

Use this rubric to assign a level (**4, 3, 2, or 1**) against the criteria for the project. In addition to the level, please enter a single letter rating: **H** (High), **M** (Medium), or **L** (Low) that reflects the quality and strength of the project relative to other projects you have assigned the same level.

SCIENTIFIC THOUGHT	
Level (1-4) and rating (H/M/L) assessment may include the following criteria: project structure; appropriateness of research methodology; understanding; correspondence of the content to the question/problem, goals and objectives; technical skills; thoroughness and effort; accordance of conclusions/evaluations to results obtained; honest evaluation of academic or practical value.	
DISCOVERY	INNOVATION
The project seeks to add to human knowledge by carrying out original research, or by synthesizing and analyzing data from a variety of sources.	The project seeks to solve a practical problem by developing and evaluating a new device, studying a model of a real-world system, or devising a new technique or method to address shortcomings of existing techniques or methods.
LEVEL 4 (most impressive)	
Devise and carry out original experimental research in which most significant variables are identified and controlled, or synthesize data from a variety of significant sources to develop new insight and draw new conclusions. The data analysis is thorough and complete. Conclusions are clearly described/presented and connected back to the data that justifies them.	Integrate several technologies, inventions, social/behavioural interventions, or design and construct an innovative application, or propose a new theory that will have human and/or commercial benefit. Performance of the prototype, method or theory is evaluated completely and realistically. Honest comparisons are made to alternative or previous solutions where possible.
Statements about the significance of the work (including human benefit, advancement of knowledge, or economic applications) are supported by the information presented and show awareness of context. For projects incorporating Indigenous Traditional Knowledge, the importance to the land and community are clear, and the project demonstrates a holistic approach to knowledge creation. Suggestions for future work are realistic and justified by the results of the current project.	
LEVEL 3	
Devise and carry out an original experiment. Identify the significant variables and attempt to control them, or synthesize data from a variety of sources to strengthen or extend existing conclusions. Analyse the results using appropriate arithmetic, graphical or statistical methods. Statements about the significance of the work are mostly supported by the information presented and show awareness of context. For projects incorporating Indigenous Traditional Knowledge, the project has demonstrable importance to the land and community and takes a holistic approach to knowledge creation.	Design and build innovative technology; or provide adaptations to existing technology or to social or behavioural interventions; or extend or create new theory. Human benefit, advancement of knowledge, and/or economic applications should be evident. For projects incorporating Indigenous Traditional Knowledge, the project has demonstrable importance to the land and community and takes a holistic approach to knowledge creation.
LEVEL 2	
Extend a known experiment with modest improvements to the procedures, data gathering and possible applications, or synthesize data from a variety of sources to confirm existing conclusions. Statements about the significance of the work are somewhat supported by the information presented and show a little awareness of context. For projects incorporating Indigenous Traditional Knowledge, the project may have importance to the land and community and is somewhat holistic in its approach.	Improve or demonstrate new applications for existing technological systems, social or behavioural interventions, existing theories or equipment, and justify them. For projects incorporating Indigenous Traditional Knowledge, the project may have importance to the land and community and is somewhat holistic in its approach.
LEVEL 1 (least impressive)	
Replicate a known experiment to confirm previous findings, or collate data from a variety of existing sources without further analysis. Statements about the significance of the work may be exaggerated and show little awareness of context. For projects incorporating Indigenous Traditional Knowledge, the project has little importance to the land and community.	Build a model or device to duplicate existing technology or to demonstrate a well-known theory or social/behavioural intervention. For projects incorporating Indigenous Traditional Knowledge, the project has little importance to the land and community.

ORIGINALITY and CREATIVITY

LEVEL 4 (most creative)	LEVEL 3	LEVEL 2	LEVEL 1 (least creative)
<p>This highly original project demonstrates a novel approach. It shows resourcefulness and creativity in the design, use of equipment, construction and/or the analysis. For projects incorporating Indigenous Traditional Knowledge, the project demonstrates a novel and/or highly creative approach to an issue of importance to Indigenous peoples as enunciated in, for example, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) or the Truth and Reconciliation Commission of Canada (TRC) calls to action.</p>	<p>This imaginative project makes creative use of the available resources. It is well thought out, and some aspects are above average. For projects incorporating Indigenous Traditional Knowledge, the project demonstrates a creative approach to an issue of importance to Indigenous peoples as enunciated in, for example, the UNDRIP or the TRC calls to action.</p>	<p>The project design is simple with some evidence of student imagination. It makes standard use of resources or equipment. The topic is a current or common one. For projects incorporating Indigenous Traditional Knowledge, the project has some connection to an issue of importance to Indigenous peoples.</p>	<p>The project design is simple with little evidence of student imagination. It can be found in books, magazines or web sources. For projects incorporating Indigenous Traditional Knowledge, the project has no clear connection to issues of importance to Indigenous peoples.</p>

COMMUNICATION

The level is based on five elements: ① ProjectBoard video ② ProjectBoard content, ③ evidence of organized record keeping (e.g., logbook, notebook, journal), ④ judging interview and ⑤ exhibit poster/display materials.

LEVEL 4 (strongest)	LEVEL 3	LEVEL 2	LEVEL 1 (weakest)
<p>All five elements are complete and exceed reasonable expectations of a student at this age/grade. The online ProjectBoard content and exhibit poster/display are informative and clearly written, striking a balance between clarity and brevity. Visual elements, including graphs, are appropriate and clearly designed. The references extend beyond web-based articles. For projects incorporating Indigenous Traditional Knowledge, the project shows clear evidence of consultation with a Knowledge Keeper or Elder and clearly conveys or supports traditional values of the community. Records are organized and thorough. The oral presentation during the interview is clear, logical, and engaging. In a pair project, both members contribute equitably to the interview.</p>	<p>All five elements are complete and demonstrate attention to detail and substance. The communication components are each well thought out and executed. Some further explanation may be required or there may be some redundant material. A few sources beyond web-based articles were used. For projects incorporating Indigenous Traditional Knowledge, place-based information from community members is included and attempts to convey or support traditional values of the community. In a pair project, both members made an equitable contribution to the interview.</p>	<p>Some of the five elements are simple, unsubstantial or incomplete, but there is evidence of student attention to communication. A number of pieces may require clarification or explanation or there may be considerable redundant material. Sources are almost entirely web-based. For projects incorporating Indigenous Traditional Knowledge, non-place-based information (e.g. from the internet) is included and little attempt is made to convey or support traditional values of the community. In a pair project, one member may have made a stronger contribution to the interview.</p>	<p>Most or all of the five elements are simple, unsubstantial or incomplete. There is little evidence of attention to effective communication. Most pieces require clarification or further explanation or most of the material is redundant. Cited sources are insufficient or of poor quality. For projects incorporating Indigenous Traditional Knowledge, the project includes information from sources with no special knowledge of the Indigenous context and makes no attempt to convey or support traditional values of the community. In a pair project, one member may have dominated the interview.</p>