



ask

Can a better understanding of sustainability motivate us to protect our earth?

acquire

- teacher and student handouts
- readings, audio and video files
- article

explore

- The Pale Blue Dot PowerPoint presentation
- The Earth: Our Home note and handout
- defining sustainability handout (definitions, models and videos)
- The inquiry process

analyze

- issue analysis

act

- exit card
- evaluate a local sustainability initiative and class presentation
- article analysis and sustainability model redesign

U1L1 | One Earth

This is an introductory lesson to establish a rationale for making societal change toward sustainability. Students will acquire a general overview of the Earth systems and how humans are impacting the Earth (Activity 1). They will then explore different materials that help them define the concept of sustainability (Activity 2 or Activity 3).

subjects: Geography, Science, Photography, Civics

timing: **Activity 1**

The Earth: Our Home | **60 minutes**

Note: follow up with Activity 4

Activity 2

Defining Sustainability | **75 minutes**

Note: follow up with Activity 5

Activity 3

The Inquiry Process | **10 minutes**

The Inquiry Process Asking Questions | **30 minutes**

The Inquiry Process Exploring Resources | **150 minutes**

The Inquiry Process Analysing Information | **75 minutes**

Note: follow up with Activity 6

Activity 4

Exit Card | **15 minutes**

Activity 5

Evaluating a Local Sustainability Initiative | **75 minutes**

Activity 6

The Inquiry Process Issue Analysis | **75 minutes**

learning goal

- To understand the Earth as a system and recognize the human impact.
- To understand the concept of sustainability and the factors that contribute to it.
- To participate in the inquiry process to understand the concept of sustainability and to develop a sustainability checklist.

success criteria

- Completion of an exit card on the Earth as our home.
- Evaluate a local initiative for sustainability.
- To actively engage in the inquiry process and analyse a current initiative for its impact on sustainability in Canada.

U1L1 | One Earth

ask

- How can seeing the world from the perspective of astronauts and scientists help motivate us to make change toward sustainability for the Earth?
- What is sustainability?
- What is the inquiry process, and how can it be used to understand the concept of sustainability?

acquire

Activity 1

Reading: Excerpts from the Blue Dot Tour

Powerpoint: The Pale Blue Dot

Audio file: Carl Sagan reading The Pale Blue Dot (link in PowerPoint)

Podcast: Quirks and Quarks, October 25: Chris Hadfield 'You are Here' (link in PowerPoint)

Note: The Earth: Our Home

Handout: The Earth: Our Home

Activity 2

Video: The Natural Step—Sustainability (link in handout)

Video: The Story of Solutions (link in handout)

Handout: Defining Sustainability

Handout: Sustainability Checklist

Activity 3

Video: The Natural Step—Sustainability (link in handout)

Video: The Story of Solutions (link in handout)

Handout: The Inquiry Process

Handout: The Inquiry Process Asking Questions

Handout: The Inquiry Process Exploring Resources

Handout: The Inquiry Process Analyzing Information

Handout: The Inquiry Process A New Model for Sustainability

Article: Every Canadian's eco-rights need Charter protection

explore and analyze

Activity 1 | The Earth: Our Home

The following activities will help students understand the fragility of the Earth and the impact of human development. It will also help students understand the perspective of scientists, in order to explore the concept of sustainability as it relates to protection of the Earth's systems.

- Powerpoint: The Pale Blue Dot—teacher reads excerpts from David Suzuki's Blue Dot Tour speech while showing the first slide, then play the audio file of Carl Sagan for the second slide, then finish the Blue Dot tour while on the third slide
- Continue with remainder of PowerPoint of Chris Hadfield photos from the ISS while playing his interview with Bob MacDonald (Quirks and Quarks)
- Continue with PowerPoint of other images from earth—of human development and sustainable human activities
- Teach The Earth: Our Home

U1L1 | One Earth

Activity 2 | Defining Sustainability

Students gain an understanding of the concept of sustainability using teacher-led activities, including comparing sustainability definitions and models, and watching sustainability videos.

Note: follow up with Activity 5

Activity 3 | Using the Inquiry Process to Define Sustainability

Students develop a sustainability checklist by conducting a student-led inquiry. In this series of activities, students find a variety of sources of information on sustainability. In general, articles on sustainability break down into the components—economic, environmental, and social.

To support them in finding good sources, you may want to direct them toward some or all of the following:

The textbook
Atlases
Municipal sustainability plans
Ministry of Transportation
Ministry of Natural Resources
Environment Canada
The United Nations Environment Program
Oxfam: A Safe and Just Space for Humanity
Ted Talk: Doughnut Economics

Note to teachers: In the Analyzing Information activity, as a class, students develop criteria with which to build a ‘Sustainability Checklist.’ The intended result of this learning is that the sustainability checklist can be used throughout a course or cycle of learning as a framework for analyzing issues. In Activity 6, they then use the checklist to evaluate David Suzuki’s initiative to add the right to a healthy environment to the Canadian Charter of Rights and Freedoms. Before they can do this, you, the teacher, need to collect their collective criteria and put it into checklist format. There is an example in Activity 6 for you to use as a guide, but it won’t reflect the unique criteria your students developed.

Note: follow up with Activity 6

act

Activity 4

Students will submit an exit card to demonstrate their understanding of the importance of the Earth and its natural systems.

Activity 5

Students apply their learning on sustainable solutions by evaluating a local initiative for its sustainability and present to the class.

Activity 6

Students apply a co-constructed sustainability checklist to a current issue in Canada and redesign the sustainability model to better reflect protection of the Earth and its resources to better serve today’s needs.

U1L1 | One Earth

references

- Alberta Oil Sands Jobs. (2015). Oil sands image. [Photo]. Retrieved April 26, 2015 from albertaoilsandsjobs.net
- Canadian Parks and Wilderness Society. (2011). Alberta boreal forest. [Photo]. Retrieved June 2 2015 from cpaws.org/campaigns/cbfa
- City Farmer. (2009, November 18). Chicago city farm. [Photo]. Retrieved June 2, 2015 from www.cityfarmer.info/2009/11/18/illinois-policy-makers-take-urban-agriculture-tou
- Environmental Change and Security Program. (2012, December 14). High density housing on mountainside. [Photo]. Retrieved June 2, 2015 from www.newsecuritybeat.org/2012/12/world-billion-building-sustainable-future/
- ESRI. (2011). Geographic inquiry process. Retrieved from edcommunity.esri.com/~/_/media/Files/EdCommunity/Lesson%20Files/g/Geographic_Inquiry_Process.pdf
- GCaptain. (2012, April 6). Shipbreaking in India. [Photo]. Retrieved June 2, 2015 from gcaptain.com/american-ships-barred-indian-scrap
- Getty Images. (2013). Sumatran deforestation. [Photo]. Retrieved from www.theguardian.com/environment/2013/feb/05/paper-firm-indonesian-deforestation
- Greenpeace. (2014, May 28). Fracking wells. [Photo]. Retrieved June 2, 2015 from greenpeaceblogs.org/2014/05/28/north-carolina-fracking-bills-sponsor-close-ties-oil-gas-industry
- Hadfield, C. (2013). The greatest photos Chris Hadfield has posted from the International Space Station. Retrieved from o.canada.com/photos/the-24-best-pics-chris-hadfield-has-posted-from-the-international-space-station
- Library of Congress (n.d.) The pale blue dot: short recording. [Audio file]. Retrieved June 2, 2015 from www.loc.gov/item/cosmos000110
- McDonald, B. (2014, October 25). Chris Hadfield: You are here [Audio podcast]. Retrieved from www.cbc.ca/player/Radio/Quirks+and+Quarks/ID/2569771162
- McCreevy, M. (2013, July 8). Selective logging in New Zealand 1972. [Photo]. Retrieved June 2, 2015 from www.teara.govt.nz/en/photograph/12762/selective-logging
- NASA. (1972, December 7). The blue marble. [Photo]. Retrieved June 2 2015 from grin.hq.nasa.gov/ABSTRACTS/GPN-2000-001138.html
- NASA. (2007, June 11). The Three Gorges Dam before and after. [Animation file]. Retrieved June 2 2015 from svs.gsfc.nasa.gov/cgi-bin/details.cgi?aid=3433
- NASA. (1990, February 14). The pale blue dot. [Photo]. Retrieved June 2, 2015 from visibleearth.nasa.gov/view.php?id=52392
- Pidwirny, M and Jones, S. (2014). The natural spheres. Retrieved from www.physicalgeography.net/fundamentals/5c.html
- Reneweconomy. (2014, July 28). Rooftop solar panels at the University of Queensland Australia. [Photo]. Retrieved June 2, 2015 from reneweconomy.com.au/2014/leading-solar-developer-ingenero-placed-in-administration-51983
- Sklyarov, A. (2012, June 6). New York City aerial. [Photo]. Retrieved June 2, 2015 from timsklyarov.com/new-york-city-aerial
- Suzuki, D and Hanington, I. (2014, July 31). You are here so be there. Retrieved from www.davidsuzuki.org/blogs/science-matters/2014/07/the-blue-dot-tour-its-about-all-of-us
- The Natural Step (Producer). (2010, April 16). The natural step and sustainability explained in 2 minutes [Video file]. Retrieved from www.youtube.com/watch?v=FFCNCQleCuk
- The Story of Stuff Project (2013, October 1). The story of solutions [Video file]. Retrieved from www.youtube.com/watch?v=cpkRvc-sOKk
- Underwood Gardens. (2011, May 11). Industrial agriculture. [Photo]. Retrieved June 2, 2015 from www.underwoodgardens.com/making-a-difference/whos-more-elitist-foodies-or-corporate-agriculture

U1L1A1 | The Earth: Our Home | **TEACHER ANSWER KEY**

overview

In this activity you will learn about the Earth as a complex system. You will hear the reflections of the astronauts who have seen the Earth from space and learn how their unique perspective informs our understanding of sustainability. At the end, you can complete an exit card to demonstrate your learning (Activity 4).

learning goal

- To understand that the Earth is a complex system categorized into four distinct but interconnected spheres.
- To understand that humans, as part of this system, exist within these spheres and change the Earth through our activities.

success criteria

- I will correctly complete an exit card to demonstrate my understanding of these ideas.

Inquiry Question

- How can seeing the world from the perspective of astronauts and scientists help motivate us to make change toward sustainability for the Earth?

The Earth Spheres

The Earth is made up of four spheres:

- the atmosphere
- the lithosphere
- the hydrosphere
- the biosphere

Understanding how these four spheres interact is essential to our efforts to minimize the negative impacts of our actions on the environment.

The Atmosphere

- the ‘air’ that surrounds the Earth
- contains nitrogen, oxygen and carbon dioxide needed by living things
- protects us from sun’s radiation

The Lithosphere

- the outside crust of the Earth
- made up of 15 major plates
- forms the continents, the ocean floor and is the basis for terrestrial (land-based) ecosystems

The Hydrosphere

- all the Earth’s water and ice (cryosphere)
- most found in oceans, some in glaciers, rivers, lakes and groundwater

The Biosphere

- all the Earth’s living things
- humans are such a dominant species that some scientists have given us our own sphere name: the anthrosphere

U1L1A1 | The Earth: Our Home | **TEACHER ANSWER KEY**

Interaction of the four spheres

The four spheres of the Earth are closely connected. Water (hydrosphere) flows through the soil (lithosphere) which also contains air (atmosphere) and is inundated with millions of microscopic and larger living organisms (biosphere).

A change in one sphere often results in a change in one or more of the other spheres.

The interaction of the three physical earth spheres allows for the cycling of energy, water and nutrients throughout the environment. These conditions allow for the survival of the components of the biosphere, including humans.



Moraine Lake, Alberta Canada (christophermartinphotography.com, 2014)

It is important for humans to understand the Earth's complex systems, so that:

- we can understand the impacts of our activities on the Earth systems
- we can mitigate the damage already done to the Earth and its systems
- we can work to protect unique ecosystems and environments

U1L1A2 | Defining Sustainability | TEACHER ANSWER KEY

overview

In this activity you will explore a variety of materials that explain the concept of sustainability. You will compare definitions from different organizations, then evaluate three models of sustainability. Lastly, you will learn about taking action for sustainability by watching 'The Story of Solutions' and use the Sustainability Checklist to evaluate citizen action on an issue. After, you can evaluate a sustainability initiative in your local community (Activity 5).

learning goal

- To understand and participate in the inquiry process.
- To understand and apply the concept of sustainability.

success criteria

- I will complete a series of activities on sustainability.
- I will evaluate a local sustainable solution and share it with the class.

Inquiry Question

- What is sustainability?

Task 1: Comparing Sustainability Definitions

When examining the issue of sustainable management of national and global resources, one must first consider the definition of sustainable development.

According to 'Our Common Future,' or the Brundtland report (1987), one must always consider the environment when evaluating development:

"...the "environment" is where we all live; and "development" is what we all do in attempting to improve our lot within that abode. The two are inseparable." (Foreword, page 3, paragraph 2).

1. Watch the video at the following link to understand the concept of sustainable development:

<https://www.youtube.com/watch?v=fNhDNjdgQE4>

a. What are the four 'care instructions' for the Earth, according to this video?

- Reduce our dependence on fossil fuels and heavy metals
- Reduce our dependence on synthetic chemicals that persist in nature
- Reduce our destruction of nature
- Ensure we are not stopping people, globally, from meeting their needs

2. Read the following definition of sustainable development from the Brundtland Commission (1987), of the United Nations.

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains within it two key concepts:

- The concept of 'needs,' in particular the essential needs of the world's poor, to which overriding priority should be given; and
- The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."

U1L1A2 | Defining Sustainability | **TEACHER ANSWER KEY**

3. How does the Brundtland definition compare with the ‘care instructions’ from the video? What are the similarities, and what are the differences?

Similarities

- Both address the need to care for the basic needs of people in poorer regions of the world.
- Both prioritize care for the environment.

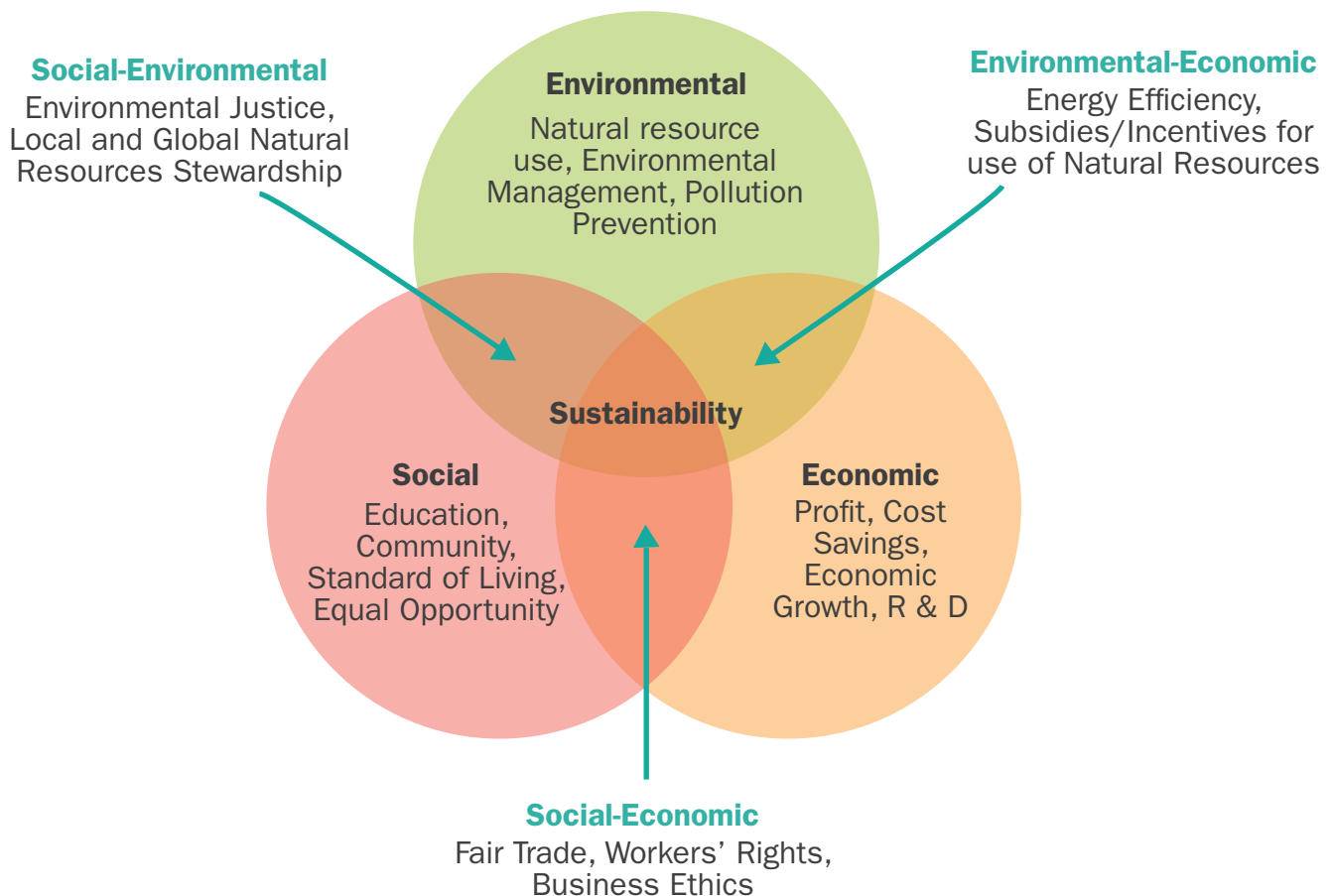
Differences

- The Brundtland definition recognizes specifically the role of technology and human activities placing strain on the limits of the natural world to meet our needs.

Task 2: Comparing Sustainability Models

Using the models below, answer the questions that follow.

The Three-sphere Model
The Three Spheres of Sustainability



U1L1A2 | Defining Sustainability | TEACHER ANSWER KEY

1. **What are the three factors that define sustainability according to this model? It may be helpful as you move forward to remember these factors as People, Profit, and Planet.**

The three factors or themes of sustainability are society, economy and the environment.

2. **Using one example from the model, explain the meaning of the area between the spheres.**

The overlapping areas between two spheres is the ‘space’ where separate themes interact with each other. The social-economic area addresses the needs of people within an economic system. For example, the idea of fair trade is a human activity within the global economic system that ensures the fair treatment of workers and producers while still providing a successful product.

The United Nations Model
Circles of Sustainability

ECONOMICS

Production & Resourcing
Exchange & Transfer
Accounting & Regulation
Consumption & Use
Labour & Welfare
Technology & Infrastructure
Wealth & Distribution

Organization & Governance
Law & Justice
Communication & Movement
Representation & Negotiation
Security & Accord
Dialogue & Reconciliation
Ethics & Accountability

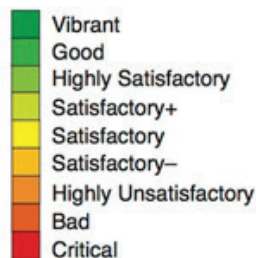
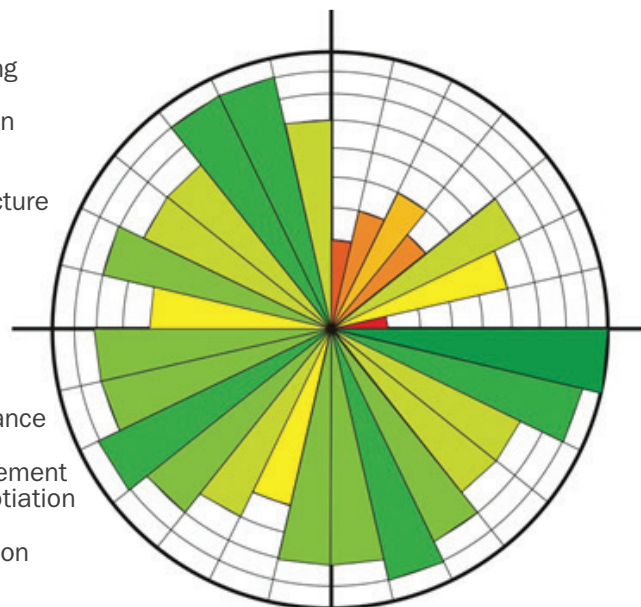
POLITICS

ECOLOGY

Materials & Energy
Water & Air
Flora & Fauna
Habitat & Food
Place & Space
Constructions & Settlements
Emission & Waste

Engagement & Identity
Recreation & Creativity
Memory & Projection
Belief & Meaning
Gender & Generations
Enquiry & Learning
Health & Wellbeing

CULTURE



U1L1A2 | Defining Sustainability | TEACHER ANSWER KEY

3. What are the factors that define sustainability according to the United Nations?

The United Nations defines sustainability using four themes or factors—culture, ecology, politics and economy.

4. Using one example from the model, explain the coloured regions inside the circle.

The coloured regions show a sustainability measurement from vibrant to critical in each of seven sub-themes for each overall theme. For example, Emissions and Waste are measuring 'critical' for their sustainability in the ecology theme, and is shown in red.

5. Which model is more effective at describing the concept of sustainability? Explain your answer using evidence from the models.

Answers will vary, as will examples from the models.

Task 3: Changing the Game

Watch the video at the following link and answer the questions that follow. If you have never seen 'The Story of Stuff,' it may be beneficial to watch that first, but it is not necessary.

www.youtube.com/watch?v=cpkRvc-sOKk

1. What is the difference between the old goal (MORE) and the new goal (BETTER)?

The goal of MORE reflects the current economic model that more is better. Growth is measured by the Gross Domestic Product (GDP), which accounts for growth in unsustainable activities as well as growth in sustainable activities. The new goal of BETTER focuses human economic activities toward more sustainable, game changing solutions that improve the quality of life and the environment as well as building the economy.

2. What symbols are shown on each of the goals to help the viewer understand these differences?

The MORE goal is drawn in black and white, and the symbols around the word look like a landfill of cast-off 'stuff.' There is a skull and cross-bones in one corner of the image. The goal of BETTER is shown in green, and depicts deer grazing by a flowing river, with environmentally friendly symbols like bicycles, windmills, solar panels and a basket of fresh produce.

3. What does GOAL stand for?

- Gives people more power.
- Opens people's eyes to the truth of happiness.
- Accounts for all the costs.
- Lessens the wealth gap.

4. What are some of the solutions the narrator describes that demonstrate the game changing? Provide three.

The narrator says that cooperatives are a good business solution because they are democratic, sustainable and equitable. Also, in Cappanori, Italy, local citizens are working with government and businesses to reduce the quantity of waste going to landfills by finding creative solutions like increasing compost, and reusing and repurposing. Lastly, developing community sharing programs, like bike and car shares, or even local equipment sharing reduces the production and purpose of extra stuff.

U1L1A2 | Defining Sustainability | **TEACHER ANSWER KEY**

5. Describe how the Ban the Bag campaign was a game changer. Apply the Sustainability Checklist and use it to support your answer.

The Ban the Bag solution was successful due to committed groups of people who decided to place the environment ahead of profit. They enlisted a local business to develop alternatives to the plastic bag, and they worked with government (the justice system) to fight companies that were trying to stop them. Strong communities involved in active citizenship to bring change to their society resulted in a successful campaign and a win for the environment.

U1L1A2 | Defining Sustainability

sustainability checklist

Environmental Sustainability needs: Planet

- Healthy and intact ecosystems
- Government policy that puts the environment first
- Educated citizens who put the environment first
- Responsible business that puts the environment first
- A forward-thinking, long-term vision

Economic Sustainability needs: Profit

- A healthy environment
- Partnership between government, industry and communities
- Sustainable communities with a high level of social capital to attract and retain strong businesses
- A wide variety of meaningful employment for people
- Responsible, efficient use of natural resources
- A forward thinking, long-term vision

Social Sustainability needs: People

- A healthy environment
- Communities with secure and high-quality housing, education, health care, food systems to encourage people to invest and engage in the social fabric of their communities
- Communities with a high-level of social capital that allows people to fully participate in the following activities:
 - Cultural—arts, heritage, active citizenship, embrace diversity
 - Political—good governance, democratic engagement, social development
 - Economic—employment, economic development, tourism, infrastructure, agriculture
 - Environmental—protection, conservation, experiences, governance
- A forward-thinking, long-term vision

U1L1A3 | The Inquiry Process: Exploring Sources of Information | TEACHER ANSWER KEY

Now that you have learned about questioning, you need to acquire and explore some materials to help you find answers.

Activity 1: Evaluating a source of information

1. As a class, brainstorm some possible sources of information that could answer the question ‘What is sustainability?’ Record them in the space below:

2. Select one and record it here _____

3. Complete the steps below to determine if it is useful.

Evaluating a source of information

- a. Who is the author?

- b. Is this a person or an organization? If it is a person, is she/he connected to an organization?

- c. What are the qualifications of the author? You may need to search the Internet for this. If you are satisfied that the author is a good source of information, you may continue to read. As you read, you need to keep the following questions in mind, and then answer them after you read.

- d. Is a particular bias or point of view evident?

- e. What kind of information is presented?
(definitions, examples, overviews, statistics, details of a case)

U1L1A3 | The Inquiry Process: Exploring Sources of Information | **TEACHER ANSWER KEY**

2. Record any diagrams or relevant figures (sketch them if necessary).

Good materials are not limited to text-based articles. Videos, infographics, graphics all contain information and are valuable in an inquiry.

Activity 3: Non-text sources

There are three additional sources you could consider in addition to the ones you have already determined as a class:

A. The Natural Step

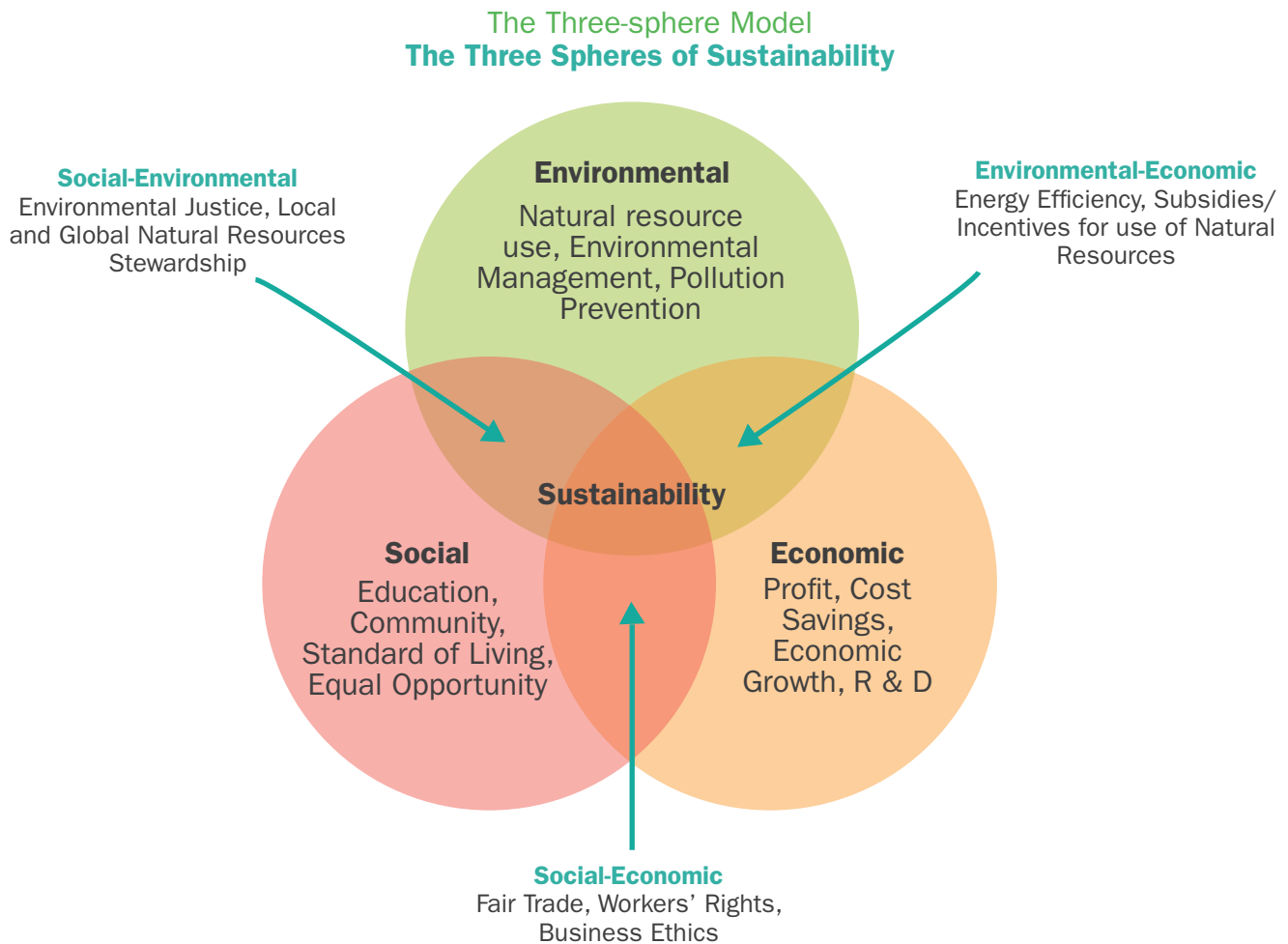
Watch the video from the Natural Step at the link: www.youtube.com/watch?v=FFCNCQIeCuk

- a. What are the four care instructions for the Earth, according to the Natural Step?
 - i. Reduce our dependence on fossil fuels and heavy metals.
 - ii. Reduce our dependence on synthetic chemicals that persist in nature.
 - iii. Reduce our destruction of nature.
 - iv. Ensure we are not stopping people, globally, from meeting their needs.

U1L1A3 | The Inquiry Process: Exploring Sources of Information | **TEACHER ANSWER KEY**

B. Three- Sphere Sustainability Model

Below is the current, commonly referenced model for sustainability:



a. What are the primary factors of sustainability according to this model?

The three factors or themes of sustainability are society, economy and the environment.

b. Explain the purpose of the areas between two spheres. Use an example from the diagram to support your explanation.

The overlapping areas between two spheres is the 'space' where separate themes interact with each other. The social-economic area addresses the needs of people within an economic system. For example, the idea of fair trade is a human activity within the global economic system that ensures the fair treatment of workers and producers while still providing a successful product.

C. The United Nations Model on sustainability:

The United Nations Model
Circles of Sustainability

ECONOMICS

Production & Resourcing
Exchange & Transfer
Accounting & Regulation
Consumption & Use
Labour & Welfare
Technology & Infrastructure
Wealth & Distribution

Organization & Governance
Law & Justice
Communication & Movement
Representation & Negotiation
Security & Accord
Dialogue & Reconciliation
Ethics & Accountability

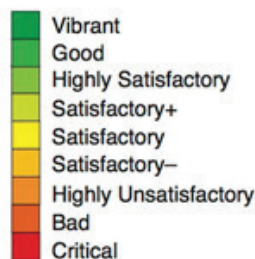
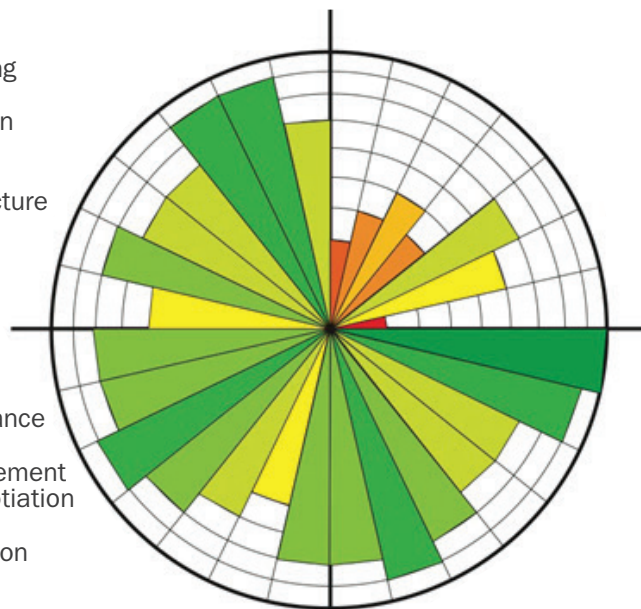
POLITICS

ECOLOGY

Materials & Energy
Water & Air
Flora & Fauna
Habitat & Food
Place & Space
Constructions & Settlements
Emission & Waste

Engagement & Identity
Recreation & Creativity
Memory & Projection
Belief & Meaning
Gender & Generations
Enquiry & Learning
Health & Wellbeing

CULTURE



- a. How does the three-sphere model compare with that of the United Nations? List two similarities and two differences.**

The United Nations model uses four pillars or themes of sustainability, instead of three. It separates society into culture and politics. In addition, the UN model shows a measurement of sustainability for each theme, by providing sub-themes and ranking them (using colour) according to their sustainability success globally. The two models are alike in that they both include the environment (ecology) and the economy as important aspects of sustainability.

Homework:

Watch the *Story of Stuff* storyofstuff.org/movies/story-of-stuff/

U1L1A3 | The Inquiry Process: Exploring Sources of Information | **TEACHER ANSWER KEY**

D. The Story of Solutions

Watch the movie at the link below:

www.youtube.com/watch?v=cpkRvc-sOKk

a. What is the difference between the old goal (MORE) and the new goal (BETTER)?

The goal of MORE reflects the current economic model that more is better. Growth is measured by the Gross Domestic Product (GDP), which accounts for growth in unsustainable activities as well as growth in sustainable activities. The new goal of BETTER focuses human economic activities toward more sustainable, game changing solutions that improve the quality of life and the environment as well as building the economy.

b. What symbols are shown on each of the goals to help the viewer understand these differences?

The MORE goal is drawn in black and white, and the symbols around the word look like a landfill of cast-off 'stuff.' There is a skull and cross bones in one corner of the image. The goal of BETTER is shown in green, and depicts deer grazing by a flowing river, with environmentally friendly symbols like bicycles, windmills, solar panels and a basket of fresh produce.

d. What does GOAL stand for?

- Gives people more power.
- Opens people's eyes to the truth of happiness.
- Accounts for all the costs.
- Lessens the wealth gap.

e. What are some of the solutions the narrator describes that demonstrate the game changing? Provide three.

The narrator says that cooperatives are a good business solution because they are democratic, sustainable and equitable. Also, in Cappanori, Italy, local citizens are working with government and businesses to reduce the quantity of waste going to landfills by finding creative solutions like increasing compost, and reusing and repurposing. Lastly, developing community sharing programs, like bike and car shares, or even local equipment sharing reduces the production and purpose of extra stuff.

f. Which of the above sources of information was most relevant and useful to your inquiry on sustainability? Explain why, providing examples.

U1L1A6 | The Inquiry Process: A New Model For Sustainability | **TEACHER ANSWER KEY**

overview

In this activity you will ACT on your learning about the inquiry process and sustainability from Activity 3 by analyzing a current initiative to effect societal change in Canada. Finally, you will use your learning to redesign the old sustainability model toward one that better represents the Earth's need for protection.

learning goal

- To identify and understand the steps in the inquiry process.
- To think critically about each stage, particularly with respect to evaluating sources of information.
- To use the inquiry process to investigate the concept of sustainability.
- To determine the key ideas for themes of sustainability.

success criteria

- Analyze a current issue using sustainability criteria co-constructed by the class.
- Create a new (and better!) model of sustainability.

Inquiry Question

- What is the inquiry process, and how can it be used to understand the concept of sustainability?

Task

In this activity you will ACT on your learning about the inquiry process and sustainability from Activity 3 by analyzing a current initiative to effect societal change in Canada. Finally, you will use your learning to redesign the old sustainability model toward one that better represents the Earth's need for protection.

sustainability checklist

Environmental Sustainability needs: Planet

- Healthy and intact ecosystems
- Government policy that puts the environment first
- Educated citizens who put the environment first
- Responsible business that puts the environment first
- A forward-thinking, long-term vision

Economic Sustainability needs: Profit

- A healthy environment
- Partnership between government, industry and communities
- Sustainable communities with a high level of social capital to attract and retain strong businesses
- A wide variety of meaningful employment for people
- Responsible, efficient use of natural resources
- A forward-thinking, long-term vision

Social Sustainability needs: People

- A healthy environment
- Communities with secure and high quality housing, education, health care, food systems to encourage people to invest and engage in the social fabric of their communities
- Communities with a high-level of social capital that allows people to fully participate in the following activities:
 - Cultural—arts, heritage, active citizenship, embrace diversity
 - Political—good governance, democratic engagement, social development
 - Economic—employment, economic development, tourism, infrastructure, agriculture
 - Environmental—protection, conservation, experiences, governance
- A forward-thinking, long-term vision

U1L1A6 | The Inquiry Process: A New Model For Sustainability | TEACHER ANSWER KEY

Part 1: Issue analysis

Read the article titled ‘Every Canadian’s eco-rights need Charter protection.’

If our right to a healthy environment was added to Canada’s Charter of Rights and Freedoms, which of the criteria from the ‘Sustainability Checklist’ would be met by this action?

- 1. Complete the Sustainability Checklist by checking each box that would apply if the government were to make a law to add environmental protection to our Charter. When completing the checklist, try to think about how business and society might function differently as a result. See checklist for highlighted answers.**
- 2. Would making our right to a healthy environment a Charter right be an activity that will improve sustainability in Canada? Explain, providing at least three reasons from the article to support your answer.**

Adding the right to a healthy environment to the Charter would improve sustainability in Canada. It would ensure that companies who are releasing waste into the environment would be required by law to ensure that waste was not harmful to human health (and by extension the environment), similar to the example in South America. Citizens impacted by pollution would have the legal right to sue the government and the business if was evident that laws were not followed. In addition, governments would be legally responsible for ensuring that drinking water was safe to avoid tragedies like Walkerton and Attawapiskat, and not take 12 years to make change in this area. If companies were legally responsible for dealing with their waste, they may start charging the true price of producing products as well, which could reduce the demand for unsustainable products.

Part 2: A new model for sustainability

Use your learning over the last week to design a new model for sustainability. Remember, the current models (from the United Nations and the three-sphere model) are not working effectively in their current states. How could you rework (or completely redesign) it to help address your new learning reflected in the Sustainability checklist? Feel free to change:

- The size and shape of all or some of the spheres
- The number of themes they address
- Which themes you think are important
- How the spheres interact with each other
- Anything else that occurs to you!

Evaluation (for use in any Canadian and World Studies geography course)

Criteria	Level 4	Level 3	Level 2	Level 1
<p>Knowledge A1. Geographic Inquiry: use the geographic inquiry process and the concepts of geographic thinking when investigating issues relating to Canadian geography</p>	To a high degree	To a considerable degree	To a moderate degree	To a limited degree
<p>Did I complete the inquiry process on sustainability? Did my work demonstrate understanding of the five steps of this inquiry process? Does my model of sustainability reflect understanding of the factors that contribute to sustainability?</p>				
<p>Thinking A1. Geographic Inquiry: use the geographic inquiry process and the concepts of geographic thinking when investigating issues relating to Canadian geography</p>	To a high degree	To a considerable degree	To a moderate degree	To a limited degree
<p>Did I demonstrate thinking skills when applying the checklist to the issue of environmental protection in the Charter? Does my new model of sustainability reflect thinking on the topic of sustainability?</p>				
<p>Application A1. Geographic Inquiry: use the geographic inquiry process and the concepts of geographic thinking when investigating issues relating to Canadian geography</p>	To a high degree	To a considerable degree	To a moderate degree	To a limited degree
<p>Did I support my decision on the sustainability of enshrining rights to a healthy environment in the Charter with three relevant reasons using evidence from the checklist and the article?</p>				