Is It Sustainable?

OVERVIEW

Students define and discuss sustainability and its 3 key components: the economy, the environment, and society. Students brainstorm, analyze, and write about the sustainability of a variety of actions taken by individuals, businesses, and governments, using a Venn diagram to help organize the process.

INQUIRY/CRITICAL THINKING QUESTIONS

- What does "sustainability" mean and how does it apply to human activity?
- How is the sustainability of an individual, business, or government activity determined?
- How can we balance the needs of people, protect the environment, and have a vibrant and equitable economy?
- How can an activity be made more sustainable?

OBJECTIVES

Students will:

- Define sustainability and its 3 key components: the economy, the environment, and society
- Identify and describe a range of activities undertaken by individuals, businesses, and governments (e.g. foods they eat, transportation they use, products they buy, services provided, laws passed, etc.)
- Determine the sustainability of these activities based on a set of criteria that includes impacts on the economy, the environment, and society
- Represent their findings using a Venn diagram
- Analyze if and how an unsustainable activity can be altered to adhere to the 3 components of sustainability

TIME REQUIRED: 1 hour

KEY ISSUES/CONCEPTS

- **Sustainability**
- **Three components of sustainability: economy, environment, and society**

SUBJECT AREAS

- **Social Studies** (World History, World Cultures, Geography, Economics, Global Studies)
- **Science** (Life, Environmental)

NATIONAL STANDARDS CONSISTENCY

- **NCSS: 1, 3, 4, 5, 6, 7, 8, 9**
- **NSES: B, C, E, F**

GRADE LEVEL: 7–12

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FTF Related Reading

- Intermediate: Chapter 1 from *Global Issues and Sustainable Solutions*
- Advanced: Unit 1, Chapter 2 from *It's All Connected*

Materials/Preparation

- Overhead: *Components of Sustainability*
- 3 different colored sticky notes, 2"x2", enough for each student to have 1 sticky note of each color
- Draw a Venn diagram (like the one in the *Components of Sustainability* overhead) on a large sheet of butcher paper (or project the overhead onto a whiteboard)

Activity

Introduction

1. Ask the class what they think sustainability means. Have them first think quietly for a minute. Then have them pair up with a partner and discuss what they think sustainability means. Have them share their answers with the class. As they share, write down their ideas on the board or overhead. Ideally they will construct a definition that is close to this: Sustainability means meeting present needs without compromising the ability of future generations to meet their own needs. The meaning of this might be explored further, with "needs" or "needs of the present" defined more clearly by students. Have them brainstorm some needs and then discuss the potential conflicts that inevitably arise between needs (e.g. having affordable clothing versus livable wages for workers, or having clean air versus using a car as transportation).
2. Define the 3 components of sustainability using the overhead *Components of Sustainability*. Explain that in determining whether an action or product/good/service is sustainable, many people who study sustainability take into account 3 key elements: the environment, the economy, and society/equity. In order to determine whether or not something is sustainable, the activity being evaluated would be assessed in relation to each of these principles, or "standards of sustainability". This assessment reveals how the action or item impacts the economy, the environment, and society, in either negative, positive, or neutral ways. You may need to define economy, environment, and society. Do this using the same think, pair, share method used to define sustainability.
3. Using the Venn diagram (on the butcher paper or projected on the whiteboard) explain that its purpose is to demonstrate that issues overlap and share common traits.

Steps

1. Explain that they will list and analyze the sustainability of several different activities, products, and actions from the categories of: individual activities (e.g. eating breakfast, driving to school, attending school, and playing guitar), specific business products or services (e.g. clothes, housing, computers, restaurants) and specific government actions (e.g. passing laws and

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regulations, provision of services such as utilities, trash, etc.).

2. Before breaking them into groups, choose 1 activity (such as driving to school) and walk through an analysis of the activity with the whole class, asking if it is sustainable using the 3 "components of sustainability" (Economics, Environment, and Society) as a guide. Questions to ask about the activity include:

Sustainability:

- Is the activity sustainable today?
- Can it be done without causing damage in the 3 areas (economics, environment, and society?)
- Can this activity be done so that people in the future will have the same opportunities to do this activity as people today?

Environment:

- How many resources does the activity use?
- Does the activity cause damage to plants or animals?
- Is biodiversity protected?
- Does it cause air pollution, water pollution, or soil erosion?
- Does it use resources at a rate that allows the resource to be renewed or regenerated?
- What happens to the waste created by the activity?
- Does the activity generate excessive waste?

Society:

- Does it contribute to people's quality of life?
- How does it affect culture(s)?
- Are individuals and communities involved in making decisions about the activity, and is the decision-making process fair and democratic?
- Is it an equitable activity; does it offer more options and opportunities to certain groups of people than others?

Economy:

- What is the economic impact of the activity?
- Does it create meaningful and satisfying work for individuals?
- Does it contribute to a community's economic development?
- Does the activity rely on products or services that have negative effects on the environment or society?
- Do some people benefit economically from this activity at the expense of others?
- Will this activity contribute to the conservation of natural resources?

3. Arrange students in groups of 3 and assign each group 1 category: individual activities, business products and services, or government actions.
4. Have them create a brainstorm list of activities that fall within their assigned category.
5. From their brainstorm list, have students choose 2 activities from their list and transfer these to individual color-coded sticky notes (use different color sticky notes for each category, such as blue for individual activities, yellow for business activities, and green for government activities).
6. Have students place their sticky notes on the Venn Diagram in the area they think the activity best fits, depending on whether the activity is economically, environmentally, and/or socially sustainable.

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7. Have each group explain to the class how they decided on the placement, giving concrete examples and evidence to support their decision. Encourage each member of the group to participate in the discussion and, if time permits, answer questions from the class.
8. Conclude with the following reflection questions.

Assessment Reflection Questions

For Intermediate and Advanced Students

- If someone asked you what sustainability meant, how would you respond?
- Explain whether it is easy or hard to decide whether an activity is sustainable.
- Can everything we do be measured against the standards of sustainability? What are some examples of activities that would be especially difficult to measure and especially easy to measure?
- Can something that is unsustainable be altered to become more sustainable?
- Choose an unsustainable activity from the Venn Diagram and explain how it could be made more sustainable.

For Advanced Students

- Why do you think people use the standards of sustainability to assess human activities? How and where could this process be useful?
- If you were a business owner or a government decision-maker, what would you think about sustainability?
- Ask whose needs should be met when there are trade-offs involved (e.g. between economic and environmental priorities) and how these contradictions can be resolved. This discussion will underscore the idea that working toward sustainability is a balancing act that requires long-term creative thinking and the ability to compromise and see through the eyes of others. Issues of choice and responsibility are also highlighted – students will learn that they have the ability to make choices that bring about positive change, and understand that their choices (e.g. whether or not to eat fast food or buy a brand of clothing that is manufactured in sweatshops) have concrete economic, environmental, and social impacts, even if these impacts are out of sight and felt far away.
- Discuss the difference between "economic development" and "economic growth" and the relationship between economic growth and consumption. What is the role of economic growth in fostering sustainable development?

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Does economic development help nations focus more on conserving their resources or does it contribute to over-consumption? In some cases, economic development includes commitments to eradicating poverty and changing unsustainable patterns of consumption.

Technology Connection

- Compare the levels of sustainability of different nations by downloading the International Institute for Sustainable Development's "Dashboard of Sustainability." The Dashboard is a unique on-line tool that uses a vehicle's instrument panel to represent country-specific assessments of economic, environmental, social, and institutional performance toward (or away from) sustainability. Download at http://www.iisd.org/cgsdi/intro_dashboard.htm.

Action Projects

- Visit **www.facingthefuture.org,** click on **Take Action**, and then **Fast Facts Quick Actions** for sustainability information and action opportunities.

- Have your students take the **Facing the Future Pledge** to help create a sustainable world. Pledge form is on page 22 or can be downloaded at **www.facingthefuture.org.** Post the pledges in the classroom and have students track and then report later in the year how they are doing on their pledge.

Additional Resources

Films

- *Ecological Design: Inventing the Future,* Brian Danitz and Chris Zelov, 1994, 60 minutes. What do flying bicycles, Rocky Mountain jungles, "living machines", and recyclable homes with their own "metabolism" all have in common? They are unique, inexpensive solutions to the design dilemma of sustainable living and are all featured in this film.

- *Visions of Utopia: Experiments in Sustainable Culture,* Geoph Kozeny, 2002, 94 minutes. This documentary looks at different ways people are bringing more community into their lives and their work.

- *Ancient Futures: Learning from Ladakh,* The International Society for Ecology & Culture, 1993, 59 minutes. **www.isec.org.uk** A documentary video on the changes that Western development brought to the high mountain city of Ladakh in northern India. Ladakh, a culture of Tibetan Buddhism and sustainable agricultural practices, struggled with the coming of television, drugs, consumerism, and industry.

Websites

- **www.iisd.org** - The International Institute for Sustainable Development (IISD) engages decision-makers in government, business, NGOs and other sectors to advance policies that are beneficial to the global economy, environment, and social well-being.

- **www.naturalstep.org** - A non-profit international organization working to build an ecologically and economically sustainable society through education, scientific research, and services for business and government.

Lesson 6 Overhead:
Components of Sustainability