“Sustainable development is development that meets the needs of today without compromising the ability of future generations to meet their own needs.”
Task
You will complete an inquiry-based project on a topic of your choice related to the theme of sustainability.

The purpose of the project is to help you develop your research skills as well as learn about how our decisions affect the future of human health and well-being, the environment, and the economy.

Specifically, you will work on your research/note-taking skills, your ability to assess your own learning, accessing and referencing sources of information, and your presentation skills.

Inquiry-based learning is a process where students are involved in their own learning. Students formulate guiding research questions, locate and access resources, investigate the answers to guiding questions, build a new understanding of the topic, and finally present projects to others. The inquiry model involves the following steps:

- planning
- gathering information
- processing information
- creating a product
- sharing new information
- evaluating learning

The presentation and format of the project will be of a genre of your choice (e.g. poster board, movie, picture book, written report, model, brochure, creating a business, etc…).

Possible Project Topics

- sustainable fashion
- alternative energy sources
- a specific environmental issue
- fair trade practices
- global warming (climate change)
- child labour
- waste/garbage reduction
- green transportation
- organic/local food production
- impact of technology
- deforestation/reforestation
- over consumption
- issues related to poverty
- access to basic needs
- gender inequality
- environmental friendly cities
- energy efficient housing
- agricultural practices
- alternative medicine
- habitat destruction/rehabilitation
- air quality
- sustainable sporting practices
- overuse of medication
- overpopulation
- water quality
- gender inequality
- health related topics (healthy choices)
- stress
- overuse of medication
- waste/garbage reduction
- sustainable education/schools
- state of the world's oceans

You may choose from the list above or come up with your own topic to research as long as the focus of the inquiry is on the quality of life of people. When choosing a topic, be sure to pick something you are interested in learning about. If you are interested in a topic, the project will be more enjoyable to complete.

One way to come up with a topic is to ask yourself the following questions: if you ran the world what would you do or change to make the world more sustainable?
Steps Involved in Inquiry

1. Planning
   - Identify a topic for inquiry
   - Complete Inquiry Research Project: Questions to be Answered and submit to teacher
   - Identify possible information sources

2. Gather Information
   - Locate and collect resources from school library, internet, public library, videos, etc…
   - Select relevant resources
   - Evaluate information to ensure sources will assist with inquiry
   - Review and revise the plan for inquiry

3. Processing
   - Establish a focus by generating an essential question
   - Create guiding questions that will help you answer the essential question
   - Choose the right information
   - Record information
   - Create a 1-page summary of research to date and submit to teacher
   - Review and revise the plan for inquiry

4. Creating
   - Organize information
   - Create a final product
   - Think about the audience
   - Revise and Edit
   - Review and revise the plan for inquiry

5. Sharing
   - Communicate new found information with classmates and teacher
   - Demonstrate appropriate audience behaviour

6. Evaluating
   - Evaluate final product and process
Research

Begin your research by checking each of the following resources:
- Use material from our textbook.
- Use a hard copy or on-line encyclopaedia.
- Use a minimum of one library book.
- Use a minimum of one website.

Other possible sources of information can come from videos, interviews, newspapers, etc…

Keep a working bibliography and complete a good copy bibliography, which you will hand in at the end of the project.

Timeline

- Inquiry Research Project: Questions to be Answered Due: _____________
- Inquiry Research Essential and Guiding Questions Due: _____________
- Working bibliography
  Summary of Research Due: _____________
- Final Project Product Due: _____________
- Presentations Begin: _____________
Inquiry Research Project: Questions to be Answered

Name: ______________________

1. What is the purpose of the research?
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

2. What do I (we) already know about the topic? List five things.
   • _____________________________________________________________
   • _____________________________________________________________
   • _____________________________________________________________
   • _____________________________________________________________
   • _____________________________________________________________

3. What do I need to learn about the topic? List five things.
   • _____________________________________________________________
   • _____________________________________________________________
   • _____________________________________________________________
   • _____________________________________________________________
   • _____________________________________________________________

4. What might be good sources of information for this project? Why?
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

5. What do I (we) expect to learn from this research?
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________
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6. How will I (we) share our new information?
   _____________________________________________________________
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Essential Questions

What is an essential question?

The success of your inquiry project depends largely on developing a quality essential question. An essential question requires one of the following thought processes:

- a question that requires you to develop a plan or course of action to answer it.
- a question that requires you to make a decision.

Characteristics of Essential Questions

- relate to real world problems
- are meaningful
- are interesting to students
- are relevant to students’ lives
- have no right or wrong answers
- can be answered
- make students investigators

Examples of Essential Questions

- What invention of the 20th century has had the greatest impact on our lives?
- What plan could be developed to reduce algae blooms in the Lake Winnipeg ecosystem?
- Who is Major League Baseball’s greatest home run hitter of all time?
- What should be done to improve the effectiveness of the United Nations?
- How can Canada best handle the influx of immigrants?
- What should be done about homelessness and poverty in Manitoba?
- What is the best way to balance the need for resource development in the Arctic with protection of the environment?

How to Create Essential Questions

Example theme: Football

A student wants to conduct an inquiry about football. She initially comes up with questions that are primarily information seeking.

1. When was Canadian football invented?
2. Who invented it?
3. Where was it invented?
4. Who were the first teams?
5. What are the rules?
6. What equipment is used?
7. Which team has won the most Grey Cups?

Upon reflection, she realizes that these types of questions don’t work well for the purpose of an inquiry. So she tries to come up with more investigative questions, such as:
1. How is Canadian football related to games played in other countries?
2. How has the game of Canadian football changed since it was invented?
3. Why are football injuries so common?
4. How do Canadian football players’ salaries compare to salaries of other Canadian professional athletes?
5. Why is football such a popular sport to watch?
6. Why does the CFL (Canadian Football League) have a hard time catching on in the United States?
## Essential Question Brainstormer

### Topic:

___________________________________________________________

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____________________________________________________


<table>
<thead>
<tr>
<th>Type of Essential Question</th>
<th>Topic</th>
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<tbody>
<tr>
<td><strong>Which one?</strong></td>
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<tr>
<td>• Collect information to make an informed choice.</td>
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<tr>
<td><strong>Example:</strong> What 20\textsuperscript{th} century Prime Minister did the most to promote human rights?</td>
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<tr>
<td><strong>How?</strong></td>
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<td>• Understand problems and perspectives, weigh options, and propose solutions.</td>
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<tr>
<td><strong>Example:</strong> How should we solve the problem of water pollution in our neighbourhood?</td>
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<td><strong>What if?</strong></td>
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<tr>
<td>• Use the knowledge you have to pose a hypothesis and consider options.</td>
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<tr>
<td><strong>Example:</strong> What if everyone had access to their basic needs?</td>
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<tr>
<td><strong>Should?</strong></td>
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<tr>
<td>• Make a moral or practical decision based on evidence.</td>
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<tr>
<td><strong>Example:</strong> Should we clone humans?</td>
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<tr>
<td><strong>Why?</strong></td>
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<tr>
<td>• Understand and explain relationships to get to the essence of a complicated issue.</td>
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<td><strong>Example:</strong> Why do some people force their children to work?</td>
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</table>
Creating Guiding Questions

Guiding questions are the smaller questions that guide you to answer the bigger essential question. Guiding questions require specific answers or factual evidence presented by experts on the topic.

**Essential Question:** __________________________________________
________________________________________________________________________

<table>
<thead>
<tr>
<th>Examples</th>
<th>Your Questions</th>
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<tbody>
<tr>
<td><strong>Who?</strong></td>
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<tr>
<td>- Identifying those involved.</td>
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<td><strong>Example:</strong> Who invented the cloning process?</td>
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<td><strong>What?</strong></td>
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<tr>
<td>- Explaining the problem or issue.</td>
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<td><strong>Example:</strong> What are the ethical implications of human cloning?</td>
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<tr>
<td><strong>Where?</strong></td>
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<tr>
<td>- Describing the current or future location(s) of the problem.</td>
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<td><strong>Example:</strong> Where are the effects of global warming most evident?</td>
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<td><strong>When?</strong></td>
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<tr>
<td>- Identifying a specific time.</td>
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<td><strong>Example:</strong> When was global warming first discovered?</td>
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<td><strong>Why?</strong></td>
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<tr>
<td>- Explaining the reason an issue or is occurring.</td>
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<td><strong>Example:</strong> Why are some people against stem cell research?</td>
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<td><strong>How?</strong></td>
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<td>- Understanding the process involved.</td>
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<td><strong>Example:</strong> How is stem cell research conducted?</td>
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Inquiry Research Project Questions

Name: __________________________

Essential Question:
________________________________________________________________________
________________________________________________________________________

Guiding Questions:

1. ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________

2. ______________________________________________________________________
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3. ______________________________________________________________________
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9. ______________________________________________________________________
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Summary of Research

Essential Question:

1. In a paragraph, summarize what you have learned during the course of your research.

2. What guiding questions were not difficult to answer? Explain? What guiding questions proved difficult to answer? Explain.

3. What have you uncovered in your research that was unexpected? Explain.

4. What form will your final project take? How will you share what you learned with the class?
# Sustainability Inquiry Project Rubric

<table>
<thead>
<tr>
<th>Content</th>
<th>Self Assessment</th>
<th>Teacher</th>
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<tbody>
<tr>
<td>Project is clearly connected to sustainability and global quality of life</td>
<td>1 2 3 4</td>
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<tr>
<td>Information provided is accurate</td>
<td>1 2 3 4</td>
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<tr>
<td>Clear communication - evidence for stated position is provided</td>
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<tr>
<td>Attractive and Visually appealing presentation of information</td>
<td>1 2 3 4</td>
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<tr>
<td>Organization/ Preparation-information is clearly organized and care is taken in preparation</td>
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<tr>
<td>Mechanics-Grammar and spelling are correct</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
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<tr>
<td>References/ Bibliography are provided and follow appropriate format</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
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<tr>
<td>Time management skills-class time and home time were used effectively</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
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<tr>
<td>Research Summary provided and completed</td>
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<th>Presentation Skills</th>
<th>Self Assessment</th>
<th>Teacher</th>
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<td>Eye contact</td>
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<td>Voice Projection</td>
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<td>Enunciation (clarity of voice)</td>
<td>1 2 3 4</td>
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<tr>
<td># of facts shared; guiding questions? Minimum 5-10</td>
<td>1 2 3 4</td>
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<tr>
<td>Use of visuals (ex. pictures, diagrams, graph models)</td>
<td>1 2 3 4</td>
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<tr>
<td>Student Developed Criteria</td>
<td>Self Assessment</td>
<td>Teacher</td>
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Comments: ______________________________________________________________
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Working Bibliography
Record all your research info here.

**Encyclopedia Articles (Print)**

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**Online Encyclopedias**

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**Books**

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**Websites**


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**Periodicals (newspapers & magazines)**

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<th>Author</th>
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<th>Title of Periodical</th>
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**Video/DVD**

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**Personal Interview**

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<th>Interviewee’s Name</th>
<th>Interviewee’s Title</th>
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