product stands out as superior demonstrating high level of originality, creativity and critical thinking. Selected medium is innovative and engaging to audience.	Product reflects meaningful inquiry process. Evidence of new understandings is clear and focused. Use of medium is appropriate to communicating learning.	Product mostly reflects meaningful inquiry process and formation of new ideas. May need more creativity and originality in selection of medium and construction of product.	Product does not reflect meaningful inquiry process, or it is difficult to comprehend. Minimal evidence of creative or original thought in content or medium selection.