

Grading Criteria: Personal Science Project

Use this rubric to work toward mastery. You are not expected to be at mastery when you start - but as you get feedback from me you should be moving your project towards mastery. Your grade will be a reflection of your ability to engage in and understand the importance of the research in the inquiry process.

STEP 1 Select a topic, problem or issue in your community then <u>collect</u>, <u>review</u> and <u>summarize</u> existing knowledge/research on the topic, problem, or issue.				
	Inquiry Steps	Mastery	Developing	Beginning
1.1	Select a topic, problem or issue relevant to your community.	Student selects a topic, problem or issue relevant to their community and narrows the focus sufficiently.	Student selects a topic, problem or issue relevant to them if not the community.	Student has difficulty narrowing the focus or lacks motivation to select one without teacher intervention.
1.2	Independently collect sources of information on the topic Generates unanswered researchable questions about the topic.	Identifies three or more sources of information from diverse media. Generates 4-5 unanswered researchable questions about that topic, problem or issue.	Identifies at least three sources of information. Sources may not be diverse. Generates 1-3 researchable questions about that topic, problem or issue. At least 1 question should be unanswerable.	Identifies two or fewer sources of information. Sources may not be diverse. Generates questions about topic that are not researchable or that are answerable without further investigation.
1.3	Records notes and cite each author using standard proper reference format.	Notes are thorough and capture the main ideas. References appear at top of notes in proper format. Complete References are compiled in a reference page.	Notes capture most of the main ideas. Most reference information appears at top of notes. Most references information is compiled in a reference page.	Notes are missing some key ideas. References are not at top of notes or have 2 or fewer pieces of information included. References are not compiled in a reference page.
1.4	Evaluate the background information regarding each author's: <ul style="list-style-type: none"> ▪ Currency Is the data and information relevant today given changes to technology, social and natural systems? ▪ validity- Is there quality evidence for claims? Were methods used to gather evidence 	Finds some information about the author, and publisher. For all sources, uses the most currently available data. Considers if the data and information is relevant today given changes to technology, social and natural systems. Identifies several perspectives from which to view the topic and explores at least three Differentiates fact from opinion. Identifies quality evidence in the source material and cites author's when making arguments or stating	Finds little information about the author, and publisher. For some sources, uses the most currently available data. Partially considers whether the information is relevant today. Identifies at least two perspectives from which to view the topic and explores them Partially differentiates fact from opinion. Identifies some quality evidence in the source material but does not cite the authors to back up their	Does not learn about the author or publisher. Does not determine if the information is current. Does not consider whether the data and information are relevant today. Does not identify different perspectives from which to view the topic. Does not differentiate fact from opinion. Identifies some quality evidence in the source material but does not cite the authors.

	<p>appropriate?</p> <ul style="list-style-type: none"> ▪ <i>Reliability</i>-Is there sufficient evidence for claim? Are there diverse sources that show the same evidence? ▪ Bias and propaganda ▪ Select the most reliable and balanced information from the resources available. 	<p>knowledge.</p> <p>Accurately discusses the reliability of the summarized information notes whether there are diverse sources showing the same evidence.</p> <p>Recognizes the limits of the information used. Discards or discusses inadequacies of resources that are identified as unreliable.</p>	<p>claims</p> <p>Comments on the reliability of the summarized information noting whether diverse sources show the same evidence.</p> <p>Uses resources that are identified as unreliable because they are available and does not clearly discuss their reliability.</p>	<p>Does not address the reliability of the sources.</p> <p>Uses all resources equally regardless of their reliability.</p>
<p>1.5</p>	<p>Develops the context: Identify the social, environmental and cultural factors that are connected to your research and how will they affect the outcome of your research?</p>	<p>Clearly defines the social, environmental and cultural factors that are relevant and discusses the interdependencies among them.</p> <p>Explores ideas thoroughly.</p>	<p>Defines many of the social, environmental and cultural factors that are relevant and discusses the interdependencies among them.</p> <p>Explores ideas carefully but misses some big ideas.</p>	<p>Many of the social, environmental and cultural factors and relevant interdependencies are not discussed.</p> <p>Ideas are not explored thoroughly. Misses most big ideas.</p>

At this point you should have a question that interests you or that will have value to your community. You should have at least three "sources", places where you are getting information, and you should know that those sources are fairly reliable and non-biased. If they are biased you should acknowledge this. Use APA format to cite your sources <http://owl.english.purdue.edu/owl/resource/949/01/>

Now read and take notes on each of your sources, get their citation information and then write a summary using steps 1.6 and 1.7 to track your progress.

1.6	<p><u>Summarize the background research and author evaluation in an "Introduction" section.</u></p> <p>Write this in paragraph form introducing your topic, problem or issue.</p> <p>Introduction uses language, voice and conventions appropriate in scientific writing.</p>	<p>Topic and purpose are clear, original and expresses a significant question that is apparent throughout the summary.</p> <p>Structure is affective and clear to the reader. Information is logically ordered and smooth transitions lead the reader through the summary.</p> <p>Voice is consistent and appropriate for scientific writing. Voice demonstrates a personal engagement in the topic, problem or issue.</p> <p>Conventions show near flawless editing for grammar, syntax, punctuation and spelling.</p>	<p>Topic and purpose are clear, expresses a significant question that is mostly apparent throughout the summary.</p> <p>Structure is generally apparent orderly and mostly well connected. Occasional lapses in logical flow.</p> <p>Voice is consistent and appropriate for scientific writing.</p> <p>Generally good conventions some regularly occurring problems with grammar, syntax, punctuation and spelling.</p>	<p>Topic and purpose are not clear, does not expresses a significant question.</p> <p>Lack of coherence and transitions. Lapses in logical thought, paragraphs may be unrelated.</p> <p>Voice is inappropriate for scientific writing, speaker lacks engagement in topic.</p> <p>Mechanical errors in grammar, syntax, punctuation and spelling distract reader. Shows a lack of editing or proofreading.</p>
1.7	<p>Uses evidence to support ideas and statements using proper citation format (APA or similar style).</p>	<p>Evidence is successfully used to support statements</p>	<p>Evidence is used to support most statements</p>	<p>More statements should be supported by evidence.</p>

What do you think about your topic now? What do you think should happen? Is there something you think people should be aware of? Are there community groups/organizations that you think should be involved or responsible for some aspect of your topic? What are they? Tell us now.

STEP 6 Make recommendation for future research or actions.				
Inquiry Steps		Mastery	Developing	Beginning
6.1	<p>Make <u>recommendations</u> for future research or actions. (What should be done differently or in addition to your work to make it more meaningful? If you were to study this topic further what question would you ask next? Or, If you wanted an organization (e.g. city government) to study this topic further, what question would you like to see addressed?) Consider whether your recommendations are realistic and if not think about what could realistically be done.</p>	<p>Makes recommendations that follow logically from the research completed.</p> <p>Describes how the results of their study fits into the larger context by accurately identifying flaws in the research that need fixing or developing plans for using the research design to impact a larger audience.</p> <p>Makes a logical and plausible recommendation for future action</p>	<p>Makes recommendations that follow from the research completed but lack clarity.</p> <p>Partially describes how the results of their study fits into the larger context by finding flaws in the research that need fixing or developing plans for future research design.</p> <p>Makes a recommendation for future action that may not be logical or plausible.</p>	<p>Recommendation is simple and related to research.</p> <p>Does not see how the results of the study fit into the larger context. Has simplistic recommendations for future research design.</p> <p>Lacks a logical or plausible recommendation for future action or action recommended is not connected to the research conducted.</p>
6.2	<p>How will your recommendations benefit your self, your community and the environment?</p>	<p>Identifies how the ecological topic, problem or issues will affect their individual life, their community and the environment.</p>	<p>Considers how the ecological topic, problem or issues will affect their individual life, their community and/or the environment.</p>	<p>Relates how research will affect their individual life, their community and/or the environment but does not see the interconnectedness between them.</p>
6.3	<p>Develop a <u>Recommendations</u> section for your report and discuss your recommendations for future action.</p>	<p>Develops a recommendation section that uses appropriate scientific conventions.</p>	<p>Develops a recommendation section that mostly uses appropriate scientific conventions.</p>	<p>Develops a recommendation section that lacks appropriate scientific conventions.</p>

You have done a lot of work, your report should be typed in scientific format and now you should create webpage presentation based on what you learned. Think about your audience and make a presentation that will engage them in learning about and understanding your topic.

STEP 7 Present findings in a written form for a bulleting board				
Inquiry Steps		Mastery	Developing	Beginning
7.1	Identify the intended audience and select a presentation format.	Identifies the audience accurately and develops appropriate presentations.	Identifies the audience but fails to develop appropriate presentations.	Does not accurately identify the intended audience
7.2	Reviews work for accuracy using appropriate conventions (grammar, syntax, punctuation, spelling, citations and references acknowledged in standard form bibliography) of technology, writing and/or oral language.	Shows near flawless editing. Cites references correctly; bibliography uses standard form. Meticulous, creative display.	Generally good with some errors. Sources may be incorrect or inadequately referenced. Some signs of careful crafting.	Mechanical errors distract reader and impede reading. Shows carelessness, lack of editing & proofreading.
7.3	Written Content Includes: 1) An introduction that engages the reader/audience in the topic, problem or issue 2) A question that is driving your inquiry 3) A summary of the research including photographs, tables, graphs, charts, written summaries, etc. 4) A conclusion that is related to the research question and is based on research data/gathered information 5 Recommendations for future action plans that includes implications for the environment/community/self	Display includes all 7 components of content.	Display includes all 5-6 components of content.	Display includes 4 or fewer components of content.