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Engaging Students Through Global Issues: 2nd Edition, Activity-Based Lessons and Action Projects

Facing the Future, Western Washington University

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ENGAGING STUDENTS THROUGH GLOBAL ISSUES

Second Edition



**ACTIVITY-BASED LESSONS
AND ACTION PROJECTS**



**ENGAGING STUDENTS
THROUGH GLOBAL ISSUES**
SECOND EDITION

**ACTIVITY-BASED LESSONS
AND ACTION PROJECTS**

Facing  the Future

Engaging Students Through Global Issues

Second Edition

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Facing the Future is a program of Western Washington University. Facing the Future's mission is to create tools for educators that equip and motivate students to develop critical thinking skills, build global awareness, and engage in positive solutions for a sustainable future.

Facing the Future develops and delivers standards-based hands-on lessons, student texts, curriculum units, and professional development opportunities for educators. Facing the Future curriculum is in use in all 50 U.S. states and over 140 countries by teachers and students in grades K-12, in post-secondary education, and across multiple subject areas. Facing the Future reaches over 1.5 million students through its programming.

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The Facing the Future Program

Western Washington University
516 High Street, MS-9102
Bellingham, WA 98225
www.facingthefuture.org

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THROUGH GLOBAL ISSUES**
SECOND EDITION

Facing  Future

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Engaging Students Through Global Issues, Second Edition is a collection of forty activities designed to help participants develop a deeper understanding of issues that involve the interconnectedness of environment, society, and economy. Often these issues are referred to as “sustainability” issues. Users familiar with *Engaging Students Through Global Issues* (ESTGI) will notice a number of improvements in this second edition.

Most importantly, this edition has been reformatted to make it useable in a wide range of formal or informal settings such as environmental learning centers, after-school programs, homeschool settings, and adult learning contexts. Activities are no longer formatted as activity plans; however, K-12 teachers will recognize that each activity can easily be used in a classroom setting. Many of the activities include reflective questions along with writing and critical thinking extensions.

Here are the other major changes in this edition:

1. The activities have been streamlined. Any material that is not directly related to the activities has been removed.
2. Activities have been organized alphabetically, and brief descriptions are provided in the table of contents. All activities have been reformatted to make them easier to read and implement.
3. Our understanding of sustainability issues continues to grow and evolve; therefore, the activities in ESTGI have been updated to reflect current scientific research.
4. The readability and vocabulary of student materials have been adjusted to better meet the learning needs of English-Language Learners (ELL), adult learners, and individuals who may or may not have a deep conceptual understanding of sustainability or systems thinking.

How to Use *Engaging Students Through Global Issues, Second Edition*

This new edition of ESTGI includes forty alphabetized activities. Complete directions for implementation are included in each activity and, where applicable, activities include handouts, cards, and any additional materials required. Several of the activities include suggestions for using the Sides Debate. This activity is useful to set the context for other activities or can be used on its own.

The following information is provided for each activity:

- ▶ **Overview**
- ▶ **Learning outcomes**
- ▶ **Estimated time required**
- ▶ **Inquiry questions**
- ▶ **A list of any specialized vocabulary introduced in the activity**
- ▶ **A description of materials needed**
- ▶ **Step-by-step instructions for implementing the activity**
- ▶ **Reflection topics** (*Going Deeper: Critical Considerations*)
- ▶ **Writing Connection** (*where applicable*)
- ▶ **Further Resources** (*where applicable*)
- ▶ **Handouts and supplementary materials** (*where applicable*)

SUSTAINABILITY BIG IDEAS

The activities in the second edition of ESTGI are organized around **eight sustainability big ideas** (Nolet, 2016). High-quality education about sustainability helps learners investigate the meaning and implications of these ideas and incorporate these ideas into their own thinking, problem solving, and decision-making. When learners dig deeper into the meaning and implications of a sustainability big idea, they are better able to acquire new knowledge and skills and apply that knowledge and those skills in new situations. The eight sustainability big ideas that frame the activities in ESTGI are: *Connecting with Nature*, *Equity and Justice*, *Health and Resiliency*, *Interconnectedness*, *Local to Global*, *Peace and Collaboration*, *Respect for Limits*, and *Universal Responsibility*. Each of these big ideas is described below.

Connecting with Nature

This big idea involves the way humans interact with the natural world. At the core of this big idea are the notions that nature represents a significant source of expertise and humans have much to learn from the billions of years of evolution of the Earth's living systems. For example, biomimicry refers to the practice of creating designs and processes that are fashioned after natural materials and systems. Similarly, new scientific approaches that combine indigenous knowledge and western scientific methods have emerged in recent years. Connecting with nature also involves developing an affinity for and an understanding of nature that disrupts dominant discourses such as "nature is something that needs to be conquered," "nature is an unlimited store of riches and resources," and "nature is an amusement park and playground." Instead, education for sustainability promotes a more intimate

response to nature. For example, E. O. Wilson used the term "biophilia" to refer to the innate emotional affiliation that humans have with other living organisms. This perspective can lead to a deep respect for nature in all of its forms, as well as a curiosity about the ways that natural systems operate. This perspective also can lead to a desire for a more direct personal engagement with the natural world. Education aimed at helping learners develop this connection can take place anywhere and does not need to entail an expedition to pristine wilderness. In fact, at the core of this big idea is the understanding that nature is everywhere and that each of us has direct access to nature each time we take a breath, look at the sky, or feel the sun's warmth on our skin.

Equity and Justice

Equity and Justice refers to equitable access to opportunities and resources, as well as just distribution of the impacts of consequences of unsustainability. Attention to equity and justice leads to a consideration of a number of issues, including various dimensions of privilege distinctions between needs and wants, and consideration of interspecies equity. This big idea includes a number of related and overlapping ideas including: social justice, economic justice, environmental justice, gender equity, food justice, climate equity, and intergenerational equity. Intergenerational equity refers to the rights of future generations to have access to adequate resources and opportunities necessary to meet their needs. The ability of future generations to meet their needs might be jeopardized if resources such as water and arable lands are used up by the current generation or if the impacts

of current human activities result in a compromised climate system.

Health and Resiliency

Education for sustainability is centrally concerned with the health and well-being of individuals and the various systems upon which they depend. Health can involve our individual habits and lifestyle choices or can involve issues that have broader, societal impacts such as hunger, water-borne illnesses, drug and alcohol abuse, and a wide range of environmentally related health conditions caused by poor air quality, climate change, and agricultural and industrial practices that damage the environment.

Resiliency refers to the capacity of a system to deal with change but also to continue to function and develop. Resilience often refers to interwoven systems of humans and nature such as communities and ecosystems, but the term also has been used extensively to refer to the capacity of individuals, particularly children, to bounce back from hardship or trauma. Both of these applications of the idea of resiliency are pertinent in the context of education for sustainability.

The big idea of health and resiliency provides learners a context for investigating characteristics of healthy, thriving systems. When learners are encouraged to see change as a natural process in complicated systems, they are better able to understand and embrace change as a positive element in their own lives. In turn, they can be encouraged to investigate the variables that contribute to their own resiliency and adaptability to life events.

Interconnectedness

Interconnectedness refers to the manner in which a group of objects interacts with one another to form a complex whole that operates as a system. The idea of interconnectedness frequently is associated with sustainability, particularly in reference to the manner in which environmental, societal, and economic systems are inextricably linked. Interconnectedness also can refer to phenomena that might be less readily thought of as systems: for example, ideas, people, communities, issues, and solutions also can be interconnected. Many people find it difficult to understand very large-scale, complexly-interconnected systems such as those associated with climate change, biodiversity, or globalized economic systems. Education for sustainability provides opportunities for learners to engage with complex, interconnected phenomena and to embrace the uncertainty and ambiguity that arise from our innate inability to comprehend fully large interconnected systems. The primary tool for investigating interconnectedness is systems thinking, which is a strategy for representing complex interdependences and interrelationships. Systems thinking looks at the way systems behave and change over time and investigates the various feedback loops and forces that affect interconnected processes.



Local to Global

The big idea *Local to Global* relates to the interdependent nature of global political, economic, and social systems and the ways in which our local actions and decisions are inextricably connected to a broader global context. The term **glocal** is sometimes used to capture this sense of interdependence and simultaneity between local and global concerns. This big idea also involves seeing humans as citizens of the world with shared values and goals that transcend culture, religion, and national identities. A global ethic is based on a respect for human rights and self-determination that transcends specific local, national, or regional agendas. This perspective involves an openness toward divergent cultural experiences and diverse ways of knowing and experiencing. Other aspects of this big idea pertain to the global nature of information, media, and the exchange of ideas. Global markets and globalized consumerism can, on one hand, cause an acceleration of cultural contamination in which local wisdom and culture are displaced by a mass-marketed corporate common denominator of products, images, and ideas. On the other hand, social media and mobile technologies create new ways for individuals to share and amplify highly personalized and very local concerns with a global community.

Peace and Collaboration

Along with our basic needs for food, water, and shelter, the most fundamental human need is for peace and security. Unfortunately, one of humanity's most persistent challenges is to help people learn how to get along. Education for a sustainability worldview must help learners develop the knowledge, values, skills, and attitudes associated with living together peacefully. The goal of this big idea is for all

people to perceive the needs of others to be as important their own.

Peace involves not only human interactions with each other but also human interactions with the planet. As the complexity of human-planet interconnectedness becomes better understood, it is becoming evident that the factors that contribute to peace (e.g., social justice, fair distribution of power and resources, equitable economic opportunity, equal protection, and impartial implementation of laws) also contribute to the health and preservation of natural systems and that the variables associated with violence also have a deleterious effect on the environment.



Respect for Limits

The term **limits** refers to the finite capacity of the Earth to supply its inhabitants with the things they need for survival, such as clean air, fresh water, food, and the ability to recycle waste and preserve the health of the planet's biodiversity. When people move from the perception of the Earth as an unlimited store of resources to a perception of Earth's resources as finite, we begin to think differently about our relationships with others alive today, our responsibility to future generations, our relationship with

other species, and our own needs and wants. At the same time, the concept of limits and the broader idea of respect for limits are potentially troublesome because they reflect a fundamentally different way of thinking about our own behaviors and beliefs. The idea of respect for limits also runs counter to the dominant economic models of most of the world, which are based on the assumptions of unlimited capacity and unlimited growth. A “no respect for limits” model sees consumption as a social responsibility, if not a patriotic duty. Education on sustainability helps learners develop new ways of seeing the world and new strategies for analyzing their own consumption habits to make them more in line with the finite limits of the natural world.

Universal Responsibility

Education for sustainability aims to help learners take personal responsibility for the consequences of their own decisions and behaviors while at the same time develop an understanding of the broader responsibility each of us has to promote the creation of a safe and just space for

all forever. While each of us has universal human rights, we also have universal human responsibilities. Those responsibilities include the expectation that we each treat other humans with respect and dignity, refrain from taking what was not freely given (including not taking from future generations), and avoid harming the natural systems upon which humans and other species depend for their survival. This accountability for our actions simply means treating others the way you want to be treated.

Universal responsibility is not simply a matter of refraining from doing harm. It also involves active and collaborative engagement to find positive solutions to sustainability-related challenges. Direct engagement with sustainability-related issues can provide learners opportunities to develop a sense of agency, efficacy, and hopefulness. Education for sustainability involving inquiry-based practices can help learners clarify their own roles and responsibilities with respect to sustainability-related issues and then develop efficacy and agency to act on those responsibilities.



ACTIVITIES OVERVIEW

1. Are You Buying This?

Participants work in groups to create and present mock television commercials for products linked to unsustainable or unhealthy behavior. Participants first present the commercial as it would typically be seen on television, and then present it again incorporating the product's negative impacts. An activity extension has the participants create a commercial advertising a new product or variation of their product that would mitigate the negative impacts.

2. Bears in the Air

Through a game in which an object is tossed as quickly as possible around a circle, participants experience the limits of success, redesign their "tossing system" to meet their goal, and begin to identify assumptions that drive behavior.

3. Biodiversity Connections

Participants simulate biodiversity within an ecosystem by assuming the identities of resident plant and animal species in a forest stream ecosystem. Participants investigate the functions of plant and animal species in the ecosystem, discover their interdependent relationships, and consider the importance of preserving biodiversity in nature.

4. Creating Our Future

Participants will learn how to create a just and humane world for present and future generations. Help participants identify and plan what they want their future to look like. Using an action-planning model, participants visualize their desired future, identify objectives, develop a plan to address local and global issues, and implement their vision through action and service learning.

5. Deep Space 3000

Use this collaborative activity to help participants envision and create a sustainable environment through the design of a "closed-system" spaceship that will be in outer space for 3,000 years, and then bring healthy and happy future generations back to Earth.

6. Every Drop Counts

A series of water-related activities beginning with a water trivia game and a short demonstration of how much of the Earth's water is available for human and other species' needs. The series includes a "water walk" and a personal water-use audit.

7. Everyone Does Better When Women Do Better

Participants enact the roles of citizens and government representatives from various countries at a "town meeting" forum. Citizens address their local government representative with concerns about the status of women and girls in their country and potential solutions for concerns raised. With input from the citizens, the leaders prioritize the concerns voiced at the meeting and decide on the most effective way to take action to improve the situation in each of the countries.

8. Farming for the Future

Through a simulation activity, participants experience the challenges, decisions, choices, and impacts that subsistence farmers in the developing world face. In "village" groups, participants decide which crops they will plant over two seasons, during which time there are randomly assigned dry and wet years.

9. Fishing for the Future

Through a fishing simulation, participants model several consecutive seasons of a fishery and explore how technology, population growth, and sustainable practices impact fish catch and fisheries management. As the participants progress through the fishing seasons, they will likely overfish their oceans and will have to migrate to other oceans to meet their basic needs.

10. From Issue to Opportunity

Help participants understand and define global issues and their interconnections. Participants develop criteria for determining what makes an issue global in scope, brainstorm and list global issues, group and prioritize the issues into categories to highlight interconnections, and explore solutions.

11. Fueling the Future

Participants compare energy use and CO² emissions by sector in the United States and China (and optionally in another country). They research and discuss energy impacts and sustainable energy solutions, write a resolution addressing energy use, and present their resolutions at a "World Energy Summit".

12. Global Issue Trivia

Use this trivia game as an introduction to the study of critical global issues. Participants collaborate in teams to answer questions about world population, economics, and environmental issues.

13. Is It Sustainable?

Use this trivia game as an introduction to the study of critical global issues. Participants collaborate in teams to answer questions about world population, economics, and environmental issues.

14. Let Them Eat Cake

This activity illustrates the inequitable distribution of resources around the world and the interconnectedness of human economic and social activities and resources scarcity by cutting and distributing pieces of cake.

15. Life: The Long and Short of It

Participants compare life expectancy (a common indicator of good health) among several countries and discuss possible explanations for the differences. They also examine the connection between per capita expenditures on healthcare and life expectancy.

16. Livin' the Good Life

Participants develop indicators to measure quality of life and conduct a survey of peers and adults to obtain data for their indicators.

17. Livin' the Good Life Part II

Participants analyze survey data using spreadsheet software and produce charts to demonstrate their results from Part I.

18. Livin' the Good Life Part III

Participants compare their own performance as measured by the quality of life indicators against averages determined by the survey results from Parts I & II.

19. Making Global Connections

Participants demonstrate the interconnectedness of global issues and solutions through a kinesthetic exercise using global issue cards and a ball of yarn.

20. Metaphors for the Future

Participants use metaphors describing different degrees of control we have over our future to explore how worldviews and mental models influence and shape our actions.

21. Microcredit for Sustainable Development

Participants research a developing country and then apply for a \$100 microcredit grant to start a small business as if they were a person living in that country. A business plan and an illustrated poster are presented to a “sustainable development panel of experts” (participants) who determine whether or not the business plan is economically, socially, and environmentally sustainable.

22. Now Hear This

Participants literally see and hear a comparison of an average North American citizen’s and sub-Saharan African citizen’s Ecological Footprint through a demonstration in which popcorn kernels – representing Ecological Footprints – are poured into a metal pan. This demonstration activity can be conducted on its own or as a companion to the other Ecological Footprint activities “Watch Where You Step” and “When the Chips are Down.”

23. Partners for Health

Participants learn about the impact of today’s most urgent global health issues (such as HIV/AIDS, malaria, and tuberculosis) and practical solutions to help address these issues. The activity concludes with an optional writing assignment in which participants research and develop a proposal to address a particular global health issue.

24. Seeking Asylum

Through simulation, participants experience the difficult choices and struggles facing refugees and internally displaced persons (IDPs) when they are forced to leave their homes. Participants learn about the root causes of refugee and IDP crises and the options and obstacles each group faces.

25. Shop Till You Drop?

In this simulation, participants experience how resources are distributed and used by different people based on access to wealth. Participants discuss and work toward personal and structural solutions to address the environmental impacts of resource consumption and to help alleviate poverty.

26. Sides Debate

Participants debate a controversial global issue, standing on opposite sides of the room depending on whether they agree or disagree with a statement provided by the teacher. They debate the issue and can switch sides if participants taking the opposite side convince them. This exercise can be used as a “hook” to introduce several other activities in this collection.

27. Splash But Don’t Crash

This activity helps participants see the effect of populations’ growth rates on the Earth’s carrying capacity through a simulation in which they move water from a container representing births and deaths into another container representing Earth.

28. Systems are Dynamic

Participants experience the dynamic, interconnected, and self-organizing nature of systems through an exercise in which they move around an open space trying to keep an equal distance between themselves and two other people.

29. Take a Step for Equity

Participants are randomly assigned an economic group and then hear poverty and wealth statistics describing their economic group as they step forward in a line. Ultimately, a distance is created between the wealthiest and the poorest illustrating the economic gap between the rich and poor. Participants then brainstorm and discuss ways to alleviate poverty and hunger.

30. Taxes: Choices and Trade-offs

In this federal tax simulation activity, participants representing “special interest groups” discuss, recommend, and lobby for a budget allocation for federal tax spending. Interest groups include military, education, housing, healthcare, Social Security, and the environment. The exercise examines multiple consecutive years in which taxes are lowered and raised.

31. Three Faces of Governance

Participants create a national energy policy via cooperation and negotiation among the three faces of governance: The State (Government), Civic Organizations, and the Private Sector. In groups representing each of these areas, participants work to accomplish their individual policy goals while negotiating and forming coalitions with other groups to strengthen their overall energy policy. Policy proposals are presented, and one plan is selected to become a national energy policy.

32. To Fight or Not to Fight

Participants examine a variety of international and intra-national conflicts through a role-playing activity. They learn to identify the roots of conflict, to separate positions from interests in a conflict, and to mediate a conflict.

33. Toil for Oil

In this oil extraction simulation, participants experience the increasing difficulty of extracting a limited, nonrenewable resource over several years. Participants consider and discuss renewable energy sources.

34. Watch Where You Step

Participants identify the components of an ecological footprint by creating a web diagram of all the resources they use in their everyday lives and the mark or footprint this consumption leaves on the environment. The activity emphasizes the interconnectedness of lifestyle, population, and environmental impacts and focuses on solutions to reduce the ecological footprint.

35. What's Debt Got to Do With It?

Participants model the impact of debt on the social and economic health of developing countries. Working in “very poor country” groups, participants choose how to allocate limited funds to different sectors of their country’s economy. The groups take on loans to help their country develop and experience what happens when their funds are diverted to debt repayment and away from investment.

36. What's in the News?

In this media literacy activity, participants use an “iceberg model” to analyze the global patterns and underlying structural causes that drive events in the news.

37. What's Up with the GDP?

In this economics simulation, participants graph changes in the personal incomes of different community residents and in the community's proportion of the Gross Domestic Product (GDP) following an oil spill. The activity explores the effect of an environmental disaster on the GDP, and the accuracy of GDP as a measurement of a community's overall health.

38. When the Chips are Down

Participants model three patterns of Ecological Footprint growth over four generations, using poker chips to represent Ecological Footprints and maps that they create to represent countries. The activity emphasizes the impact of changes in population growth rates and consumption patterns over relatively few generations, and possible solutions to these impacts.

39. Who are the Nacirema?

Participants read a short story about the body-related rituals of a cultural group called the Nacirema and then use the same literary device employed in the original story to write their own short stories about rituals of the Nacirema. This writing exercise spurs a discussion on cultural awareness, assumptions, and worldviews.

40. Worldwide Mingle

Participants experience what it is like to stereotype and to be stereotyped based solely on brief identity descriptions (labels placed on participants' backs) of people from particular backgrounds. The label identities are related to population, economic status, and the environment.

ACTIVITY SPREADSHEET

Activity	Time	Connecting with Nature	Equity and Justice	Health and Resiliency	Interconnectedness	Local to Global	Peace and Collaboration	Respect for Limits	Universal Responsibility
1	Are You Buying This? 60 mins		●		●				●
2	Bears in the Air 30-40 mins				●		●		
3	Biodiversity Connections 60 mins	●			●			●	
4	Creating Our Future 90 mins	●	●	●	●	●	●	●	●
5	Deep Space 3000 120 mins	●		●	●	●		●	●
6	Every Drop Counts! 60-120 mins				●			●	●
7	Everyone Does Better When Women Do Better 120 mins		●	●	●				
8	Farming for the Future 60 mins	●	●	●	●	●	●	●	●
9	Fishing for the Future 60 mins	●	●	●	●	●	●	●	●
10	From Issue to Opportunity 60 mins	●	●	●	●	●	●	●	●
11	Fueling the Future 120 mins	●		●	●	●	●	●	●
12	Global Issues Trivia 30 mins				●				
13	Is it Sustainable? 60 mins		●	●	●	●		●	●
14	Let Them Eat Cake 60 mins		●		●	●	●	●	●
15	Life: The Long and Short of It 15-30 mins		●	●	●	●			
16	Livin' the Good Life? 180 mins		●	●	●	●			●
17	Livin' the Good Life? Part II 180 mins		●	●	●	●			●
18	Livin' the Good Life? Part III 180 mins		●	●	●	●			●
19	Making Global Connections 60 mins		●		●	●	●		●
20	Metaphors for the Future 60 mins	●	●	●	●	●	●	●	●

Activity	Time	Connecting with Nature	Equity and Justice	Health and Resiliency	Interconnectedness	Local to Global	Peace and Collaboration	Respect for Limits	Universal Responsibility
21	Microcredit for Sustainable Development 120+ mins		●	●	●	●			
22	Now Hear This 5-10 mins	●		●	●	●		●	
23	Partners for Health 60 mins		●	●	●	●	●		●
24	Seeking Asylum 60 mins		●	●	●	●	●		●
25	Shop Til You Drop? 60 mins		●	●	●	●			●
26	Sides Debate 5-10 mins		●		●		●		●
27	Splash but don't Crash 60 mins	●		●				●	●
28	Systems are Dynamic 30 mins	●			●				
29	Take a Step for Equity 15-30 mins		●	●	●				●
30	Taxes: Choices and Trade-offs 60 mins		●						
31	Three Faces of Governance 60 mins		●		●		●		
32	To Fight or Not to Fight 60 mins		●	●	●	●	●	●	●
33	Toil for Oil 60 mins	●		●	●			●	●
34	Watch Where You Step 60 mins	●	●	●	●	●		●	●
35	What's Debt Got to Do With It? 60 mins				●	●			●
36	What's in the News? 10-120 mins		●		●		●		●
37	What's up with the GDP? 60-90 mins		●	●	●	●		●	●
38	When the Chips are Down 90 mins	●	●	●	●	●	●	●	●
39	Who Are the Nacirema? 60 mins	●	●		●		●		
40	Worldview Mingle 30 mins	●	●	●	●	●	●	●	●

Activity 1

Are You Buying This?

Overview

Participants work in groups to create and present mock television commercials for products linked to unsustainable or unhealthy behavior. Participants first present the commercial as it would typically be seen on television, and then present it again incorporating the product's negative impacts. An activity extension has the participants create a commercial advertising a new product or variation of their product that would mitigate the negative impacts.

Big Ideas

- ▶ Equity and Justice
- ▶ Interconnectedness
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Big World, Small Planet*
- ▶ *Exploring Global Issues*

Time

- ▶ 60 minutes

Materials/Preparation

- ▶ **Handout:** *Product and Consequence Cards*, make one double-sided front-to-back copy with "Products" on one side and "Consequences" on the other, and cut into individual cards
- ▶ Blank paper and color/pencils for creating props/signage

Inquiry

- ▶ How does advertising influence consumption?
- ▶ How does advertising shape a society's vision of "the good life"?
- ▶ Who bears responsibility for regulating the marketing and consumption of legal but harmful and/or unsustainable products?

Learning Outcomes

Participants will:

- ▶ Recognize the connection between advertising, consumption choices, and the unstated consequences of those choices
- ▶ Become critical consumers of marketing directed towards them and recognize tactics used by advertisers to influence their behavior
- ▶ Understand the power of advertising in selling U.S. values and ideals to foreign countries and cultures

ACTIVITY

1. (Optional) Do a Sides Debate using the following prompt: "Only ads promoting healthy foods and activities should be allowed during television shows targeting children under the age of eight."
2. Ask the group if they have seen an advertisement recently that made them really want to buy a product. Ask them if they remember how the ad presented the product. Was a celebrity promoting it? Did it feature people doing fun and exciting activities unrelated to the product? Were there attractive models involved? Was a certain image projected to reflect a specific lifestyle?
3. Tell the group that in the first nine months of 2004 alone, companies in the U.S. spent over \$100 billion advertising their products. The average young person views over 40,000 television ads each year, plus thousands more online, in movies, on billboards, and from other outlets.
4. Explain that most ads leave out any negative consequences tied to consuming that product and generally only include information on potential dangers if required to by law (like with some advertising for prescription drugs). Advertisers do not discuss the impact of their products on the environment or unfair labor practices unless the product is being marketed as "eco-friendly" or "socially responsible."
5. Tell the group that they are going to try their talent at creating advertisements for products that are often marketed to U.S. citizens. However, not only will they have to create an ad that makes the product look good; they will also have to create an ad that focuses on the product's less glamorous side.

Steps

1. Break the group into groups of four to five participants.
2. Tell the participants that they are going to get a card with the product they are in charge of advertising. One side of the card has some attractive selling points for the product. The other side has some of the consequences of consuming that product.
3. Tell the participants that in order to effectively sell their product, they have to decide:
 - a. What is the demographic they are selling to? (Whom they think will buy this product)
 - b. What is the advertising technique they will use? A celebrity? Humor? Will using the product make you smarter/sexier/cooler?
4. Tell the participants they have 15-20 minutes to create two commercials that they will act out in front of the group. One commercial will only focus on the attractive side of the product, while the other should only focus on the consequences. Participants should use the same advertising technique for both ads. If they are using supermodels or extreme sports to sell the attractive side of the product, they should use supermodels and extreme sports to sell the consequences as well.
5. Tell the participants that the ads have to be the same length as a regular commercial, so each ad should not be longer than one minute.
6. After the groups put their ads together, have them present both commercials to the group, with the ad selling the attractive side of the product presented first.
7. Bring the group back together for Critical Considerations.

Going Deeper: Critical Considerations

- When you were deciding how to sell your product, why did you choose the advertising techniques you used?
- Do you think these advertising techniques influence what you and your friends purchase?
- If you lived in a far away country and your only knowledge of the U.S. came from watching U.S. commercials, what would you think were the most important values of our society?
- Do you think advertising should be regulated more or less than it is now? How so? What changes would you like to see?
- What could be some of the consequences if everyone in the world were exposed to the same amount of advertising that U.S. citizens are exposed to?
- Who should be most responsible for regulating what we consume – government, companies, or consumers?
- What could be some of the consequences – both positive and negative – if government decided to greatly restrict how much advertising we are exposed to each year?
- How does advertising influence a society's vision of "the good life"?

Writing Connection

Have participants consider a commercial or advertisement they have seen recently. What was the product? What was the brand? What was the marketing technique? What was the demographic the ad was targeting (women, teens, parents, the elderly)?

Instruct the participants to write a paragraph or two identifying how consuming that product could affect global issues such as health, the environment, and poverty.

Further Resources

Film, *Affluenza*, 1997, 56 minutes; and *Escape from Affluenza*, 1998, 56 minutes, John de Graaf, Bullfrog Films. Humorous documentary films on the history and effects of consumption and a growing movement to live simply and consume less. www.bullfrogfilms.com

Book, *Fast Food Nation* (also a documentary film), Eric Schlosser, Perennial, 2002. An exposé of the fast food industry with a large section focusing on how junk food is marketed to youth.

Adbusters Magazine. A not-for-profit, reader-supported magazine concerned about the erosion of the physical and cultural environment by commercial forces. www.adbusters.org

www.commercialalert.org – Focuses on campaigning to limit exposure to advertising and the effects of advertising and commercialism on kids' health.

www.marketingpower.com – The American Marketing Association's website provides information on marketing, including history, best practices, and a code of ethics.

www.coopamerica.org – Co-op America offers practical steps for using your consumer and investor power for social change.



PRODUCT CARDS

(copy on front side)

The Ultra Behemoth Burger

- 4 beef patties, a full half-pound of meat!
- 6 slices of cheese
- 5 strips of smoked bacon
- Incredible low price of \$1.99
- Available 24 hours a day

The Dominator XL SUV

- Over 12 feet long
- 4 wheel drive
- Fits 8 people comfortably
- Includes 6 disc CD player and TV sets in each seat
- Protects your family in case of an accident

Pine Valley Estates

- Magnificent all-wood dream homes
- Located in a quiet wooded area
- Over 4,000 square feet, plus 2 acres of private land
- Only a 30 minute drive from the city center

Super Clean Car Wash Foam

- Keeps your car shiny and new looking
- Protects your paint job from scratches
- Makes every car look expensive

Handi-Lunches

- A complete pre-packaged lunch for kids
- Saves you time preparing food
- Kids love the taste
- Includes healthy meats, cheeses, snacks, and a drink

Mega Cool Jeans

- Stylin'
- Very hip
- Worn by famous people
- Only \$25 a pair

CONSEQUENCE CARDS

(copy on back side)

The Dominator XL SUV

- Global warming caused by fossil fuel pollution contributes to the extinction of species, loss of arable land, and destruction of natural habitats
- Destruction of the ozone layer caused by carbon emissions increases the risk of skin cancer

The Ultra Behemoth Burger

- It takes about 12,000 gallons of water to produce 1 beef patty
- Nearly 59 million U.S. citizens (about 20%) are obese
- Annual healthcare costs for a person with diabetes is about \$13,000 (4 times the cost for a non-diabetic)

Super Clean Car Wash Foam

- Washing your car at home puts hazardous chemicals into streams, rivers, and oceans
- Runoff from car wash soap contaminates fish we eat and kills plants
- Frequent car washing wastes hundreds of gallons of water

Pine Valley Estates

- Over a 5 year period, 6 million acres of farmland in the U.S. were paved over for homes
- About half of the Earth's forests have already been destroyed
- Deforested areas suffer from flooding, mudslides, and lack of biodiversity

Mega Cool Jeans

- Sewn in a sweatshop by 12 year olds who work 16 hour days and are not paid minimum wage
- Workers do not have time to go to school, so they stay poor forever
- Made from non-organic cotton, which is one of the crops most heavily sprayed with toxic chemicals

Handi-Lunches

- Each food item is wrapped in non-recyclable plastic, producing huge amounts of trash that end up in landfills
- In 2001, the U.S. threw away over 250 million tons of garbage into landfills and incinerators

Activity 2

Bears in the Air

Overview

Through a game in which an object is tossed as quickly as possible around a circle, participants experience the limits of success, redesign their “tossing system” to meet their goal, and begin to identify assumptions that drive behavior.

Big Ideas

- ▶ Interconnectedness
- ▶ Peace and Collaboration

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 30 minutes - 1 hour

Materials/Preparation

- ▶ A stuffed bear or other easy and safe-to-throw object
- ▶ Watch with a second hand to time activity
- ▶ Clear an area in the classroom large enough for participants to stand in a circle

Inquiry

- ▶ How do mental models and assumptions keep us from reaching our goals?
- ▶ How can we redesign a system that is not functioning well to achieve our desired outcome?

Learning Outcomes

Participants will:

- ▶ Experience how mental models can limit our success and keep us from reaching our goals
- ▶ Redesign a system to accomplish a shared goal
- ▶ Discuss how this activity models real-world systems and explore possible redesigns of those systems



ACTIVITY

Steps

1. Arrange participants so they are standing shoulder to shoulder in a circle. Stand in the circle with them and show them the stuffed bear or other object.
2. Tell participants they are going to play a game in which they talk the bear around the circle. Tell them there are only two rules to the game: everyone must touch the bear and they must touch it in the same sequence each time.
3. Have everyone hold their hands out in front so they are ready to catch the bear.
4. Gently toss the bear to someone across the circle.
5. Have that person toss the bear to someone else and drop his or her hands after tossing. The last person tosses the bear back to you.
6. Practice once so they are comfortable with the sequence.
7. Now tell them you are going to time the activity to see how fast they can do it. You will need to either time it yourself or designate a student for that job ahead of time.
8. Run the activity and time it. After the first time you run through, tell participants that you are sure they can do it much faster. Run and time the activity a few more times, telling them after each run through that they can do it even faster. Most likely they will be able to do it faster in the beginning just by tossing faster; however, once they reach a certain level of success, they will not get any faster without a system redesign. In fact they may even get slower if they get sloppy and toss the bear outside the circle or drop it in their attempt to go faster. This part of the activity models of the concept of limits to success.
9. If they ask if they can do the activity differently, just repeat that the two rules above.
10. Continue until participants figure out how to redesign the system to achieve the desired goal. There are several redesigns that will accomplish the task much faster, such as standing next to each other and passing the bar along the line or lining their hands up vertically in the correct order and cascading the bear down the vertical line.
11. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- What happened the first few times through? Did you succeed in doing it faster? Why?
- Was there anyone who thought about other ways of doing it but did not speak up? What kept that person from offering a solution?
- Did anyone offer a solution that was ignored? Why was their solution ignored?
- What were the assumptions in the activity, and how did these assumptions limit your ability to achieve your goal (there might have been some assumptions that there are unstated rules about how the activity could be done)?
- What are some examples of real world situations in which people experience the limits to success by doing something harder and faster? What are the assumptions associated with how that system functions, and how could that system be redesigned to achieve a common goal?

Further Resources

Book, *The Lorax* by Dr Seuss, published by Random House in 1971. This children's story about the wise Lorax who warned the Onceler not to cut down all the Truffula trees models several Systems Thinking concepts, including interconnectedness and unintended consequences.

Activity 3

Biodiversity Connections

Overview

Participants simulate biodiversity within an ecosystem by assuming the identities of resident plant and animal species in a forest stream ecosystem. Participants investigate the functions of plant and animal species in the ecosystem, discover their interdependent relationships, and consider the importance of preserving biodiversity in nature.

Big Ideas

- ▶ Connecting with Nature
- ▶ Interconnectedness
- ▶ Respect for Limits

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour



Inquiry

- ▶ What is biodiversity, and why is it important in an ecosystem?
- ▶ What factors threaten biodiversity?
- ▶ What can people do to help protect and conserve the Earth's ecosystems?

Learning Outcomes

Participants will:

- ▶ Identify the functions of plant and animal species in a forest stream ecosystem
- ▶ Explore species interdependency
- ▶ Consider what can be done to help protect biodiversity

Materials/Preparation

- ▶ **Handout:** *Plant/Animal Identity Cards*, copy and cut into 15 cards (one per every two students)

Vocabulary needed:

Ecosystem: A community of plant, animal, and/or other living organism functioning together as a natural system.

Habitat: The environment in which an organism or biological population lives or grows.

Biodiversity: The variety of life in all its forms, levels, and combinations, including ecosystem diversity, species diversity, and genetic diversity.

ACTIVITY

Introduction

1. Tell the group that they are going to do an activity in which they take on the identity of a plant or animal species in a forest stream ecosystem and explore species interdependency.
2. If necessary, go over the vocabulary words.

Steps

1. Brainstorm what a forest stream ecosystem might look like and what plant and animal species might live there (you want general answers such as trees, insects, birds, fish, shrubs, etc.).
2. Arrange participants in pairs. Have each pair randomly draw a *Plant/Animal Identity Card* and tell them that it is their job to figure out how the different plants and animals in the ecosystem function and interact.
3. Have each pair discuss and then answer the first question on their card: "What is your function in this ecosystem?"
4. Give participants about ten minutes to move about the room with their partner and interview other student pairs to investigate what other plant and animal species exist in the ecosystem and how they interact. Have them provide at least two answers to the second and third questions on their cards: "What/Who do you depend on in this ecosystem?" and "What/Who depends on you in this ecosystem?"
5. Call the group to attention. Together, discuss the ecosystem and how it functions. How are the different plant and animal species interacting to ensure each other's survival? As participants share their species and connections, draw or write the ecosystem components on the board and draw lines of connection between the different species.
6. Select a few participants to explain their function within the ecosystem. Have participants share which plant and animal

species they depend on and which plant and animal species depend on them within the ecosystem.

7. Conclude with Critical Considerations.

Going Deeper: Critical Considerations

- Why is biodiversity in an ecosystem important?
- What impact does removing even one species from an ecosystem have on the ecosystem as a whole?
- How might the ecosystem be affected if a new plant or animal species were introduced?
- How do human beings affect an ecosystem? What are some negative and positive effects?
- What is one example of an ecosystem in your community or region?
- What can you do as an individual, and what can be done on a systemic level, to protect and conserve the Earth's ecosystems?



Plant/Animal Identity Cards

COHO SALMON (fish)

What is your function in this ecosystem?

What/Who do you depend on in this ecosystem?

What/Who depends on you in this ecosystem?

SPIKE RUSH (green, grass-like plant growing along shorelines or in shallow water)

What is your function in this ecosystem?

What/Who do you depend on in this ecosystem?

What/Who depends on you in this ecosystem?

COOPER'S HAWK (raptor type bird)

What is your function in this ecosystem?

What/Who do you depend on in this ecosystem?

What/Who depends on you in this ecosystem?

SPOTTED FROG

What is your function in this ecosystem?

What/Who do you depend on in this ecosystem?

What/Who depends on you in this ecosystem?

BLACK BEAR

What is your function in this ecosystem?

What/Who do you depend on in this ecosystem?

What/Who depends on you in this ecosystem?

Activity 4

Creating Our Future

Overview

How do we create a just and humane world for ourselves and for future generations? Help participants identify and plan what they want their future to look like. Using an action-planning model, participants visualize their desired future, identify objectives, develop a plan to address local and global issues, and implement their vision through action and service learning.

Big Ideas

- ▶ Connecting with Nature
- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Global Issues and Sustainability*
- ▶ *Big World, Small Planet*

Time

- ▶ 90 minutes

Inquiry

- ▶ How do we envision and create a world we want for ourselves and for future generations?
- ▶ What unmet needs exist in our local and global communities?
- ▶ How do we identify structural solutions to global issues?
- ▶ How can we work together to plan a course of action?

Learning Outcomes

Participants will:

- ▶ Visualize the future they desire
- ▶ Collaborate with their peers
- ▶ Identify issues they want to address, and identify and prioritize objectives
- ▶ Present their findings

Materials/Preparation

- ▶ **Handout:** *Action Planning Worksheet*, one per group of students
- ▶ Butcher paper or white boards for each group
- ▶ Markers (regular or dry erase), one set per group

ACTIVITY

Introduction

1. Ask participants what they think the world will look like twenty years from now. Have two or three participants briefly describe the future as if it were a picture (this may be dystopian).
2. Now ask them what they want the world to look like in twenty years for themselves and for future generations (this is a good place, if needed, to define the difference in *think* and *want*). Ask, "If this is the future we want, how do we make it happen?" Ask them to describe what they will see, hear, smell, taste, and touch. Explain that in order to create a world we want for our future generations and ourselves, we need first to envision what we want and then create a plan of action. This activity provides a model for doing just that.

Steps

1. Explain that, in order to help focus their vision of the future, it is helpful to think about specific quality-of-life issues that are important to them. Brainstorm and list quality-of-life issues (these may include some or all of the following):

Food	Recreation
Transportation	Energy
Elder Care	Security
Water	Spirituality/Religion
Education	Employment
Childcare	Healthcare
Housing	Entertainment/Art
Environment	
2. Have participants do a five-minute free-write describing their vision of the world in twenty years, addressing some or all of the quality-of-life issues identified in the brainstorming exercise. Give them the prompt: "In my vision of the future..." Encourage participants to focus on what they want the future to be like, not what they do not want it to be like. For example, rather than saying, "In the future, people will not use polluting fossil fuels," say, "In the future, we will use clean, renewable energy sources." Tell them to provide as many details as possible in describing their vision. Have participants read aloud one or two sentences from their free-writes or have them share in pairs.
3. Explain that they will develop a plan of action to address one of the quality-of-life issues on the list (such as food, water, healthcare, the environment, etc.) using a model called an "Action Planning Sequence." Through this process, they will assess how the issue affects both local and global communities and develop a plan to address the structural causes of the issue.
4. Give each student a copy of the handout, *Action Planning Worksheet*, and show the overhead of the same worksheet. Explain each step of the action planning process to the participants, using the overhead as a guide.
5. Divide the participants into groups of three or four Assign or have each group choose a topic from the list of issues. Give each group a piece of butcher paper and pens.
6. Give them about 20-30 minutes to follow the steps outlined in the handout. They should begin by discussing and agreeing upon a shared vision. Circulate the room and assist participants as they are working.
7. After they complete the handout, have each group transfer the information to a piece of butcher paper or on the whiteboard. Encourage them to include graphs, pictures, quotes, etc.
8. Have each small group present their displays to the entire larger group.
9. Bring the group back together for critical reflection.

Going Deeper: Critical Considerations

- How does describing what you want your future to look like help you realize it? How and why is this an important step in creating a world we want?
- Did the action sequence process work? How could the process be improved?
- How well did you work together in your groups? Did everyone participate? How did you make decisions?
- What will you do next to implement your plan?
- In what other circumstances could you use this action planning process?
- Once you have taken action on an issue, it changes the dynamics of the issue by producing unintended consequences or by revealing new solutions. What can you do next to address this issue and work toward your vision?

Writing Connection

Have participants write a letter to an influential entity (government agency, newspaper, etc.) explaining their vision and outlining the steps to realizing it.

Further Resources

Film, *Pay it Forward*, Mimi Leder, 2000, 123 minutes. Feature film about a young boy who attempts to make the world a better place.

Book, *The Lemming Dilemma: Living with Purpose, Leading with Vision*, David Hutchens, Pegasus Communications, 2000. A charming story about a lemming's quest for meaning, aspiration, and value.

Book, *The Complete Guide to Service Learning*, Cathryn Berger Kaye. 2004. A wealth of activities, ideas, and resources to encourage service learning in K-12 and Higher Education.



CREATING OUR FUTURE

Action Planning Worksheet Page 1

Group members: _____

Issue we are focusing on: _____

Scope of the Issue

Who or what is currently being affected by this issue?

How does this issue affect our local community?

How does this issue affect our global community?

Visualize Desired Outcome

Brainstorm, discuss, and write a summary of the desired outcome for our specific issue:

Gather Companions

What is already being done to effect change on this issue? Brainstorm, discuss, and list the people and organizations that share a similar vision and can help us meet our vision:

CREATING OUR FUTURE

Action Planning Worksheet Page 2

Identify and Prioritize

What are the steps or parts that will lead to our vision? What does the vision look like? For example, if the vision is “full access to health care for all people,” then the objectives might be more doctors per person, more clinics in poor neighborhoods, or more reproductive health care. Discuss, list, and prioritize two or three objectives that will lead to our vision.

What are some specific things that will need to occur in order to realize our vision and to be sure that we are addressing structural solutions to the issue?

Identify Obstacles

Discuss who or what might get in the way of realizing our vision. List a few obstacles and include ways we might address them:

Identify Resources

What resources will we need to get our vision going? Is it information, money, time? How will we use these resources? Discuss and list information, resources, and other help we will need to realize our vision:

Implement Action Plan and Follow Up

What steps will we take to start working on our vision? Who will be responsible for implementing each step? List the steps we will take to start implementing our vision:

Keep the vision in mind and keep telling the story of the future you desire!

Activity 5

Deep Space 3000

Overview

Use this collaborative activity to help participants envision and create a sustainable environment through the design of a “closed-system” spaceship that will be in outer space for 3,000 years, and then bring healthy and happy future generations back to Earth.

Big Ideas

- ▶ Connecting with Nature
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Respect for Limits
- ▶ Universal Responsibility

Time

- ▶ 2 hours



Inquiry

- ▶ What is a “closed-system” and what are the ramifications of living in a closed versus open system?
- ▶ How can we create a sustainable environment capable of supporting everyone’s physical, social, cultural, and political needs over an extended period of time?

Learning Outcomes

Participants will:

- ▶ Identify the components necessary for human survival, how they are connected, and how to meet those needs in a closed environment
- ▶ Draw and list components of a sustainable “closed-system” spaceship that meets human needs
- ▶ Discuss the connection and application of their spaceship design to planet Earth
- ▶ Design and write about sustainable solutions

Materials/Preparation

- ▶ **Handout:** *Deep Space 3000*, one per group
- ▶ Butcher paper, one sheet per group, or multiple white boards
- ▶ Colored markers (regular or dry erase), five to six per group

ACTIVITY

Steps

1. Read the following scenario to the participants: “Your group is on a mission with the United Nations. The Earth’s ecosystems have been severely damaged and are unable to support life. Your task is to outfit a spaceship that will be away for 3,000 years, and will bring future generations back to Earth alive, healthy, and happy. Assume that on its initial departure from Earth, the spaceship will have a crew of about 1,000 people. The ship will have an orbit around the sun similar to that of Earth’s orbit. It will have big windows, and can be as large as you want it to be, within reason. You may bring items with you when your ship leaves Earth, but you may not get any more items once you leave. Once you depart, the ship is a ‘closed-system,’ which means that you cannot use anything from outside the ship – except for solar energy – nor can you remove anything from the ship except heat. You are allowed to use only today’s technology, but should assume that the technical construction of the ship is already figured out.”
2. Explain the following directions to the group:
 - You will need to address the following in your spaceship design: oxygen, food, fresh water, energy, waste disposal, governance, entertainment, and quality of life (Note: you may want to list these on a white board).
 - Think about the kinds of products, services, and expertise you want to bring.
 - There are no wrong answers, but you will have to explain why you chose what you did and how it meets the needs of the community. Remember, it is a 3,000-year voyage and you are responsible for your own well-being and that of hundreds of generations after you.
3. Arrange participants in groups of four or five, and give each group one handout, *Deep Space 3000*, one sheet of butcher paper, and a set of pens (alternatively, ample whiteboard space can be used).
4. Using the handout, have each group begin by brainstorming and listing the material and non-material needs of the crew and what is necessary to meet those needs

Prompts: How do you ensure that you can grow food for 3,000 years? What are the difficulties in producing different products such as vegetables, exotic fruits, meat, etc.? How will you provide fresh air and drinking water? What form of energy will produce the least waste and is both nontoxic and renewable? How are you handling waste? Is it possible to find ways to use “waste” for other purposes? How will you ensure the crew’s physical and mental health? What kinds of social interaction will you have? How will you entertain yourselves? What type of governance and community rules are necessary to maintain order and solve problems together?
5. After groups have completed their brainstorm and decided on the essential pieces, have them draw a picture of the spaceship, list the contents, show how the various parts relate to each other, and list any rules, community agreements, governance systems, and other non-material aspects they decide on.
6. When the design process is complete, have each small group report to the entire larger on their spaceship. Ask them to explain what they identified as essential needs, how they designed the ship to meet those needs, and what issues they might encounter in the future (such as population growth, education, old age, death and birth, etc.).
7. Conclude with the following Critical Considerations.

Activity 5

Going Deeper: Critical Considerations

• What did other groups provide for that your group neglected?

- What need was most difficult to meet?
- What characteristics of the Earth let us know that it is also a closed system, like the spaceship (e.g., finite amounts of land, water, and other resources, and a limited ability to absorb wastes)?
- How is the Earth different from your spaceship (e.g., Earth has more species diversity, it is larger, etc.)?
- How well did the group process work?
- How did you make decisions (majority-rule, consensus, etc.)? Were you able to come up with creative solutions?
- Did everyone participate?
- What can we learn about decision-making processes from this activity?
- Why do we sometimes act as though the Earth is not a closed system (such as dumping wastes into oceans, harvesting fish or forests more quickly than they can renew, and continuing exponential population growth)?
- What are the ultimate consequences of such actions in a closed system?
- What kinds of rules or government did you decide on? How did you deal with human rights?
- Would it be acceptable if half of the population did most of the work but received less education and fewer resources?
- How would you address that inequity?

Writing Connection

Have participants write journal entries about the experience living on their group's conceived ship. Include potential social and environmental issues such as civil conflict, resource depletion, and collective versus individual cultural identities within the closed system.

Further Resources

Film, *Cities* (from the “Reinventing the World” video series), directed by David Springbett and Heather MacAndrew, Bullfrog Films, 2000, 50 minutes. Focusing on large and diverse cities around the world, this documentary explores the question of how we can live sustainably, given human growth and resource scarcity.

www.bfi.org – The concept of Spaceship Earth was first developed by the architect, engineer, mathematician, and poet, Buckminster Fuller. The Buckminster Fuller Institute serves a global network of design science innovators “to make the world work for 100% of humanity in the shortest possible time through spontaneous cooperation without ecological offense or the disadvantage of anyone.”

DEEP SPACE 3000

Worksheet

Name _____

Human Needs	How You Will Address These Needs In Your Spaceship Design
FOOD	
WATER	
AIR/OXYGEN	
ENERGY	
WASTE DISPOSAL	
GOVERNANCE	
COMMUNITY RULES	
ENTERTAINMENT	
QUALITY OF LIFE	
OTHER NEEDS	

Activity 6

Every Drop Counts!

Overview

A series of water-related activities beginning with a water trivia game and a short demonstration of how much of the Earth's water is available for human and other species' needs. The series includes a "water walk" and a personal water-use audit.

Big Ideas

- ▶ Interconnectedness
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ *1-2 hours (dependent on partial or complete activity)*

Learning Outcomes

Participants will:

- ▶ Understand that the world's freshwater supply is finite
- ▶ Understand what it might be like if they had to haul their own water daily
- ▶ Consider the global implications of freshwater use and discuss solutions to water scarcity

Inquiry

- ▶ How much available fresh water exists worldwide?
- ▶ What are the causes and consequences of unequal water use around the world?
- ▶ How is water availability and use connected to other global issues?
- ▶ What can be done to conserve water resources and increase water availability?

Materials/Preparation

- ▶ **Teacher Master:** *Water Trivia*
- ▶ **Handout or Master:** *Water Facts*
- ▶ **Handout:** *Personal Water Use Audit* (one per student)
- ▶ 1 gallon of water
- ▶ Clear, wide mouth container about the size of 1 pint (Optional: Add a drop of blue food coloring to the cup so that when you add the water it will be more visible from the back of the room)
- ▶ 1-cup measuring cup, tablespoon, and teaspoon
- ▶ Bucket of water or several gallon containers of water

ACTIVITY

Introduction

1. Do a trivia game using the *Water Trivia* teacher master sheet. Ask participants all or some of the trivia questions.
 2. Have participants brainstorm all the things they do or use that require water. Create a list on the board or with the projector under the headings: "Domestic," "Agricultural," and "Industrial."
 3. Ask participants if they know how much fresh water there is on the planet.
 4. Tell them you are going to demonstrate how much fresh and available water there is on the planet.
- Why is it important to protect freshwater resources from pollution?
 - What are some other purposes/uses of freshwater aside from human consumption?
 - How can we reduce our personal water use?
 - Does the greater use of water resources in developed countries affect the availability of water resources in water-scarce countries?
 - How can water productivity (more crop per drop) be increased so that more water is available in areas that need it?

Steps Part 1

1. Show the group a gallon of water.
2. Take out 2.5 percent (3 tablespoons plus 1 teaspoon) and place it in a clear container to represent the amount of freshwater on Earth.
3. Of this amount, remove 70 percent (2 tablespoons) to represent the amount of water trapped in glaciers or buried too deep in the ground to be recovered realistically. The remainder – less than one percent of the Earth's total water supply – is left to support human needs for agriculture, drinking, and washing as well as for lakes, rivers, and freshwater ecosystems.
4. Conclude this section with *Critical Considerations Part One*.

Critical Consideration Part 1

- Given that there is a fixed amount of fresh water on the planet, what will happen to the distribution of water resources as global population grows?
- What happens when people do not have enough water to meet their basic needs?
- What happens when a freshwater resource is polluted?

Steps Part 2

1. Show and discuss the *Water Facts* handout or overhead.
2. Create a scenario of living in a water-scarce country by having participants walk around the room several times carrying a bucket (or gallon) of water (or have them go outside and carry the bucket). You can do this activity with either one bucket and have one student at a time carry it, or use several gallon-containers and have a number of participants do the activity simultaneously.
3. Pass out and go over the *Personal Water Use Audit* worksheet with participants so they can measure how much water they and their family use.
4. Conclude with *Critical Considerations Part Two*.

Critical Consideration Part 2

- How hard was it to carry the bucket of water?
- How would your life be different if you had to walk three hours every day for your water?
- What would life be like if you didn't have a safe, adequate water supply?
- Have you ever known anyone who had a water-related illness?

- Why aren't water-related illnesses very common in the developed world?
- Can water-rich countries help provide water resources to water-poor countries? How?
- Why do people in the developing world spend such a large percentage of their income on water?
- How are water availability and use connected to other global issues (food production, health, environment, global warming, poverty, etc.)?

Writing Connection

Have participants write a story as if they were a drop of water moving through the hydrologic cycle. They should describe what they see, hear, smell, taste, etc.



Further Resources

Film, *Environmental Ethics: Examining Your Connection to the Environment and Your Community*, The Video Project, 2005, 62 minutes, www.videoproject.com. This documentary profiles a diverse group of courageous Goldman Environmental Prize winners who have made it their duty to protect their local environments. Download an accompanying study guide at www.envethics.org.

Book, *Water: The Fate of Our Most Precious Resource*, Marq de Villiers, Mariner Books, 2001. An eye-opening account of how global population growth, unchecked development, and cross-border struggles are stressing and depleting the world's fresh water supply.

www.water.org – Water Partners International is committed to providing clean drinking water to communities in developing countries. Working in partnership with donors and those in need of safe water, they have helped thousands of people develop accessible, sustainable, community-level water supplies.

www.unep.org – The Food and Agriculture Organization of the United Nations leads international efforts to defeat hunger, serving both developed and developing countries.

WATER TRIVIA

- What percent of the Earth's water is available for people to use?
 - ▶ a. less than 1%¹
 - b. 5%
 - c. 10%
 - d. 20%
- What percentage of people in the world lack access to safe drinking water?
 - a. 5%
 - b. 11%
 - ▶ c. 25%
 - d. 45%
- What is the total amount of water (in gallons) consumed per day by the average person in the U.S.?
 - a. 10
 - b. 50
 - ▶ c. 100²
 - d. 200
- About how many gallons/day are needed to sustain life (including the minimum water needed to produce the food we consume)?
 - a. 5
 - ▶ b. 13
 - c. 21
 - d. 33
- What percentage of the adult human body is comprised of water?
 - a. 10%
 - b. 20%
 - ▶ c. 50-65%
 - d. 75-80%
- What activity accounts for 65-70% water usage, the highest in the world?³
 - ▶ a. Agriculture
 - b. Industry
 - c. Domestic
- What is a proven technology or practice that can decrease agricultural water use?
 - ▶ Answers: drip irrigation, planting low water use crops
- What are other uses and benefits of fresh water aside from human consumption?
 - ▶ Answers: streamflow, provides animal and plant nutrients and habitat, wetland filtration, recreation
- What percent of his/her income does the average U.S. citizen spend on drinking water?
 - ▶ a. 0.5%
 - b. 2%
 - c. 10%
 - d. 25%
- What percent of his/her income does the average Honduran living in the slums of that country's capital city spend on drinking water?⁴
 - a. 0.5%
 - b. 2%
 - c. 10%
 - ▶ d. 25%
- Approximately how many people in developing countries die each year from water-related disease?
 - a. 100
 - b. 1,000
 - c. 10,000
 - ▶ d. 10,000,000⁵
- How many gallons of water does it take to produce 1 pound of corn?
 - a. 68
 - b. 168
 - c. 568
 - ▶ d. 1268
- How much water does it take to produce one pound of beef?⁶
 - a. 17
 - b. 170
 - ▶ c. 1,799
 - d. 17,900
- What are 2 things you can do personally to reduce your water use?
 - ▶ Answers: turn off the water when brushing teeth, plant drought tolerant landscaping, reduce meat consumption.
- What is one benefit of a dam?
 - ▶ Answers: produce hydroelectricity, prevent flooding, control water storage; make navigation easier.
- What is one negative impact of a dam?
 - ▶ Answers: impede the flow of soil nutrients, impede fish migration, flood rivers upstream
- Name three sources of fresh water.
 - ▶ Answers: melting snow, aquifers, groundwater, rainwater, icebergs, desalinization of salt water.

¹ United States Department of the Interior. United States Geological Survey. (2012). *How Much Water is Available?* http://www.usgs.gov/blogs/features/usgs_top_story/how-much-water-is-available

² United States Environmental Protection Agency. Office of Wastewater Management. (2016). *Water Sense: Indoor Water Use in the United States.* <https://www3.epa.gov/watersense/pubs/indoor.html>

³ Agriculture: 65-70%; Industry: 20-25%; Domestic: 13%.

⁴ Water Partners International, www.water.org

⁵ Water Partners International, www.water.org

⁶ United States Department of the Interior. United States Geological Survey. (2015). *How Much Water Does it take to Grow a Hamburger?* <http://water.usgs.gov/edu/activity-watercontent.html>

WATER FACTS

Worksheet

- Every day more than 1 billion people make a 3-hour journey on foot just to collect water.
- More than 1.2 billion people (25% of the world's total population) do not have access to a safe and adequate water supply.
- 14,000 people die every day from water-related illnesses. This includes diseases transmitted via water such as giardia and dysentery, from lack of water (dehydration), and from parasites that breed in water (e.g. malaria).
- An average U.S. citizen will spend 0.5% of his/her annual income on water; while a citizen of Honduras will spend 25% of his/her annual income on water.

PERSONAL WATER USE AUDIT

Worksheet

Keep track of how many times you do each activity in one day. Keep a running tally throughout the day and then calculate your total times and gallons used at the end of the day.

Activity	Tally Times Doing Activity	Total Number	Estimated Water Use <i>Multiply total number by the amount listed to get total gallons</i>
Washed Hands			0.1 gallons = _____ gallons
Showered <i>Regular Showerhead</i>			30 gallons = _____ gallons
Showered <i>Low-Flow Showerhead</i>			15 gallons = _____ gallons
Tub Bath			20 gallons = _____ gallons
Brushed Teeth			0.2 gallons = _____ gallons
Drank a Glass of Water			0.008 gallons = _____ gallons
Boiled Pot of Water for Cooking			0.25 gallons = _____ gallons
Flushed Toilet <i>Conventional Toilet</i>			5 gallons = _____ gallons
Flushed Toilet <i>Ultra Low-Flow Toilet</i>			1.6 gallons = _____ gallons
Washed a Load of Dishes in Dishwasher			15 gallons = _____ gallons
Washed Load of Dishes in Sink <i>Not Running the Tap</i>			10 gallons = _____ gallons
Washed Load of Laundry in Conventional Machine			40 gallons = _____ gallons
Washed Load of Laundry in High-Efficiency Machine			25 gallons = _____ gallons
Washed a Car			15 gallons = _____ gallons
Other Activity:			
Total Daily Gallons			

Adapted from WaterPartners International "Tap Tally Sheet" <http://water.org/assets/PDF/ODsplishsplash.pdf>

Activity 7

Everyone Does Better When Women Do Better

Overview

Participants enact the roles of citizens and government representatives from various countries at a “town meeting” forum. Citizens address their local government representative with concerns about the status of women and girls in their country and potential solutions. With input from the citizens, the leaders prioritize the concerns voiced at the meeting and decide on the most effective way to take action to improve the situation in each of the countries.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 2 hours

Learning Outcomes

Participants will:

- ▶ Brainstorm indicators of the health and well-being of women and girls around the world
- ▶ Research facts about the demographics and status of people in a given country
- ▶ Give a verbal presentation of the situation in a given country
- ▶ Prioritize the needs of each country in order to develop an effective plan of action

Inquiry

- ▶ What does it take to make a population healthy?
- ▶ Why is women’s health so important for everyone?
- ▶ What are the root causes of a population’s poor health?
- ▶ Which solutions address the root causes of a population’s poor health?

Materials/Preparation

- ▶ **Handout:** *Vocabulary and Country Profile*. One per student.
- ▶ **Handout:** *Town Meeting Role Cards*. One sheet per five students. one card per student. Each group will represent a different country (three to six countries depending on class size) with five identities per group
- ▶ **Handout:** *Strategy Worksheet*. One per student
- ▶ 2015 World Population Data Sheet and 2015 Women of Our World download at www.prb.org, one hard copy per group or Internet access for each group

(Adapted with permission from the activity *Starvation or Survival* developed by Barby and Vic Ulmer of *Our Developing World*. For related activities please visit *Our Developing World’s* website at www.magiclink.net/~odw)

ACTIVITY Day 1

Introduction

- (Optional) Do a Sides Debate using the following statements. As a following, we should spend more money on education and health care.
 - Which issue(s) have the greatest effect on the whole country?
 - Which issue(s) might be the cause of some of the other issues?
 - What are some solutions that would improve the situation in your country?
 - Which solution do you think is best? Why?
 - Which solutions should be tackled first? Brainstorm a list with the group and record it for reference later in the activity.
- Individually, list in order of priority three to five solutions you would like to see implemented to improve the health and well-being of your country. What would you measure? (e.g., life expectancy, infant mortality rate, literacy rates, HIV/AIDS rates, teen birth rates, number of women in poverty) Why are these things important?
- Go over the vocabulary words using the Handout, *Vocabulary and Country Profile*.

Steps

- Divide the participants into country groups of five participants, and assign each group a country from the list above.
- Hand out one role card to each student and have them write the name of their country in the first blank line on their role card.
- Pass out PRB's 2015 World Population Data Sheet and 2015 Women of Our World (or have participants access the reports online) and have participants individually use the reports to fill in the blanks for their role.
- In their country groups, participants begin their town meetings. Give the following instructions:
 - All country groups will hold their meetings at the same time.
 - The participants representing citizens (i.e., teacher, farmer, nurse, and parent) will sit facing the government representative.
 - The government representative will begin the meeting by introducing themselves and sharing some facts

about the country by reading the role card aloud to the group of citizens.

- The citizens will take turns reading their character role card aloud to the group.
 - The government representative will take notes on the *Country Profile Sheet*, recording the facts that the citizens share.
- Bring the group back together for reflection questions.

Going Deeper: Critical Consideration

- Have the participants discuss the differences between the low, medium, and high development countries. Which countries seem to be doing well?
- Which countries are not doing well?
- What are the strengths and weaknesses of your assigned country?
- Are there differences between how men and women are doing? If so, what do you think is the cause of these differences?

ACTIVITY Day 2

Steps

- Have participants return to their country groups to discuss the concerns brought to the table in the last meeting. Give each student one *Strategy Worksheet* and give them about ten minutes to complete steps.
- Give participants ten minutes to complete Step Three of the *Strategy Worksheet*. Their country has been granted ten million dollars to improve the health and well-being of all citizens. The government official will be making the final decision, but the citizens will be able to offer input. Participants will write a brief synopsis of what they would like to spend the money on, why they chose to spend it that way, and what they think the result will be.

3. Bring the group together and have the government representative from each group announce his/her decision to the citizens.
4. Give each citizen one minute to voice their opinion about the decision. They can support or criticize the government official, but they must offer a thoughtful explanation for their views.
5. The government representatives can either change their decision based on the input from the community members or they can adhere to their original decision.
6. Conclude with the following reflection questions.

Going Deeper: Critical Consideration

- Were you satisfied with the decision made by your country’s government representative?
- How well did the government representative represent everyone’s views?
- How can citizens be involved in creating a healthy community?
- If a country is doing well, how do you know if everyone is doing well? Is it possible that there might be a group of people who are not represented by the country’s averages?
- Why do some people say that everyone does better when women do better? Do you agree or disagree with this statement?

Writing Connection

Have students prepare a report to present to the class about the situation in their assigned country and their solutions. This can be in the form of a poster presentation, a speech, a press release, or other interactive method.

Further Resources

Film, *Iron Jawed Angels*, Katja von Garnier, 2003. A feature length film about women’s right to vote. www.iron-jawed-angels.com.

www.unifem.org – UNIFEM, the United Nations Development Fund for Women, provides financial and technical assistance to innovative programs and strategies fostering women’s empowerment and gender equality.

www.awid.org – The Association for Women’s Rights in Development is an international membership organization connecting, informing and mobilizing people and organizations committed to achieving gender equality, sustainable development, and women’s human rights.



VOCABULARY AND COUNTRY PROFILE

- In your country group, discuss the following questions. Refer to the Country Profile notes and your role cards.
 - Which issue(s) have the greatest effect on the whole country?
 - Which issue(s) might be the cause of some of the other issues?
 - What are some solutions that would improve the situation in your country?
 - Which solution do you think is best? Why?
 - Which solutions should be tackled first?
 - Are there some solutions that might have a positive effect on more than one problem?
- Individually, list in order of priority three to five solutions you would like to see implemented to improve the health and well-being of your country.

Country Profile for: _____

	Population
	Life Expectancy
	% Of Population Living on Less Than \$2 Per Day
	% Of Government Seats Held by Women
	Total Fertility Rate
	Infant Mortality Rate
	% of Women Attended by a Skilled Person when Giving Birth
	% of Population living with HIV/AIDS
	% of Population living with HIV/AIDS that are Women
	% of Population living without Access to Safe Drinking Water
	% of Girls Enrolled in a Secondary Education
	% of Girls who are Literate
	% of Women Working in Jobs other than Farming

Additional Notes: _____

TOWN MEETING ROLE CARDS

I am a school teacher in _____. I should live to be about _____ years old. In my country, _____ % of girls are enrolled in secondary education and _____ % of girls are literate. **Both boys and girls / mostly boys / mostly girls** get to go to school. Girls who have the chance to go to school are better able to take care of themselves and their families.

I am **very proud of / satisfied with / very concerned** about the well-being of the people in my country.

I am a parent of 2 children in _____. The fertility rate in my country is _____. I have **fewer / about the same number / more children** than most women. I should live to be about _____ years old. In my country, _____ infants per 1,000 will die before they turn one. _____ % of women are attended by a skilled person when they give birth. When the infant mortality rate is high, parents are likely to have more children. When women do not have skilled help during childbirth, the mother's or baby's health is at risk.

I am **very proud of / satisfied with / very concerned** about the well-being of the people in my country.

I am a farm worker in _____. I should live to be about _____ years old. In my country, _____ % of women are working in jobs other than farming. Although farming is an important part of life, in most countries farmers earn little to no money. If women are not allowed to work for fair wages then they are more likely to end up in poverty. This makes it more difficult for them to take care of their families. In my country, **men / women** have most of the wage earning jobs.

I am **very proud of / satisfied with / very concerned** about the well-being of the people in my country.

I work as a nurse in _____. I should live to be about _____ years old. In my country, _____ % of the people live with HIV/AIDS. Of those people, _____ % are women. More **men / women** have HIV/AIDS. _____ % of people have access to safe drinking water. Without access to safe drinking water, people – especially infants – can become very sick.

I am **very proud of / satisfied with / very concerned** about the well-being of the people in my country.

I am a member of the government of _____. I should live to be about _____ years old. In my country, _____ % of government seats are held by women and _____ % are held by men. Our population is _____, and of that population, _____ % of the people live on less than \$2 per day. It is well known that poverty is connected to poor health.

I am **very proud of / satisfied with / very concerned** about the well-being of the people in my country.

STRATEGY WORKSHEET

- In your country group, discuss the following questions. Refer to the Country Profile notes and your role cards.
 - Which issue(s) have the greatest effect on the whole country?
 - Which issue(s) might be the cause of some of the other issues?
 - What are some solutions that would improve the situation in your country?
 - Which solution do you think is best? Why?
 - Which solutions should be tackled first?
 - Are there some solutions that might have a positive effect on more than one problem?
- Individually, list in order of priority three to five solutions you would like to see implemented to improve the health and well-being of your country.

- Now imagine that your country has been granted \$10 million to spend on improving the health and well-being of all citizens. From the perspective of your role, take about ten minutes to write a brief synopsis of how you think the money should be spent, why you would choose to spend it that way and what you think the result will be (you may use the back of this paper or another sheet of paper to write your synopsis).

Activity 8

Farming for the Future

Overview

Through a simulation activity, participants experience the challenges, decisions, choices, and impacts that subsistence farmers in the developing world face. In “village” groups, participants decide which crops they will plant over two seasons, during which time there are randomly assigned dry and wet years.

Big Ideas

- ▶ Connecting with Nature
- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Materials/Preparation

- ▶ **Handout:** *Farming for the Future Directions and Worksheet*, one copy per group of three to four participants
- ▶ **Handout:** *Effects of Malnutrition*, one copy per group of three to four participants
- ▶ **Handout:** *Impact and Solution Cards*, make one copy and cut out cards, keep the Year One and Year Two cards separate
- ▶ 1 six-sided dice

Inquiry

- ▶ What are some of the challenges that subsistence farmers face in growing enough food to feed their families?
- ▶ What are the root causes of hunger and poverty, and how can they be addressed sustainably?

Learning Outcomes

Participants will:

- ▶ Experience the challenges, decisions, choices, and impacts that subsistence farmers in the developing world face
- ▶ Understand some of the root causes of hunger
- ▶ Consider sustainable solutions to help alleviate poverty and hunger

Vocabulary needed:

Food Security: Availability and access to around 2,000 calories per day of nutritionally adequate and safe food.

Subsistence Farming: Small scale farming for the purpose of growing food to meet the needs of the family and/or community, as opposed to commercial for-profit farming.

Malnutrition: Lack of proper nutrition, generally through inability to access or utilize enough healthy food to support daily functions.

ACTIVITY

Introduction

1. Start out with an introduction question such as “Do you remember a time when you were not sure where your next meal would come from, and what did you do?” Or “Have you ever grown your own food or worked on a farm?”
2. Go over the vocabulary words. Begin by asking the participants to define: food security, subsistence farming, and malnutrition.
3. Tell the group they are going to do an activity to simulate subsistence farming in small villages in Zimbabwe.

Steps

1. Go over the directions using a copy of the handout *Farming for the Future Directions and Worksheet*.
2. Arrange the group into “village” groups of three to four participants and have each group choose a name for their village.
3. Give each group one *Farming for the Future Directions and Worksheet* and one *Effects of Malnutrition Chart*.
4. Villages have about five minutes to select the number and type of food crops they will plant and fill in the “# of Fields” column on the worksheet.
5. Throw the dice (or have one student throw it) to determine Year One weather: 1, 2, 3, or 4 = a dry year; 5 or 6 = a wet year (typically there are more dry years than wet years in Africa).
6. Villages compute their food yields based on the weather and, in pencil, fill out the first part of the worksheet (up to the Total Yield line).
7. Have villages read off their village name, the crops they planted, and their total yield.
8. Have each village, one at a time, select a Year One *Impact Card* and read it aloud to the group. Tell them that some cards affect all the villages and some only apply to the village that draws the card.
9. Participants fill out the Impact Loss line of their worksheet after each *Impact Card* is read. If participants draw *Impact Cards* that impact all villages, then the Impact Loss line will need to be revised accordingly. Be sure they use a pencil so they can erase and rewrite the loss.
10. After all villages have selected and read an *Impact Card*, have participants calculate the “Total Yield After Impact” and fill in that line of their worksheet.
11. Have participants calculate malnutrition based on the *Effects of Malnutrition Chart* and fill in that line of the worksheet. Ask participants why malnutrition effects will be felt the following year.
12. Call on each village to read aloud their calculated “Total Yield After Impact” and record it on the board to compare the different villages’ yields.
13. Repeat the activity for Year Two using the Year Two *Solution Cards* in place of the Year One *Impact Cards*. There are two basic differences between Year One and Two. For Year Two, the effects of malnutrition from the previous year are included in the yield calculations, and the *Solution Cards* suggest sustainable practices to increase crop yield and improve quality of life (you do not need to tell the participants that the Year Two cards are all solutions).
14. Conclude with the following considerations via a group discussion and/or journal writing.

Going Deeper: Critical Consideration

- How did the village yields compare to one another?
- Who fared the best and who fared the worst?
- What were the primary reasons for the differing yields?

- How did the Impact Cards change your situation as a subsistence farmer?
- What are the practical effects of living a life in which the line between starvation and survival is so fine?
- What do you think it would be like if this simulation represented your own life, year in and year out?
- The activity provides all villagers with *Solution Cards* in Year Two. How realistic are the solution cards?
- What are some other solutions to the challenges faced by the farmers (other than the ones offered on the *Solution Cards*)?
- What do you think would have happened if this cycle of low food production and malnutrition were to continue for several years?
- What are structural solutions to the issues of hunger and food security?
- What are some factors affecting whether or not solutions can be implemented (e.g., governance, NGOs, community-based development)?
- Do people in the developed world impact food production in the developing world? If so, how?
- What other global issues are connected to the issue of food security?

Writing Connection

Research and write a paper or create a brochure about a developing country, focusing on its food security and agricultural practices. Include a brief background on the country's demographics, hunger and poverty statistics, current agricultural practices, and recommendations for sustainable practices to improve quality of life.

Research and write a report on trade agreements (like NAFTA), focusing on how these affect both subsistence farmers in developing countries and people in the developed world.

Further Resources

Film, *Silent Killer: The Unfinished Campaign Against Hunger*, John DeGraaf, Bullfrog Films, 2005, 57 minutes. Highlights promising attempts in Africa, and in South and Central America, to end world hunger.

Film, *Santiago's Story*, TransFair USA, 2000, 15 minutes. This short film demonstrates how fair trade can make a difference in local communities.

Book, *Hope's Edge: The Next Diet for a Small Planet*, Frances Moore Lappé and Anna Lappé, Jeremy P. Tarcher/Putnam, 2002. *Hope's Edge* includes the stories of subsistence farmers from five continents as well as an analysis of hunger, calls for action, learning resources, and recipes too.

Book, *Coming Home to Eat: The Pleasures and Politics of Local Foods*, Gary Paul Nabhan, W.W. Norton & Company, 2002. Chronicles a year spent by the author eating only from his local foodshed (growing, fishing, and gathering).

www.oxfamamerica.org – Oxfam America is an international development and relief agency committed to developing lasting solutions to poverty, hunger, and social justice.

www.fao.org – The Food and Agriculture Organization of the United Nations leads international efforts to defeat hunger, serving both developed and developing countries.

<http://www.fairtradeusa.org> – Website of FairTradeUSA, a nonprofit organization that promotes and certifies fair trade products.

www.localharvest.org – A nationwide directory of farmers markets, CSAs, and other local food sources.

FARMING FOR THE FUTURE

Worksheet

Students Names: _____

Village Name: _____

- Directions:** Your village has ten small fields to plant
 You must plant at least three different crops to ensure a variety of food types and at least two fields must be protein crops
 Determine your yields based on the weather dice roll:
 1, 2, 3, 4 = dry year; 5, 6 = wet year
 Use a pencil to fill out the worksheet
 Chose an Impact Card, read it aloud, and calculate impact losses (some impacts will affect all villages and some will affect only your village)
 Determine the effect of malnutrition based on your final total yield and the Effects of Malnutrition chart
 Repeat activity for Year Two

YEAR ONE

TYPES/ CROPS	# OF FIELDS	WET YIELD UNITS	DRY YIELD UNITS	TOTAL YIELDS
ROOTS				
YAMS				
CASSAVA				
CEREAL				
MAIZE				
MILLET				
PROTEIN				
GROUND NUTS				
PEAS				
TOTAL YIELD				
IMPACT LOSS (from card)				
TOTAL YIELD AFTER IMPACT				
NEXT YEAR'S LOSS FROM MALNUTRITION				

YEAR TWO

TYPES/ CROPS	# OF FIELDS	WET YIELD UNITS	DRY YIELD UNITS	TOTAL YIELDS
ROOTS				
YAMS				
CASSAVA				
CEREAL				
MAIZE				
MILLET				
PROTEIN				
GROUND NUTS				
PEAS				
TOTAL YIELD				
IMPACT LOSS (from card)				
LOSS FROM LAST YEAR'S MALNUTRITION				
TOTAL YIELD AFTER IMPACT AND MALNUTRITION LOSS				

Multiply your Yields by 10 in order to get your total yield.

EFFECTS OF MALNUTRITION

Worksheet

If food production falls below 450 units, your village will suffer from malnutrition and illness, affecting the residents' ability to work in the fields the following year. Use this chart to calculate malnutrition in your village based on the total food unit yield for each year.

FOOD UNITS	LOSS FROM MALNUTRITION NEXT YEAR
450 and above	LOSE 0 UNITS
400-449	LOSE 25 UNITS
350-399	LOSE 40 UNITS
300-349	LOSE 55 UNITS
250-299	LOSE 65 UNITS
0-249	LOSE 70 UNITS

IMPACT CARDS *Year 1*

Flood

River bursts its banks, and since your village is located close to the river, your fields are flooded.

Your village loses 50 units

Normal Harvest

However "rust", a plant disease, affects your village, reducing maize yield to 50 units for a wet year and 30 units for a dry year.

Your village calculates the loss of maize yield

Normal Harvest

However your village's food storage has become damp, causing rot in 25% of your yams.

Your village calculates the loss of yam yield

Normal Harvest

However failure to rotate crops has lowered your yield. Cassava is very filling, easy to grow, and does not require much water but it depletes soil.

Your village reduces units by 60 if you grew two or more fields of cassava

Normal Harvest

However there has been political corruption in your village and a local government official has demanded that you pay him with food units.

Your village loses 40 units

Global Warming

Temperatures have been rising steadily. Many seeds are temperature sensitive and will not germinate at higher temperatures.

Each villages loses 50 units

AIDS

Several working-age villagers have contracted HIV/AIDS, reducing the number of workers available to grow crops.

Your village loses 70 units

Population Growth

More children were born in your village this year, requiring extra food to survive.

Your village subtracts an additional 40 units from the "loss from next year's malnutrition" line

War

A civil war erupts in the region and soldiers from both sides overrun fields in all of the villages.

Each village loses 100 units

Debt Repayment

International lenders, who have given you loans, need to be repaid immediately. Your village must grow "cash crops" of flowers for export, reducing food crops for your people.

Your village loses 70 units

SOLUTION CARDS *Year 2*

Farming Collective

All the villages form a collective to learn and share sustainable farming practices.

Each village's yield increases by 50 units

A Community Well

After several years of drought, a non-governmental organization (NGO) offers to work with your village to construct a well.

Your yield increases by 60 units

Experimental Field

You plant a field of maize using compost and drip irrigation. The irrigation water is from a rooftop water catchment system, since rain is your only water source.

Your village gains 20 units for each maize field planted

Digging Ditches

You spend several weeks digging contour ditches, which help conserve water and prevent soil erosion.

Your village's yield increases by 30 units

Rotate Crops

Your village decides to rotate maize and groundnut crops. Groundnuts enrich the soil with nitrogen, doubling the yield of your maize crops.

Your village doubles its maize crop units

Literacy Class

Several people in your village join a literacy class and, now able to read the directions on a natural pesticide sack, they find that you need less than you have been using.

Your village gains 10 units because of the money saved on pesticide

Composting

Your village decides to start using compost and can thus reduce the buying of expensive fertilizers.

Your village saves money and is able to increase crop yield by 20 units

Health Center

A regional health center opens, providing primary and reproductive healthcare to all villages. The health center teaches reproductive health classes. After time, birth rates begin to stabilize and all villages require less food to survive.

All villages revise the malnutrition chart so only 400 food units are needed to prevent malnutrition

Activity 9

Fishing for the Future

Adapted with permission from "Fishing with Jim" by Jim Hartmann and Ben Smith

Overview

Through a fishing simulation, participants model several consecutive seasons of a fishery and explore how technology, population growth, and sustainable practices impact fish catch and fisheries management. As the participants progress through the fishing seasons, they will likely overfish their oceans and will have to migrate to other oceans to meet their basic needs.

Big Ideas

- ▶ Connecting with Nature
- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Inquiry

- ▶ What happens when a commonly owned resource is overused?
- ▶ What are the impacts of overfishing or exploiting a natural resource?
- ▶ How can we establish and maintain the sustainable use of a resource?

Learning Outcomes

Participants will:

- ▶ Experience the "tragedy of the commons" as it relates to fishing resources
- ▶ Consider social, environmental, and economic impacts of overfishing
- ▶ Identify sustainable fishing practices
- ▶ Determine and explain purchasing/consumption choices

Materials/Preparation

- ▶ **Handout:** *Fishing Log*, one per student
- ▶ Plain, small candy-covered chocolate candies, one 16-ounce bag for up to 20 students
- ▶ Small plastic bowls, one per four to five students with 20 candies in each
- ▶ Spoons, one per four to five students, and straws, one per student
- ▶ Watch, for timing activity



ACTIVITY

Introduction

1. Introduce and discuss the concept of sustainability using the following definition: "Sustainability is meeting the needs of the present without limiting the ability of people, other species, and future generations to meet their needs." Ask why sustainability might be an important goal for a society and what might be some of the challenges in realizing this goal.
2. Tell participants that today they are going to go fishing and explore some of these sustainability issues.

Steps

1. Explain the game rules:
 - a. Each student will be a "fisher" whose livelihood depends on catching fish.
 - b. The candies represent ocean fish such as cod, salmon, tuna, etc.
 - c. Each fisher must catch at least two fish in each round to survive (i.e., get enough fish to either eat or sell).
2. When the fishing begins, participants must hold their hands behind their backs and use the "fishing rod" (straw) to suck "fish" (candies) from the "ocean" (bowl) and deposit them into their "boat" (i.e., on the table in front of them).
3. The fish remaining in the ocean after each fishing season represent the breeding population; thus, one new fish will be added for every fish left in the ocean (bowl).
4. Divide the participants into small groups of four or five participants and have each group choose an ocean name, such as North Atlantic, North Pacific, Arctic, Mediterranean, etc.
5. Give each group one serving bowl, and give each student one straw and one copy of the handout *Fishing Log*.
6. Put one bowl of candies by each group.
7. Say "Start fishing," and give the participants about 20 seconds for the first "season" of fishing.
8. Have each fisher count their catch and record the data in their *Fishing Log*.
9. Fishers who did not catch the two fish minimum must sit out the following round.
10. Add one new fish (candy from the bag) for every fish left in the ocean (bowl).
11. Allow fishers to use their hands on the straws during the second session to represent "new technology."
12. After the second fishing season, give one fisher from each group a spoon representing more new fishing technology such as trawl nets, sonar equipment, etc. Continue the game for round three.
13. Ask the participants what happened when ocean group [name] ran out of fish. How are the fishers going to survive now (one option is to move to another ocean)? Allow participants to "invade" other ocean groups when their ocean is depleted, but do not tell them that they can do this beforehand. Fishers may either go as a group to another ocean or they may disperse to other oceans.
14. Repeat fishing, recording, and replenishing fish stocks until either sustainable fishing levels are achieved or until all (or most) groups fish out their ocean.
15. (Optional) Repeat the activity after the group has experienced the "tragedy of the commons" and discuss sustainable practices to see if they can harvest in a sustainable manner.
16. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- How did you feel when you realized that you had depleted your fish stock?
- How did you feel when other fishers joined your ocean group?
- How does this activity relate to real ocean and fishery issues?
- Have participants brainstorm ways to have a sustainable fishery. What rules could be developed (e.g., limit the types of equipment allowed, limit the number and type of fish, institute shorter seasons)?
- What is missing in this game (impacts on animals that rely on fish for their survival, population growth, etc.)?
- What happens to a resource when you have infinite population growth, rapidly developing technology, and a finite resource?
- Are there any commonly-owned resources in our region or community? If so, what are some similar issues that arise, and how can they best be managed? (For example, air is a commonly used resource – how do we deal with air pollution? Forestry or animal grazing rights sometimes prompt similar discussion points. You might also talk about city parks, national parks, and other public lands and their competing uses and needs.)

Writing Connection

Have participants do a free-write and follow-up discussion on the following quote by John C. Sawhill, relating it to the fishing activity: “In the end, our society will be defined not only by what we create, but by what we refuse to destroy.”

Further Resources

Film, *Environmental Ethics: Examining Your Connection to the Environment and Your Community*, The Video Project, 2005, www.videoproject.com. This 62 minute documentary profiles a diverse group of courageous Goldman Environmental Prize winners who have made it their duty to protect their local environment. Includes protection of ocean fisheries. Download an accompanying study guide at: www.envethics.org.

www.worldwatch.org – State of the World, World Watch Institute, New York. Useful and up-to-date data on current resource use.

www.fao.org/fi – United Nations Food and Agriculture Organization (FAO) Fisheries Resource website.

www.montereybayaquarium.org – The mission of the Monterey Bay Aquarium is to inspire conservation of the oceans.



FISHING LOG

Worksheet

Ocean Name: _____

Fishers: _____

Record your group's catch and the amount of fish left in the ocean after each season:

SEASON	CATCH	FISH LEFT IN OCEAN
1		
2		

Briefly describe the status/health of your fishery:

SEASON	CATCH	FISH LEFT IN OCEAN
3		
4		

Briefly describe the status/health of your fishery:

How could you have made your fishing practices sustainable?

Activity 10

From Issue to Opportunity

Overview

Help participants understand and define global issues and their interconnections. Participants develop criteria for determining what makes an issue global in scope, brainstorm and list global issues, group and prioritize the issues into categories to highlight interconnections, and explore solutions.

Big Ideas

- ▶ Connecting with Nature
- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Time

- ▶ 1 hour



Inquiry

- ▶ What defines a global issue?
- ▶ How are global issues connected to each other and to our own lives?
- ▶ What is the benefit of understanding the connections between global issues?

Learning Outcomes

Participants will:

- ▶ Develop and discuss criteria for defining a global issue
- ▶ Identify, group, and prioritize global issues
- ▶ Explore and explain the interconnections between global issues as well as their solutions

Materials/Preparation

- ▶ **Handout:** *Defining a Global Issue*
- ▶ Butcher paper, five to ten sheets
- ▶ Marking pens, one per student
- ▶ Sticker dots, two per student

ACTIVITY

Introduction

1. Ask participants, "What makes an issue global versus local?" Brainstorm, list, and discuss the defining criteria of a global issue. These may include the following: global issues have significant impacts, they are trans-boundary, they are persistent (occurring repeatedly over time), and they are interconnected. Use the handout *Defining a Global Issue* to help lead this part of the discussion.

Steps

1. Have the group brainstorm and list on the board or on paper as many global issues as they can think of, assessing each issue against the agreed-upon criteria for defining a global issue.
2. Look at the entire list, and have the group develop categories into which similar issues can be grouped. For example, rainforest destruction, loss of natural habitat, global warming, climate, and species extinction could all be categorized under "The Environment." Other possible categories include: "Health," "Human Rights," "Energy," "Food and Water Security," "Peace and Conflict," "Economics," "Population," "Governance," and "Culture/Worldview." After deciding on five or more categories, write each category on the top of separate pieces of butcher paper and post them around the room.
3. Have the participants go to each of the posted sheets and write the global issues from the brainstorm list under a relevant heading. There will likely be issues that fall under more than one category.
4. Give each student a sticker. Have him or her walk around the room, read all the posted sheets, and then place a sticker on what he or she believes are the two most important categories.
5. Conclude with the following reflection questions.



Going Deeper: Critical Considerations

- Which category had the most votes (stickers)? Is there a clear majority? If there is a clear majority, consider focusing a unit of study on the most popular global issue or issues.
- Which category ended up with the most issues?
- Which specific issues fell under the most categories?
- Why is it that some issues seem to have many connections? How might this information be useful, and what might this tell us about the issue(s)?
- Explain the idea of leverage. The global issues that seem to be the most connected to the other issues are probably ones that have the highest leverage. Working on one or two issues that have several connections, therefore, can help alleviate many of the problems. Brainstorm possible solutions to the high leverage global issues.
- Discuss the process of brainstorming, grouping, and prioritizing used in this activity. Discuss the potential this process has for resolving other problems.

Writing Connection

Have participants participate in a Model United Nations style of assembly in which they act as country delegates, writing and presenting resolutions that address specific global issues.

Have each learner choose one issue from the group list (or a new one) and use either a diagram or a paragraph to demonstrate how it meets the criteria of a global issue (as defined in the activity). This assignment emphasizes participants' ability to assess and apply criteria and illustrate interconnectedness. Participants may want to have time to do some Internet research on their chosen issue in order to do a more thorough job. Give participants the following instructions:

Choose one of the global issues we have listed today. Then draw a diagram or write one to two paragraphs that illustrate how the issues meet at least three of the criteria we established for a global issue. You must include interconnectedness and significant impacts as two of the criteria. For each set of criteria, give three examples of how your issue qualifies as a global issue. For example, you might imagine that you are a legislator or philanthropist heading out to work on this issue. Ask yourself which other interconnected issues you need to consider. With which groups might you want to collaborate? To convince people to support your issue, you will need to be able to explain the impact of the issue and its importance.

DEFINING GLOBAL ISSUES

Worksheet

What makes an issue “global”?

Global Issues Are:

- ▶ Significant
- ▶ Trans-national or trans-boundary
- ▶ Persistent or long-acting
- ▶ Interconnected

Activity 11

Fueling the Future

Overview

Participants compare energy use and CO² emissions by sector in the United States and China (and optionally in another country). They research and discuss energy impacts and sustainable energy solutions, write a resolution addressing energy use, and present their resolutions at a “World Energy Summit.”

Big Ideas

- ▶ Connecting with Nature
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 2 hours



Inquiry

- ▶ How does energy use by different sectors compare between the U.S. and China?
- ▶ How is energy use connected to other global issues?
- ▶ What can be done to conserve energy resources and reduce CO² emissions?

Learning Outcomes

Participants will:

- ▶ Calculate and compare the percentage of energy use and emissions by country and sector to world average energy use and emissions
- ▶ Brainstorm and research impacts of energy use by sector and energy solutions
- ▶ Write and present their resolution at a mock “World Energy Summit”

Materials/Preparation

- ▶ A few items to show during the introduction segment of the activity (e.g., food, clothing, a book, computer, etc.)
- ▶ **Handout:** *Energy Use by Country and Sectors Table*, one per two to four students
- ▶ **Handout:** *Fueling the Future Role Cards*, copy and cut
- ▶ **Handout/Master:** *Writing a Resolution Worksheet*, one per student
- ▶ Calculators, one per group of two to four students

ACTIVITY Day 1

Introduction

1. Show participants some items (e.g., food, clothing, a book, computer, etc.) one at a time and ask them how energy is connected to the manufacturing and use of the item.
2. Tell the group they are going to do an activity that examines and compares the type and amount of energy use and emissions in the U.S. and China.
7. Bring the group back together for the following discussion prompts and questions (after the discussion, have the participants either hold on to their completed *Energy Use by Country and Sectors Table* or collect the worksheets and pass them out again on day two of the activity).

Steps

1. Write on the board or overhead these three energy sectors: Transportation, Residential, and Industrial/ Commercial.
2. Have participants brainstorm different uses of energy (e.g., cars, home heating and cooling, lights, food production, etc.) and list them below the appropriate sector.
3. Divide the participants into six small groups of two to four participants representing the three energy use sectors (transportation, residential, and industrial/commercial) for both the U.S. and China (Note: For groups with more than 24 participants, divide into nine small groups representing the U.S., China, and another country's energy sectors. For country profiles of energy use by sector, visit the World Resource Institute's website at <http://www.wri.org/resources>).
4. Give each group a copy of *Energy Use by Country and Sectors Table* and one *Role Card* (there will be two groups for each energy sector – one for the U.S. and one for China).
5. Give groups about 15 minutes to complete the table for their country and sector, following the prompts on the *Role Cards* (calculate percent, list uses and impacts, and brainstorm sustainable energy solutions). Each group will need a calculator to figure out their percentages.
6. Have a representative from each small group report to the larger group on the percentages in the first section of the table, and have participants fill in their tables based on the reported data from the other groups.

Going Deeper: Critical Considerations

- Discuss the difference in percentages between U.S. and China energy use and emissions.
- Which sectors use the most energy?
- Which country uses the most energy?
- Why should we care about energy use and emissions?
- Have participants share and discuss their brainstorm lists of energy uses by different sectors.
- Have participants share and discuss their sustainable energy solutions.

ACTIVITY Day 2

Introduction

1. Tell the group that they are going to participate in a "World Energy Summit" in which they will work together in U.S./China sector groups to develop policy addressing energy consumption, conservation, and emission reductions. Tell them that they will be writing a resolution about their energy policy.

Steps

1. Put up the Handout/Overhead, *Writing a Resolution Worksheet*, and go over what a resolution is with the group.
2. Arrange the group so that each sector joins together with the same sector from the other country. There will be

three larger groups comprised of a U.S./China transportation sector, a U.S./China residential sector, and a U.S./China industrial/commercial sector. Give one *Writing a Resolution Worksheet* to each group. Have the small groups assign roles: facilitator, timekeeper, note taker, and reporter.

3. Give the groups about 10-15 minutes to discuss and decide on one or two policies to address energy consumption, conservation, and emission reductions. They will need to refer to the "Sustainable Energy Solutions" section of the "Energy Use by Country and Sectors Table" that they completed on day one of the activity.
4. Give the groups 15-20 minutes to write a resolution and to prepare to present their resolution to the group.
5. Hold a "World Energy Summit" in which each group has three to five minutes to present their resolution to the group.
6. Each student should take notes on the resolutions presented so they can discuss and vote on the resolutions later.
7. After all groups present, facilitate a discussion on the pros and cons of each resolution.
8. Have participants vote on each resolution.
9. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- Did the resolution process work? Were we able to develop some good energy policies?
- What are the limitations of this process?
- What are some other ways that governments, groups, and individuals can effect change in energy use and emissions?
- What other global issues are connected to energy?
- What are some of the hidden costs of using non-renewable energy?

- How can developing countries meet their growing energy needs in a sustainable manner?
- Discuss the concept of "leapfrog technology" in which modern, sustainable technologies are transferred to developing countries, avoiding the unsustainable stage of industrial development that developed countries experienced.

Further Resources

Film, *Rising Waters: Global Warming and the Fate of the Pacific Islands*, directed by Andrea Torrice, 2000, 57 minutes. Through personal stories of Pacific Islanders in Kiribati, the Samoas, the atolls of Micronesia, and Hawaii, as well as researchers in the continental United States, this documentary film puts a human face on the international climate change debate.

Film, *Silent Sentinels*, directed by Richard Smith, produced by the Australian Broadcasting Corporation, 1999, 57 minutes. This documentary film takes a broad look at coral reefs and how the coral organism has coped with climate change over time.

www.earthtrends.wri.org – World Resources Institute's "Earth Trends" is a comprehensive online database that focuses on environmental, economic, and social trends. "Country Profiles" present environmental information about key variables for several topic areas. View charts and graphs to find statistics for over 220 countries.

<http://cait.wri.org> – The Climate Analysis Indicators Tool (CAIT) is an information and analysis tool on global climate change developed by the World Resources Institute.

FUELING THE FUTURE

Energy Use by Countries and Sectors

ENERGY CONSUMPTION/ YEAR* (million metric tons of oil equivalent)	UNITED STATES (1999)	U.S. % [†] OF WORLD ENERGY USE	CHINA (1999)	CHINA % [†] OF WORLD ENERGY USE	TOTAL WORLD ENERGY USE (1999)	OTHER COUNTRY (use, emissions, and % of world energy use)
TRANSPORTATION						
RESIDENTIAL						
INDUSTRIAL/ COMMERCIAL [§]						
CO2 EMISSIONS/YEAR (million metric tons)						
TRANSPORTATION						
RESIDENTIAL						
INDUSTRIAL/ COMMERCIAL**						
ENERGY USES AND IMPACTS brainstorm different ways that energy is used in each sector and their impacts						
TRANSPORTATION USES			TRANSPORTATION IMPACTS			
RESIDENTIAL USES			RESIDENTIAL IMPACTS			
INDUSTRIAL/ COMMERCIAL USES			INDUSTRIAL/ COMMERCIAL IMPACTS			
SUSTAINABLE ENERGY SOLUTIONS brainstorm alternatives to reduce and conserve energy for each sector						
TRANSPORTATION USES						
RESIDENTIAL USES						
INDUSTRIAL/ COMMERCIAL USES						

* SOURCE: World Resource Institute EarthTrends www.earthtrends.wri.org

† A 'million metric ton of oil equivalent' is a measurement of energy. It is equal to the amount of energy in 1 metric ton of crude oil, 107 kilocalories or 41.868 gigajoules.

‡ To find % of World Energy Use divide U.S. total and China total by Total World Energy Use.

§ This category includes industry, agriculture, commercial, and public services.

** This category includes public electricity, heat production, auto producers, other energy industries, manufacturing industries, and construction.

FUELING THE FUTURE ROLE CARDS

Country and Energy Sectors

<p>Country: China</p> <p>Energy Sector: Transportation</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector 	<p>Country: United States</p> <p>Energy Sector: Transportation</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector 	<p>Country:</p> <p>Energy Sector: Transportation</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector
<p>Country: China</p> <p>Energy Sector: Residential</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector 	<p>Country: United States</p> <p>Energy Sector: Residential</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector 	<p>Country:</p> <p>Energy Sector: Residential</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector
<p>Country: China</p> <p>Energy Sector: Industrial/Commercial</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector 	<p>Country: United States</p> <p>Energy Sector: Industrial/Commercial</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector 	<p>Country:</p> <p>Energy Sector: Industrial/Commercial</p> <ol style="list-style-type: none"> 1. Calculate your sector's percentage of the world's energy use and emissions 2. List uses and impacts of your sector 3. Brainstorm sustainable energy solutions for your sector

FUELING THE FUTURE

Writing a Resolution

What is a Resolution?

A resolution is a formal way of stating intended action by a group. Resolutions are used by decision-making bodies ranging from local school boards to the United Nations. A resolution usually consists of two main parts:

1. **PREAMBLE:** The *Whereas* clause(s) contains background information and reasons for the resolution.
2. **REQUEST FOR ACTION:** The *Resolved* clause(s) contains the request for action.

Steps in Preparing a Resolution

1. Identify the issue of concern.
2. Research and gather supporting background materials which are sufficient to allow a person with no prior knowledge of the subject to make an informed, intelligent decision.
3. Write a draft and then a final resolution in the proposed format, taking care to ensure that:
 - Each "**Whereas**" clause is accompanied by sufficient background material.
 - At least one of the "**be it Resolved**" clauses directs government (or other entity) to take action.
4. Select a representative(s) from your group to present and provide rationale in support of your resolution at the World Energy Summit.

How to Write a Resolution

Write the sections of your resolution in the following format:

1. The *Heading* serves as identification for the resolution and states **WHERE** the resolution will be submitted, **WHAT** the subject of the resolution is, and **WHO** is proposing the action.
2. The *Preamble* is used to explain **WHY** the action in the *Resolved* section should be taken. It states past action, reasons for the action, and reasons for concern. Each *Preamble* clause should be written as a separate paragraph, beginning with *Whereas* and ending with a semi-colon. The last paragraph of the *Preamble* should end with a connecting phrase such as "Therefore be it..."
3. The *Resolved* section indicates what action is proposed. The word **RESOLVED** is underlined and printed in capital letters, followed by a comma and the word "that". Each resolved clause is a separate paragraph and ends with a semi-colon, and in the case of the next to the last clause should be followed by "and".

Sample Resolution:

SUBMITTED TO: Our Class

SUBJECT: Writing a Resolution

PROPOSED BY: Our Teacher

Whereas we are studying energy use and emissions;

Whereas we have become experts on energy use and emissions for specific countries and energy use sectors;

Whereas we are holding a World Energy Summit;

Whereas we are learning to write a resolution for the World Energy Summit;

therefore, be it **RESOLVED**, that:

We agree to follow these guidelines in writing a resolution for the World Energy Summit;

We promise to work together to write a great resolution;

We will develop policies to conserve energy use and reduce emissions; and

We will present our findings at the World Energy Summit.

For more information on writing a resolution, visit the United Nations Online website at:
<http://www.unol.org/res/rw3.shtml>

Activity 12

Global Issues Trivia

Overview

Use this trivia game as an introduction to the study of critical global issues. Participants collaborate in teams to answer questions about world population, economics, and environmental issues.

Big Ideas

- ▶ Interconnectedness

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 30 minutes

Inquiry

- ▶ How are the issues of population growth, resource consumption, poverty, conflict, and the environment connected?

Learning Outcomes

Participants will:

- ▶ Collaborate and answer questions about critical global issues

Materials/Preparation

- ▶ **Teacher Master:** *Global Issues Trivia Questions*

ACTIVITY

1. Divide the group into two teams, and have them arrange their seats so team members can discuss the following trivia questions.
2. Give the following directions:
 - a. Each team will choose a spokesperson.
 - b. Team one will be asked a question and then have ten seconds to discuss the question among their team members and give their answer.
 - c. For each correct answer, they get one point.
 - d. If the team that is asked the question gets it wrong, the other team gets to answer the question.
 - e. Rotate questions between the two teams.
3. Choose some or all of the trivia questions from the handout *Global Issues Trivia Questions* and begin the game (some questions are multiple choice).
4. Optional: You may want to have a prize for the winning team!

Assessment Reflection Questions

1. What do you think are the most surprising and/or shocking facts?
2. Discuss how the issues raised in the game are connected to each other.
3. What issues interest you the most, and what would you like to learn more about?

GLOBAL ISSUES TRIVIA

- What is the current (2015) human population of the world?
 - 3.5 billion
 - 7.3 billion
 - 10.5 billion
 - 18.5 billion
- What was the world's human population in 1960?
 - 0.5 billion
 - 1 billion
 - 3 billion
 - 5 billion
- At current rates of growth, what will world population be in 2050?

▶ About 9 billion
- What are the first, second, third, and fourth most-populous countries in the world?

▶ From first to fourth most populous:
China, India, United States, Indonesia
- By about how many people per year is world population growing?
 - 25 million
 - 55 million
 - 80 million
 - 95 million
- What percentage of the world's people today live in cities?
 - 10%
 - 25%
 - 50%
 - 80%
- What city in the world has the largest population?

▶ Tokyo with 37.8 million
- Because of urban sprawl in the United States, an area the size of which state is paved over each year?
 - Texas
 - Delaware
 - Rhode Island
 - Kansas
- In 1950, average life expectancy worldwide was:
 - 36
 - 49
 - 56
 - 66
- In 2000, average life expectancy worldwide was:
 - 46
 - 56
 - 71
 - 76
- What is the measurement tool called that is used to describe the area of the Earth's surface necessary to support a given human lifestyle?

▶ Ecological Footprint
- What country has the largest Ecological Footprint per person?
 - United States
 - Italy
 - Japan
 - Afghanistan
- What environmental concern is associated with habitat loss?

▶ Biodiversity—extinction of species
- What are some humane methods proven to reduce population growth?

▶ Provide access to reproductive health care; educate and empower women; reduce poverty
- Roughly what percentage of the world's people live on \$2 a day or less?
 - 15%
 - 30%
 - 40%
 - 65%
- Roughly what percentage of the world's people live on \$1 a day or less?
 - 10%
 - 20%
 - 45%
 - 65%
- What is the most widely spoken language on Earth?

▶ Mandarin Chinese
- Roughly how many people in the world today are chronically hungry?

▶ 800 million
- Roughly what percentage of the world's people lack access to a safe water supply?
 - 10%
 - 15%
 - 20%
 - 50%
- Approximately what percentage of global energy do hydrocarbon fuels generate?
 - 20%
 - 45%
 - 60%
 - 85%
- What activity accounts for the highest water use worldwide - agriculture, industry, or domestic?
 - Agriculture (65-70%)
 - Industry (20-25%)
 - Domestic (13%)
- Worldwide, how many cars and trucks are in use each day?
 - 10 million
 - 100 million
 - 600 million
 - 1 billion
- What is a renewable resource?

▶ Possible answers are trees, wind, and fish; resources that can be replaced as they are consumed.
- What element do many scientists believe can provide an unlimited source of clean energy?

▶ Hydrogen

Source: *It's All Connected: A Comprehensive Guide to Global Issues and Sustainable Solutions, 2005* (Updated data from United States Census Bureau (2016). http://www.census.gov/popclock/?intcmp=home_pop)

Activity 13

Is It Sustainable?

Overview

Participants define and discuss sustainability and its three key components: the economy, the environment, and society. Participants 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.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 60 minutes

Materials/Preparation

- ▶ **Handout/Master:** *Components of Sustainability*
- ▶ Three different colored sticky notes, 2" x 2", enough for each student to have one sticky note of each color
- ▶ Draw a Venn diagram (like the one in the *Components of Sustainability Handout/Overhead*) on a large sheet of butcher paper (or project master onto a whiteboard)

Inquiry

- ▶ 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 you balance the needs of people, protect the environment, and have a vibrant and equitable economy?
- ▶ How can an activity be made more sustainable?

Learning Outcomes

Participants will:

- ▶ Define sustainability and its three 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 three components of sustainability

ACTIVITY

Introduction

1. Ask the group what they think sustainability means. Have them first think quietly for a minute. Then have them pair with a partner and discuss what they think sustainability means. Have them share their answers with the group. 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 idea might be explored further, with “needs” or “needs of the present” defined more clearly by participants. Have them brainstorm some needs and then discuss the potential conflicts that inevitably arise between needs (e.g., having affordable clothing versus living wages for workers, or having clean air versus using a car as transportation).
2. Define the three 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 three 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 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 regulations, provision of services such as utilities, trash, etc.).
2. Before breaking them into groups, choose one activity (such as driving to school) and walk through an analysis of the activity with the whole group, asking if it is sustainable using the various sustainability big ideas as a guide. Questions to ask about the activity include:

Sustainability:

- Is the activity sustainable today?
- Can it be done without causing harm to humans or other species, now or in the future?
- 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 participants in groups of three, and assign each small group one 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 participants

choose two 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 governmental activities).

6. Have participants 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.
7. Have each small group explain to the whole group 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 whole group.
8. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

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

Further Resources

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.

Film, *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.

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.

COMPONENTS OF SUSTAINABILITY



Activity 14

Let Them Eat Cake

Overview

By using the distribution of cake, participants learn about inequitable resource distribution, resource scarcity, and the interconnectedness between economic and social activities on a global scale.

Big Ideas

- ▶ Equity and Justice
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour



Inquiry

- ▶ What are some consequences of the unequal distribution of resources around the world?
- ▶ What feelings and behaviors result from such inequity?
- ▶ What can we do to make resource distribution around the world more fair and just?

Learning Outcomes

Participants will:

- ▶ Experience an inequitable distribution of resources
- ▶ Consider, write about, and discuss the connection between resource distribution and hunger issues, and the underlying connections to human economic, environmental, and social activities

Materials/Preparation

- ▶ **Master or Projector:** *Sharing the Cake – Divided by World Population*
- ▶ **Master or Projector:** *Sharing the Cake – Divided by Per Capita GNI in PPP*
- ▶ A delicious cake, pie, or other baked item that can be cut into wedges
- ▶ Plates, napkins, and forks, one per student
- ▶ Spatula (or knife) to cut and serve the cake

**Be sure to check to see if any of the participants have allergies to any of the ingredients in the cake.*

ACTIVITY

During the activity you will divide the participants into small groups according to the table below:

FOR A CLASS OF 20 FORM GROUPS OF	FOR A CLASS OF 30 FORM GROUPS OF	REPRESENTING	PERCENT (%) OF EARTH'S POPULATION	
			20	30
3	4	Africa	14%	16%
1	2	US & Canada	5%	5%
2	3	Latin America	9%	9%
2	4	Europe	12%	10%
12	17	Asia	60%	60%

Introduction

(Optional) Do a Sides Debate using the statement below (see Sides Debate activity on page 143): "The United States contributes more wealth and products to the world market, so therefore has the right to use more of the world's resources."

based on population. Physically separate the participants into the groups as indicated in the table above.

Steps

1. Show the cake to the group and explain that you have brought it for them to share. (You might set the cake out in front of the group before you start the activity to pique the participants' interest.)
2. Ask the group if you should invite more people (such as the class next door) to join you in eating the cake. If the participants say no, ask them why not. Explain that this dilemma represents the concept of environmental scarcity, in which there is just not enough of a particular resource for everyone who wants or needs it. In this case, if the group next door came over, there would be less cake per person.
3. Tell them that instead of inviting the group next door, you will divide the cake for this group to share. Ask them to imagine that they represent all the people on the planet. Put up the overhead *Sharing the Cake – Divided by World Population*, showing how the cake would be cut if it were divided
4. Ask each region how they feel about this distribution. (This distribution equally divides the cake among each region and represents the "fairest" distribution.)
5. Tell the participants that instead of dividing it by population you will divide the cake to represent how resources are actually distributed in the world, based on per capita Gross National Income (GNI) adjusted for purchasing power parity (PPP). Show *Sharing the Cake Divided by Per Capita GNI in PPP*.
6. Cut the cake into five unequal pieces, as indicated on the Master, and distribute the pieces to each "region." Be sure to hold up each piece so the group can see how much each region will get.
7. Ask each region how they feel about their share of the cake. Ask Asia and Africa how they are going to divide the cake among their population. Will they try to divide their very small piece equally among the group, or will one or two people decide to eat all of it? (Some participants will likely begin eating the cake, while others may get agitated. Allow some stress to develop.)

8. Ask each region what they are going to do about the situation. Some may choose to migrate to U.S./Canada and take their cake. You might see discrimination (only some people can have the cake), conflict (fighting over the cake), or “brain-drain” (only our “friends” – those with professional degrees or education – from another region can come over and share our piece of the cake). Make sure there is enough time for everyone to experience the feeling of having very little or of having more than everyone else.
9. Explain that this unequal distribution of cake is an example of “structural scarcity,” in that there may be enough of the resource to go around but it is not distributed fairly.
10. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- How did it feel when you saw how much other groups got? How did you divide the cake within your group? Did you do anything to get more cake, or give any away?
- How does this activity relate to the real world?
- Think about a time when you were hungry, or consider how you might feel if you hadn’t eaten in a few days. How would this activity make you feel?
- What are real examples of people trying to “get more cake”? Point out that there is also unequal distribution within countries, and brainstorm ten cases of unequal distribution in your community, state, or country.
- Have the participants brainstorm ways they could personally address the inequitable distribution of resources. Examples include: reduce, reuse, and recycle resources; buy energy-efficient and sustainable products; volunteer at nonprofit organizations working toward social justice; and talk about this issue with friends and family.

- How could a comfortable and fulfilling lifestyle be provided for all the world’s people? If this does not seem possible, what are some of the potential consequences of continued and increasing inequity between individuals and nations?
- What are some of the ethical, social, and security implications of this inequity? Do you see examples of that occurring today? If so, what consequences are evident, and where? What underlies them?
- Discuss the differences between emergency solutions and structural solutions (food aid vs. job creation).

Further Resources

Film, *Plan B: Rescuing a Planet Under Stress and a Civilization in Trouble*, Lester Brown, W.W. Norton & Company, New York, 2003. Brown calls for a worldwide mobilization to stabilize population and climate before they spiral out of control. It provides a plan for sustaining economic progress worldwide.

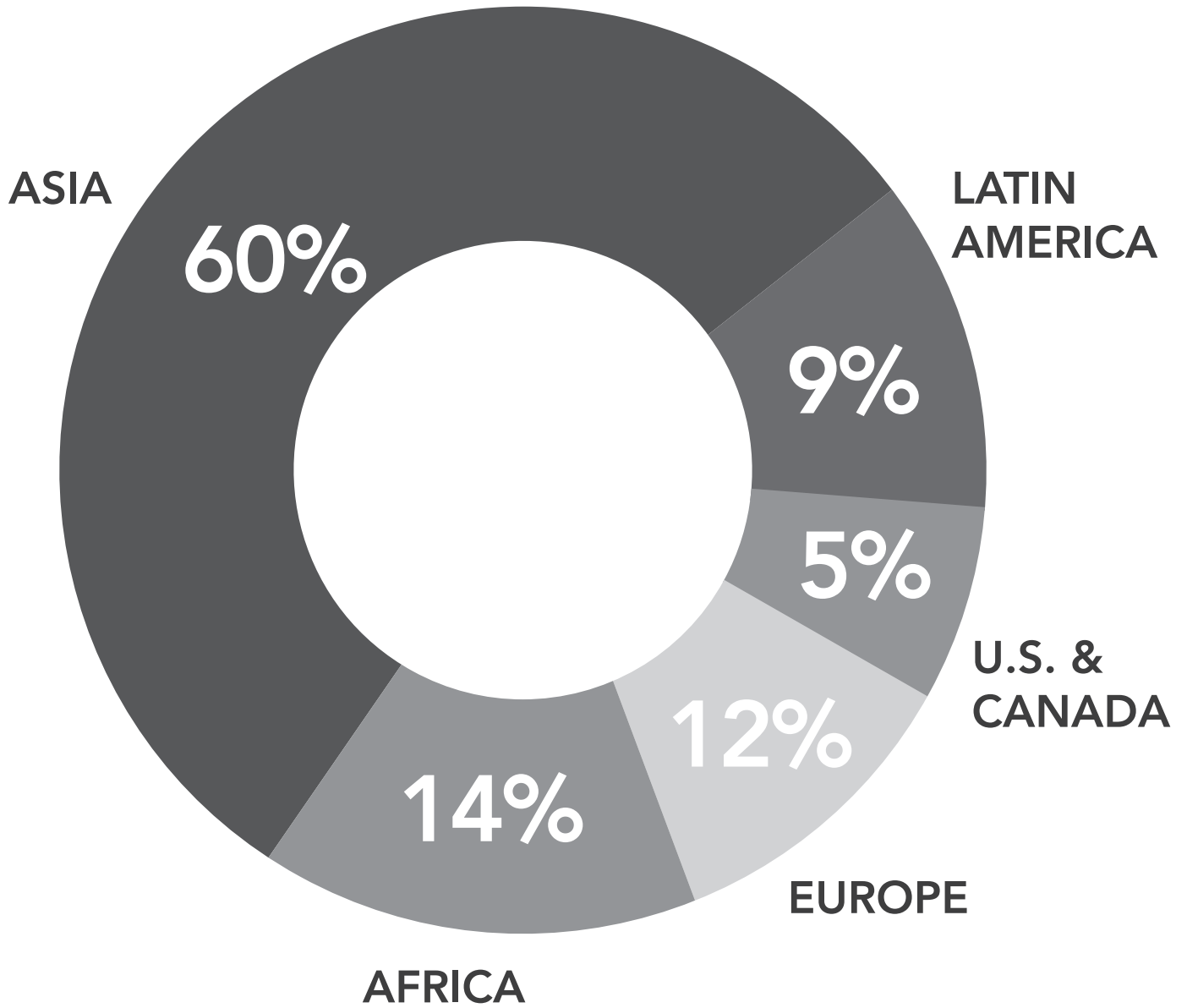
State of the World 2016, World Watch Institute, New York, www.worldwatch.org.

<http://www.unfpa.org> – The United Nations Population Fund (UNFPA) is an international development agency that supports countries in using population data for policies and programmes to reduce poverty, to prevent HIV/AIDS, and to promote reproductive health and dignity and respect for women and girls.

www.oxfamamerica.org – Oxfam America is an international development and relief agency committed to developing lasting solutions to poverty, hunger, and social justice.

SHARING THE PIE

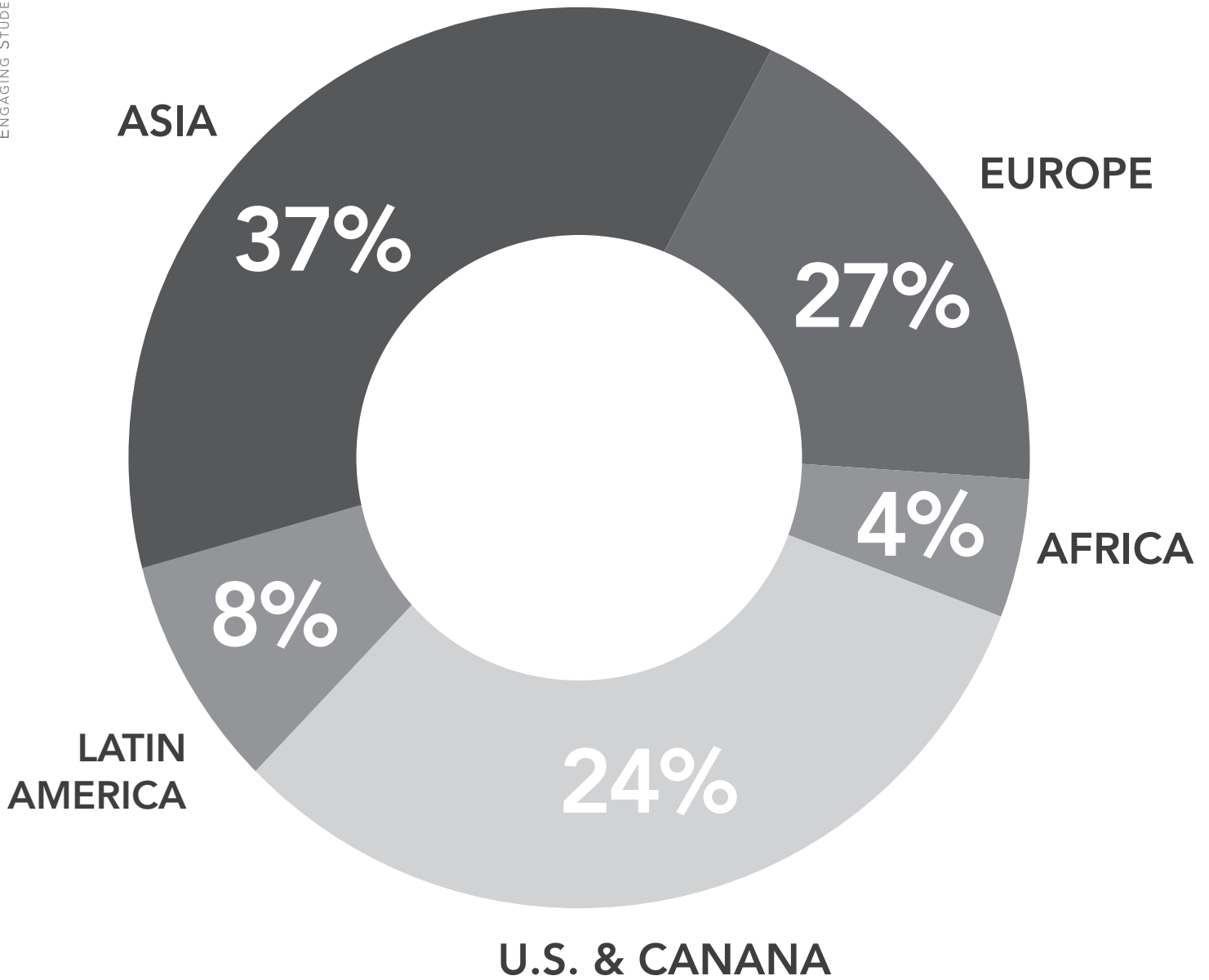
Divided by World Population



Data from 2005 World Population Data Sheet of the Population Reference

SHARING THE PIE

Divided by Per Capita GNI in PPP



Data from 2005 World Population Data Sheet of the Population Reference

Activity 15

Life: The Long and Short of It

Overview

Participants compare life expectancy (a common indicator of good health) among several countries and discuss possible explanations for the differences. They also examine the connection between per capita expenditures on healthcare and life expectancy.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global

Related

Facing the Future Readings

- ▶ *Global Issues and Sustainability*
- ▶ *Big World, Small Planet*

Time

- ▶ 15-30 minutes



Inquiry

- ▶ Why do people in some countries live longer than people in other countries?
- ▶ What factors contribute to long life expectancy?

Learning Outcomes

Participants will:

- ▶ Identify the many factors that affect life expectancy
- ▶ Compare life expectancy rates for a variety of countries

Materials/Preparation

- ▶ **Handout:** *Life Expectancy Country Cards*, one card per student (if you do not use all 30 cards, be sure that you still include a range of life expectancies in the ones you do use)
- ▶ (Optional) **Handout/Projected Master:** *Top 30 Countries for Life Expectancy*, one per student, or make an overhead
- ▶ 8.5 x 11 sheets of blank paper, one per student

ACTIVITY

Introduction

1. Begin by asking the participants why they think people in some countries live longer than people in other countries.
2. Ask participants to define life expectancy. Life expectancy is the average number of years, for an entire population, that an individual born today would be expected to live if current mortality rates continued (i.e. how long individuals in a certain population are expected to live if the conditions affecting life do not change).
3. b. Why do you think the U.S. is 31st?
4. c. Now look at the amount of money spent per person, per year on health care. Which country spends the most? Who spends the least?
5. d. Why might Cuba be in the top 30 if they only spend \$236 per person, per year on healthcare?
6. e. Why might Cuba be almost tied with the U.S. for life expectancy if the U.S. spends more than 22 times the amount of money that Cuba spends on healthcare?

Steps

1. Give each student one *Life Expectancy Country Card* and one blank 8.5 x 11 sheet of paper.
2. Have participants transfer the information on their card to the blank paper so it is large enough for the group to read.
3. Tell participants to look at their *Life Expectancy Country Card* and then stand in a line in order of longest to shortest life expectancy as you ask: Is there anyone expected to live to be over 80? Over 70? Over 60? Over 50? Over 40? Over 30? Have participants form a half-circle so all country cards are visible to the rest of the group and/or have them read aloud their country and life expectancy.
4. (Optional) Have participants identify their country on a map.
5. Either continue with the following activity extension or conclude with the reflection questions below.

2. Conclude with the following reflection questions.

Going Deeper: Critical Consideration

- Why do you think there is such a large gap in life expectancy between countries (total range is from 32 to 82 years)?
- Do you think life expectancy is a good way to measure health?
- Identify some possible characteristics of the countries with long, mid-range, and short life expectancies.
- If we only look at life expectancy as an indicator of a country's health, what other information might we be missing?

Writing Connection

Have participants write a one-page description of their country that offers a possible explanation for its average life expectancy.

Activity Extensions

1. Give each student, or show as on projector, *Top 30 Countries for Life Expectancy*. Have participants review the information and answer the following questions:
 - a. Why do you think someone in Japan is likely to live almost five years longer than someone in Cuba?

Further Resources

Film, *Rx for Survival: A Global Health Challenge*, PBS, 2006, 360 minutes. From vaccines to antibiotics, clean water to nutrition, bioterror threats to the HIV/AIDS pandemic, this 6-part series tells the stories of global health champions and the communities they strive to protect.

Book, *Mountains Beyond Mountains*, Tracy Kidder, Random House, 2003. A true story of Paul Farmer, a doctor who sets out to diagnose and cure infectious diseases and to bring the lifesaving tools of modern medicine to people in Haiti.

<http://hdr.undp.org> – The Human Development Report (HDR), a project of the United Nations Development Program (UNDP), provides data and statistics on human development, including life expectancy and literacy rates.

www.prb.org – Population Reference Bureau's website with extensive country data.

www.pih.org – Partners In Health is a non-profit organization promoting global health.



LIFE EXPECTANCY CARDS

(SOURCE: UNDP 2013)

Japan 84 years	Canada 82 years	Norway 82 years
Costa Rica 78.2 years	United States 77.4 years	Cuba 77.3 years
Mexico 75.1 years	Sri Lanka 74 years	Venezuela 72.9 years
Hungary 72.7 years	China 71.6 years	Jamaica 70.8 years
Vietnam 70.5 years	Thailand 70.0 years	Peru 70 years
Nicaragua 69.7 years	Turkey 68.7 years	Uzbekistan 66.5 years
India 63.3 years	Nepal 61.6 years	Yemen 60.6 years
Cambodia 56.2 years	Papua New Guinea 55.3 years	Haiti 51.6 years
Kenya 47.2 years	Niger 44.4 years	Chad 43.6 years
Mozambique 41.9 years	Malawi 39.7 years	Swaziland 32.5 years

TOP 30 COUNTRIES FOR LIFE EXPECTANCY

(SOURCE: UNDP 2013)

	COUNTRY	LIFE EXPECTANCY 2013 (years)	HEALTH CARE EXPENDITURE PER CAPITA 2013 (\$)
1	Japan	84	\$3768
2	Spain	83	\$2898
3	Andorra	83	\$2948
4	Singapore	83	\$2507
5	Switzerland	83	\$9276
6	Australia	83	\$6110
7	Italy	83	\$3155
8	San Marino	83	\$3847
9	France	82	\$4864
10	Monaco	82	\$6993
11	Republic of Korea	82	\$1880
12	Iceland	82	\$4126
13	Israel	82	\$2599
14	Canada	82	\$5718
15	Cyprus	82	\$1884
16	Luxembourg	82	\$7981
17	New Zealand	82	\$4063
18	Norway	82	\$9715
19	Sweden	82	\$5680
20	Austria	81	\$5427
21	Greece	81	\$2146
22	Finland	81	\$4449
23	Portugal	81	\$2037
24	Germany	81	\$5006
25	Ireland	81	\$4233
26	Netherlands	81	\$6145
27	United Kingdom	81	\$9146
28	Malta	81	\$2000
29	Slovenia	80	\$2085
30	Belgium	80	\$5093

Activity 16

Livin' the Good Life?

Overview

Participants develop indicators to measure quality of life and conduct a survey of peers and adults to obtain data for their indicators. They analyze the survey data using spreadsheet software and produce charts to demonstrate their results. Participants compare their own performance as measured by the quality of life indicators against averages determined by the survey results.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Materials/Preparation

- ▶ **Handout:** *Quality of Life Categories*
- ▶ **Handout:** *Quality of Life Survey* (you can download the survey form from www.facingthefuture.org)
- ▶ **Handout:** *Excel Instruction Sheet*, one copy per student
- ▶ Participants will need basic competency with spreadsheet applications (e.g. Microsoft Excel). You may need to review how to enter data and perform basic summing and averaging functions before beginning this exercise.

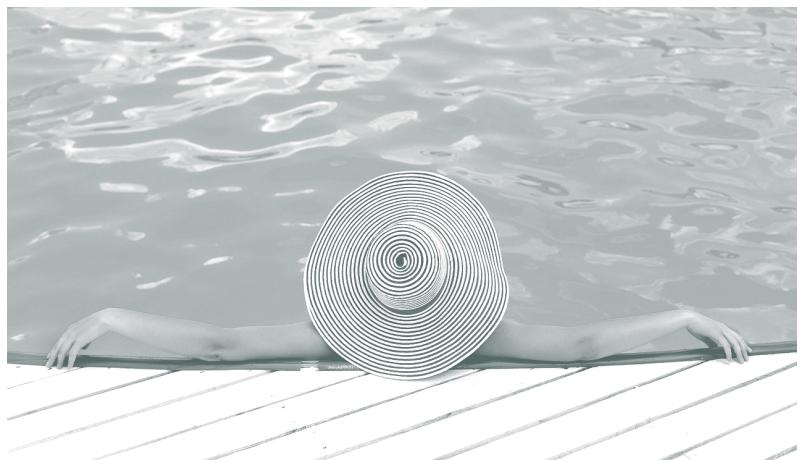
Inquiry

- ▶ How is quality of life measured?
- ▶ What are other ways to measure quality of life?
- ▶ How does the concept of what is necessary for a high quality life change over the course of our lives?

Learning Outcomes

Participants will:

- ▶ Develop quality of life indicators
- ▶ Develop and administer a quality of life survey
- ▶ Analyze data and present the results
- ▶ Understand the connection between how quality of life is measured and global issues such as sustainability, inequality, poverty, and good governance



ACTIVITY

Introduction

1. (Optional) Do a Sides Debate using one of the following prompts (see Sides Debate description on page 143): "People who make more money have a better quality of life." "The 40-hour workweek should be reduced to 32 hours."
 2. Ask the group, "If everyone in the world were 'livin' the good life,' what would we have in common?" OR "If everyone in the world had a high quality of life, how do you think the world might be different than it is today?" (Encourage participants to think about quality of life as a positive concept, not just a lack of negative aspects. For example, the World Health Organization defines "health" as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.")
- of life is Relaxation, how would one measure that (e.g., number of hours per week you do after-school activities; number of days you take a vacation per year)?
6. Consider how easy or difficult it will be for the people you survey to provide data for the indicators. For example, an indicator of Recreation could be the number of milliseconds a person spends playing sports every day, but not many people can tell you how many milliseconds they spend doing anything!
 7. Break the participants into small groups of two to three participants, and assign each small group one of the quality of life categories. Tell the groups they will have about ten minutes to come up with their indicator and write it on a piece of paper. Circulate around the small groups and assist where necessary.

Steps

1. Ask the group to brainstorm general categories of things in their lives that are important to their quality of life. Start with one example such as "family."
2. Either use the categories that they come up with or display on the projector *Quality of Life Categories*.
3. Give the group the following information and instructions: You are going to develop indicators (measurements) to evaluate quality of life based on these categories. You will develop and administer a survey of peers and adults asking for data on the indicators you develop.
4. In groups of two to three participants, each group will come up with an indicator for one of these broad quality of life categories either from the pre-prepared list or from the list created by the whole group.
5. The indicators must be measurable in units of time or quantities and should fit into the formula "Number of ____ per ____." For example, if an important element of quality
8. Have each small group tell you the indicator they came up with and write it on a transparency of the survey, or fill in on the projector or computer. Check that the indicator is something measurable in units of time or quantity, and that a person being surveyed could provide an answer easily. Check that the indicator will fit into the formula "Number of ____ per ____."
9. Explain to the whole group that you will create a final survey based on their indicators and then the participants will survey peers and adults to assess their quality of life as defined by these indicators.
10. Show the transparency of the indicators and conclude day one with the following reflection questions.

Going Deeper: Critical Considerations

- Why did you choose the indicator you did to define your quality of life category?
- Can you think of other indicators for the categories written on the transparency?

(Note: Do not change the original indicators given by the small groups, as you will use those indicators for the survey portion of the exercise. Remind participants that there are many different ways to measure quality of life.)

- How do you think people might adjust their lives to be in line with one or more of these indicators? (For example, if it were socially accepted that a quality of life measurement for Relaxation is the number of vacation days taken annually, then people might adjust their balance between work and vacation time.)

Further Resources

Film, *Affluenza* (1997) 56 minutes; *Escape from Affluenza*. De Graaf, J. (1998). Bullfrog Films. 56 minutes. Humorous documentary films on the history and effects of consumption and a growing movement to live simply and consume less. www.bullfrogfilms.com

Film, *Work and Time* (from "Reinventing the World" series). Springbett, D. & MacAndrew, H. (2000). Bullfrog Films. This 50 minute documentary examines work and time as intertwined problems in our fast-forward lives. www.bullfrogfilms.com

Book, *Take Back Your Time: Fighting Overwork and Time Poverty in America*. De Graaf, J. (2003). Berrett-Koehler Publishers, Inc., San Francisco. The official handbook of the national movement behind "Take Back Your Time Day".

www.yesmagazine.org – Yes! Magazine's 2004 Summer Issue discusses what constitutes the good life according to a range of people including scientists, writers, sociologists, and religious leaders.

<http://hdr.undp.org/statistics> – United Nations Development Program (UNDP) page on statistics and indicators.

http://www.who.int/substance_abuse/research_tools/whoqolbref/en – The World Health Organization's Quality of Life project uses a life assessment instrument to measure 26 broad areas, including physical health, psychological health, social relationships, and environment.

www.redefiningprogress.org – Redefining Progress is a leading organization in creating indicators that measure progress in the context of sustainable development.

www.timeday.org – Home of the October 24th "Take Back Your Time Day".

www.sustainablemeasures.com – Sustainable Measures develops indicators that measure progress toward a sustainable economy, society and environment. Their website offers information and resources on sustainable indicators.

QUALITY OF LIFE
Categories

FAMILY

RECREATION

CREATIVE PURSUITS

WORK/EARNING MONEY

FRIENDS

HEALTH

THE ENVIRONMENT

REST/RELAXATION

SPIRITUAL PURSUITS

VOLUNTEERING/HELPING OTHERS

Activity 17

Livin' the Good Life? Part II

Overview

Participants develop indicators to measure quality of life and conduct a survey of peers and adults to obtain data for their indicators. They analyze the survey data using spreadsheet software and produce charts to demonstrate their results. Participants compare their own performance as measured by the quality of life indicators against averages determined by the survey results.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Learning Outcomes

Participants will:

- ▶ Develop quality of life indicators
- ▶ Develop and administer a quality of life survey
- ▶ Analyze data and present the results
- ▶ Understand the connection between how quality of life is measured and global issues such as sustainability, inequality, poverty, and good governance

Inquiry

- ▶ How is quality of life measured?
- ▶ What are other ways to measure quality of life?
- ▶ How does the concept of what is necessary for a high quality life change over the course of our lives?

Materials/Preparation

- ▶ Download and save on your computer the *Quality of Life Survey* from www.facingthefuture.org (or make a copy or retype the handout *Quality of Life Survey*). Type in the students' indicators in the "Indicator" section of the survey form
- ▶ Make seven copies of the completed *Quality of Life Survey* for each student in the class (one copy for each student to complete during class, and six for each student to administer outside of class). You may decide that students will conduct more or less than six surveys outside of class, but the quantity of surveys per student should remain an even number to ensure that survey data from their peers and adults is represented equally.
- ▶ Make one copy of the *Excel Instruction Sheet* handout for each student

ACTIVITY

Steps

1. Tell the group they are going to make a survey themselves and then administer the same survey to peers and adults in order to gather data for their quality of life indicators.
2. Explain that by collecting data, the group will be able to see the average performance in quality of life for their community, as well as determine how their personal quality of life compares against the community average.
3. Give each student one copy of the *Quality of Life Survey* you have prepared with their indicators and have them complete it in class. Tell them to be as accurate and honest as possible with the data they provide. Be sure they write their name on their survey, as you will be handing it back to them later.
4. Collect the surveys and tell the participants they will get their surveys back later so they can compare their performance against the community average.
5. Pass out the remaining six surveys for each student, and go over the Survey and Excel Instructions.
6. Tell the participants to be aware of problems they may encounter when conducting their surveys that could make the data they collect less accurate. Typical issues to be aware of when conducting a survey include:
 - Are the people they are surveying being honest?
 - Are they surveying people in groups, instead of individually (people tend to adjust their answers based on what they hear their peers saying)?
 - Do people understand the questions?
 - Do people have enough information to give an accurate answer?
7. Ask the participants to think of reasons why inaccurate data could be harmful if it is used to make important decisions.
8. Give them two to four days to conduct their surveys, enter the data in Excel, and turn in their Excel documents to you.

Further Resources

Film, *Affluenza* (1997) 56 minutes; *Escape from Affluenza*. De Graaf, J. (1998). Bullfrog Films. 56 minutes. Humorous documentary films on the history and effects of consumption and a growing movement to live simply and consume less. www.bullfrogfilms.com

Film, *Work and Time* (from "Reinventing the World" series). Springbett, D. & MacAndrew, H. (2000). Bullfrog Films. This 50 minute documentary examines work and time as intertwined problems in our fast-forward lives. www.bullfrogfilms.com

Book, *Take Back Your Time: Fighting Overwork and Time Poverty in America*. De Graaf, J. (2003). Berrrett-Koehler Publishers, Inc., San Francisco. The official handbook of the national movement behind "Take Back Your Time Day".

www.yesmagazine.org – Yes! Magazine's 2004 Summer Issue discusses what constitutes the good life according to a range of people including scientists, writers, sociologists, and religious leaders.

<http://hdr.undp.org/statistics> – United Nations Development Program (UNDP) page on statistics and indicators.

http://www.who.int/substance_abuse/research_tools/whoqolbref/en – The World Health Organization's Quality of Life project uses a life assessment instrument to measure 26 broad areas, including physical health, psychological health, social relationships, and environment.

www.redefiningprogress.org – Redefining Progress is a leading organization in creating indicators that measure progress in the context of sustainable development.

www.timeday.org – Home of the October 24th “Take Back Your Time Day”.

www.sustainablemeasures.com – Sustainable Measures develops indicators that measure progress toward a sustainable economy, society and environment. Their website offers information and resources on sustainable indicators.



QUALITY OF LIFE CATEGORIES

FAMILY

RECREATION

CREATIVE PURSUITS

WORK/EARNING MONEY

FRIENDS

HEALTH

THE ENVIRONMENT

REST/RELAXATION

SPIRITUAL PURSUITS

VOLUNTEERING/HELPING OTHERS

QUALITY OF LIFE SURVEY

Survey Administered by (your name): _____

Person being surveyed is: Peer (Age 18 or younger) Adult (Older than 18)

QUALITY OF LIFE CATEGORY	INDICATOR
FAMILY	
RECREATION	
CREATIVE PURSUITS	
WORK/EARNING MONEY	
FRIENDS	
HEALTH	
THE ENVIRONMENT	
REST/ RELAXATION	
SPIRITUAL PURSUITS	
VOLUNTEER/ HELPING OTHERS	

EXCEL INSTRUCTIONS

Step 1- Administer Quality of Life Survey:

- Each student will survey three different peers outside of this class (under the age of 18) and three different adults (e.g., parents, teachers, relatives, etc.) using the *Quality of Life Survey* developed by your class.
- Survey responders do not need to give their name, but you will need to check the "Peer" or "Adult" box on the survey form.
- Explain to the survey responders that your class has developed some quality of life indicators and that you would appreciate them taking five minutes of their time to answer some questions (Note: Be sure that they have not already been given the survey by another student in your class).
- While administering the surveys, be sure to keep the units of measurement constant for each indicator. If an indicator is "hours of sleep per day", make sure that hours per day is the measurement consistently used for that indicator, and not hours per week, per month, etc.
- If someone cannot answer a question, record that as N/A for "Not Available".
- Record their answers legibly, since you will need to type it into the Excel sheet later.

Step 2 – Create Excel Spreadsheet and Input Survey Data:

- Create an Excel document like the one in the example below and save it on your computer or on a disk.
- Enter the data from your surveys into the Excel spreadsheet. Enter peer or adult in the left hand column and their response under each category as shown in the example below. The sample data filled in below represents data from one surveyed peer and one surveyed adult (this data is just an example; the categories and indicators your class came up with may produce completely different kinds of numbers).
- If you have surveys with some unanswered indicators, DO NOT enter zero in that category on the Excel sheet. Write N/A, like in the example under the "Creative Pursuits" category. Only use zero if their answer is actually zero.

QUALITY OF LIFE DATA ENTRY SHEET

CATEGORIES									
RESPONDENT TYPE (PEER OR ADULT)	FAMILY	REC.	CREATIVE PURSUITS	WORK/EARNING MONEY	HEALTH	THE ENVIRONMENT	REST/RELAX	SPIRITUAL PURSUITS	VOLUNTEER/HELPING OTHERS
PEER	5	2	N/A	5	4	0	30	1	2
ADULT	7	1	2	40	2	5	10	3	3
ADULT									
PEER									

Step 3 – Submit Excel Spreadsheet:

- After you have entered all your data, save the spreadsheet and either e-mail or hand in a disk to your teacher.
- Be sure you include your name somewhere in the e-mail or written on the disk.

Activity 18

Livin' the Good Life? Part III

Overview

Participants develop indicators to measure quality of life and conduct a survey of peers and adults to obtain data for their indicators. They analyze the survey data using spreadsheet software and produce charts to demonstrate their results. Participants compare their own performance as measured by the quality of life indicators against averages determined by the survey results.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Learning Outcomes

Participants will:

- ▶ Develop quality of life indicators
- ▶ Develop and administer a quality of life survey
- ▶ Analyze data and present the results
- ▶ Understand the connection between how quality of life is measured and global issues such as sustainability, inequality, poverty, and good governance

Inquiry

- ▶ How is quality of life measured?
- ▶ What are other ways to measure quality of life?
- ▶ How does the concept of what is necessary for a high quality life change over the course of our lives?

Materials/Preparation

- ▶ Prior to the activity, cut and paste the data from the participants' Excel sheets so that all the students' survey results are combined in one master sheet (you may want to give this task to a teacher assistant or a student)
- ▶ Calculate the average of the data for each indicator, combining the data for "Peer and Adult", "Peer only", and "Adult only" (i.e., add all numbers together for each indicator and divide by the total number of respondents)
- ▶ Print out a copy of the results and bring to class
- ▶ Create and expand the following table on the board or overhead (or if you have access to an LCD projector you can display the actual Excel chart), including all of the survey indicators and the data from each set of Respondents:

INDICATOR	AVERAGE PEER/ ADULT	AVERAGE PEER	AVERAGE ADULT

ACTIVITY

Steps

1. Ask the participants how their surveying went and if they think the data they collected is accurate.
 2. Ask if they noticed any significant differences between responses from peers and adults.
 3. Tell the participants that you have combined all of their data and that you now have averages for their community's performance in each quality of life category. Ask them how they would determine the average, or explain how you obtained the averages.
 4. Tell the participants you are going to give them back the personal surveys they completed earlier so they can compare their responses to the community averages.
 5. Give each student their own *Quality of Life Survey*.
 6. Have the participants look at their personal surveys and compare their performance against the averages of the other survey respondents (adults and peers).
 7. Bring the group together for reflection questions.
- If this process were accepted as the right way to measure quality of life, should governments be responsible for guaranteeing people a basic level of quality of life?
 - How is our government currently involved in guaranteeing basic quality of life (minimum wage, national parks, etc.)? Should they be more involved? Less involved?
 - Would the indicators for quality of life be the same across this country? The world? For example, how might they differ between a wealthier country and a poorer country?
 - How are international standards for quality of life determined?

Further Resources

Film, *Affluenza* (1997) 56 minutes; *Escape from Affluenza*. De Graaf, J. (1998). Bullfrog Films. 56 minutes. Humorous documentary films on the history and effects of consumption and a growing movement to live simply and consume less. www.bullfrogfilms.com

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www.yesmagazine.org – Yes! Magazine's 2004 Summer Issue discusses what constitutes the good life according to a range of people including scientists, writers, sociologists, and religious leaders.

Going Deeper: Critical Considerations

- Do you think this process accurately measures quality of life? What worked and what was difficult about the process?
- What was surprising about the results?
- What could you and/or other people do differently to change or improve your/their quality of life? How did the results of the group surveys compare to the community's averages?
- Are these indicators of quality of life sustainable? If everyone on the planet measured well-being by these indicators, what would the impact be on the environment, the economy, and society?

<http://hdr.undp.org/statistics> – United Nations Development Program (UNDP) page on statistics and indicators.

http://www.who.int/substance_abuse/research_tools/whoqolbref/en – The World Health Organization's Quality of Life project uses a life assessment instrument to measure 26 broad areas, including physical health, psychological health, social relationships, and environment.

www.redefiningprogress.org – Redefining Progress is a leading organization in creating indicators that measure progress in the context of sustainable development.

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www.sustainablemeasures.com – Sustainable Measures develops indicators that measure progress toward a sustainable economy, society and environment. Their website offers information and resources on sustainable indicators.

QUALITY OF LIFE CATEGORIES

FAMILY

RECREATION

CREATIVE PURSUITS

WORK/EARNING MONEY

FRIENDS

HEALTH

THE ENVIRONMENT

REST/RELAXATION

SPIRITUAL PURSUITS

VOLUNTEERING/HELPING OTHERS

QUALITY OF LIFE SURVEY

Survey Administered by (your name): _____

Person being surveyed is: Peer (Age 18 or younger) Adult (Older than 18)

QUALITY OF LIFE CATEGORY	INDICATOR
FAMILY	
RECREATION	
CREATIVE PURSUITS	
WORK/EARNING MONEY	
FRIENDS	
HEALTH	
THE ENVIRONMENT	
REST/ RELAXATION	
SPIRITUAL PURSUITS	
VOLUNTEER/ HELPING OTHERS	

EXCEL INSTRUCTIONS

Step 1- Administer Quality of Life Survey:

- Each student will survey three different peers outside of this class (under the age of 18) and three different adults (e.g., parents, teachers, relatives, etc.) using the *Quality of Life Survey* developed by your class.
- Survey responders do not need to give their name, but you will need to check the "Peer" or "Adult" box on the survey form.
- Explain to the survey responders that your class has developed some quality of life indicators and that you would appreciate them taking five minutes of their time to answer some questions (Note: Be sure that they have not already been given the survey by another student in your class).
- While administering the surveys, be sure to keep the units of measurement constant for each indicator. If an indicator is "hours of sleep per day", make sure that hours per day is the measurement consistently used for that indicator, and not hours per week, per month, etc.
- If someone cannot answer a question, record that as N/A for "Not Available".
- Record their answers legibly, since you will need to type it into the Excel sheet later.

Step 2 – Create Excel Spreadsheet and Input Survey Data:

- Create an Excel document like the one in the example below and save it on your computer or on a disk.
- Enter the data from your surveys into the Excel spreadsheet. Enter peer or adult in the left hand column and their response under each category as shown in the example below. The sample data filled in below represents data from one surveyed peer and one surveyed adult (this data is just an example; the categories and indicators your class came up with may produce completely different kinds of numbers).
- If you have surveys with some unanswered indicators, DO NOT enter zero in that category on the Excel sheet. Write N/A, like in the example under the "Creative Pursuits" category. Only use zero if their answer is actually zero.

QUALITY OF LIFE DATA ENTRY SHEET

CATEGORIES									
RESPONDENT TYPE (PEER OR ADULT)	FAMILY	REC.	CREATIVE PURSUITS	WORK/EARNING MONEY	HEALTH	THE ENVIRONMENT	REST/RELAX	SPIRITUAL PURSUITS	VOLUNTEER/HELPING OTHERS
PEER	5	2	N/A	5	4	0	30	1	2
ADULT	7	1	2	40	2	5	10	3	3
ADULT									
PEER									

Step 3 – Submit Excel Spreadsheet:

- After you have entered all your data, save the spreadsheet and either e-mail or hand in a disk to your teacher.
- Be sure you include your name somewhere in the e-mail or written on the disk.

Activity 19

Making Global Connections

Overview

Participants demonstrate the interconnectedness of global issues and solutions through a kinesthetic exercise using global issue cards and a ball of yarn.

Big Ideas

- ▶ Equity and Justice
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 60 minutes



Inquiry

- ▶ How are global issues interconnected?
- ▶ How does a change in one global issue affect other global issues?
- ▶ How are solutions to global problems interconnected?

Learning Outcomes

Participants will:

- ▶ Kinesthetically experience the interconnectedness of global issues
- ▶ Understand how a change in one issue can positively and negatively affect a change in another issue

Materials/Preparation

- ▶ **Handout:** *Global Issues*, with one subject on each card per student (or one per pair of participants if you do the activity in pairs)
- ▶ Large cards, to be worn around the neck by participants
- ▶ Ball of yarn

ACTIVITY

1. Display the following quote on the board or projector and have participants do a journal entry or “free write” (a short, ungraded, writing that allows participants to compose freely and fluently on a given word, quote, piece of art, etc.) on it: “When you try to pick out anything by itself, you find it hitched to everything else in the universe.” – John Muir
2. After they write for a few minutes, lead a group discussion about the quote, having participants share their writing.
3. Alternatively, you can introduce the activity by asking participants to think about something they ate today. Then ask them to think about how the food/meal might be connected to the environment. Did the production, processing, or transportation have any impact on the natural environment, including water, land, plants, or animals? Now ask them to choose one of these environmental connections and think about its human connection: Does the environmental impact have any effect on people? Do people use the environmental resource? After a few seconds, have one or two participants share their series of connections.
4. Tell participants they are going to do an exercise that will help them see and experience how global issues are interconnected.
3. Have that student (together with their partner) read the global issue on their card and state how this issue is connected to your issue (e.g., healthcare is connected to poverty because most people living in poverty do not have access to basic healthcare; conflict is connected to discrimination because some wars are started when one group of people does not like another group based strictly on their ethnic background or religious beliefs; education is connected to population growth because people with higher levels of education tend to have fewer children). If the student cannot figure out how the two issues are connected, other participants in the circle can help. If no one in the circle can think of a connection, the student(s) can pass and continue the activity.
4. Once the student(s) has stated how their issue is connected to the previous one, they hold on to a piece of yarn and toss the ball of yarn to someone else across the circle.
5. Continue the exercise until everyone has caught the ball of yarn, called out the interconnections, and is now holding a piece of the yarn. Have the last student throw the ball of yarn throw it back to you. You should now have a representative “web” of yarn with every student wearing a *Global Issues Card* and a piece of the web.
6. Have everyone pull the string so the web is taut.

Steps

1. Have participants stand in a circle. Pass out the *Global Issues Cards* to each student and keep one card for yourself. In groups with more than 16 participants, you can have participants pair up, choose one card between them, and do the activity together. Have the pairs stand so that one partner is in front of the other.
2. Read aloud the global issue on your card and then toss the ball of yarn to a student in the circle.
7. Tug on your piece of the yarn and ask if anyone felt the tug. Have some others tug on the yarn and see who else feels it. Try tugging harder and see who feels it then. Ask what that tug might represent or signify about the connections between global issues.
8. Conclude the activity with a discussion using the reflection questions below. You may want to lead the discussion while the participants are still standing and holding the yarn so the symbolism of the web is still present.

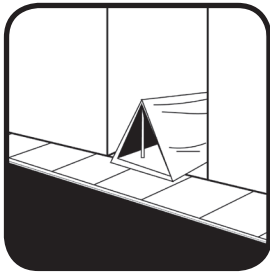
Going Deeper: Critical Considerations

- Why might it be helpful to understand how and why global issues are interconnected?
- Can you think of other issues that might be interconnected like the ones raised in this activity?
- How can understanding the interconnectedness of global issues help us find solutions to the problems surrounding these issues?
- Understanding the interconnectedness of issues can often be the first step in solving problems. Interconnectedness is an important and key concept in “systems thinking” – a holistic way of thinking that takes into account the connections, interactions, and processes that link different elements together and form a complete “system.” By understanding that issues are interconnected, we can begin to see when and where we can intervene in a system to make change (see “It’s All Connected,” Units 1 and 7 for a detailed discussion of systems thinking). What are some examples of places we could intervene in a system and maximize positive connections between various issues? Have the participants discuss the idea of intervening in a system and making positive changes.
- Identify not only where or when one could intervene in a system but also how an individual’s actions can “snowball” – i.e. trigger other reaction in the system that build upon and sustain the positive effects of the original action. What kind of small action might snowball into a large result? How can small changes replicate and multiply to produce widespread and lasting change?

Writing Connection

Arrange participants in groups of five or six. Using a *Global Issues Card*, one student writes a short summary (2-3 sentences) of their issue on the top of a piece of paper and then passes the paper to the next student. That student then writes a short description (1-2 sentences) that explains how the issue on their card is related to the previous story. Then they fold the paper so that only the last story is visible and pass it on to someone else. Keep passing, writing, and folding the paper until everyone has written part of the connections story. Once everyone has written, have each small group open the whole story and read it aloud to the whole group.

GLOBAL ISSUES CARDS Page 1



POVERTY



CONSUMPTION



POPULATION GROWTH



PEACE AND CONFLICT



HUMAN MIGRATION



ENVIRONMENT



TECHNOLOGY

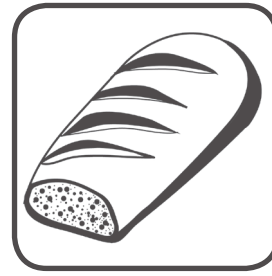


HEALTHCARE

GLOBAL ISSUES CARDS *Page 2*



EDUCATION



FOOD



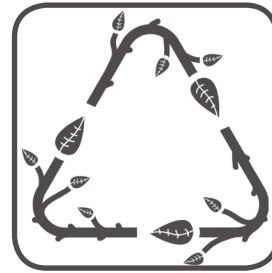
WATER



ECONOMICS



DISCRIMINATION



SUSTAINABILITY



HUMAN RIGHTS



GLOBAL WARMING

GLOBAL ISSUES CARDS *Page 3*



GOVERNANCE



CULTURE



SOCIAL JUSTICE



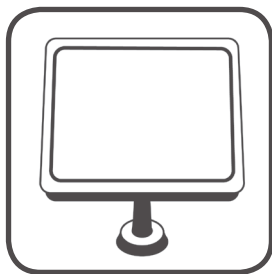
BIODIVERSITY



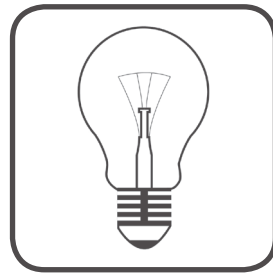
**NON-RENEWABLE
RESOURCES**



**RENEWABLE
RESOURCES**



MEDIA



ENERGY USE

Activity 20

Metaphors for the Future

Overview

Participants use metaphors describing different degrees of control we have over our future to explore how worldviews and mental models influence and shape our actions.

Big Ideas

- ▶ Connecting with Nature
- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour



Inquiry

- ▶ How do perception and worldview influence and shape our actions?
- ▶ How can we create the future that we want?

Learning Outcomes

Participants will:

- ▶ Discuss and write about a pressing issue of the future from the perspective of a specific worldview
- ▶ Determine what metaphor best describes the student's view of the future
- ▶ Evaluate how different perspectives on our level of control over the future influence behavior and actions

Materials/Preparation

- ▶ **Handout:** *Metaphors for the Future*
- ▶ The four metaphors of the future presented in this activity range from a perspective of pre-determinism to total self-determination. After analyzing a few critical issues from the perspective of one of these views of the future, participants will have a chance to choose or create a metaphor that they feel best represents their own view of the future. One purpose of the activity is to allow participants a chance to “see” the world through the eyes of someone else. Another purpose is to offer participants a way to identify and form their own views of the future. Finally, participants are encouraged to explore how different worldviews influence our actions and affect outcomes.

ACTIVITY

Introduction

1. Ask participants to brainstorm some issues/problems/concerns that they feel humanity must address in the next 20 to 50 years (e.g., the growing gap between the rich and poor, HIV/AIDS, or environmental degradation).
2. Tell participants they are going to explore the future of some of these issues using several metaphors. You may need to define metaphor (i.e. a figure of speech in which one thing is described as if it were another, as in "Life is just a bowl of cherries.").
4. Have participants share their chosen or newly-created metaphor with a partner and explain why they chose it.
5. Conclude with the following reflection questions.

Steps

1. Arrange the participants into at least four groups with no more than five participants per group.
2. Assign each small group one of the metaphors for the future from the handout, *Metaphors for the Future*. Do not have participants share their view with the other groups.
3. In their groups, have the participants read their metaphor together and then discuss and write a summary of how they would address two or three of the issues from the brainstorm list created in Step One, as if they were a person who held the belief of their assigned metaphor. Have them discuss the positive and negative aspects of holding this view of the future. For example, the group with the metaphor that says "the future is like a great roller coaster on a moonless night" might respond to the issue of HIV/AIDS by saying that there is nothing they can do about it and therefore they will choose to ignore this issue. A positive aspect of this view could be that they might not worry as much about this issue. The negative aspect of this view might be that the problem will persist and may eventually impact their lives even if they are not affected directly. Have participants create a metaphor that describes their view of the future, and report it to the whole larger group.

Going Deeper: Critical Considerations

- Which metaphor occurred most frequently?
- Which occurred least frequently? Do you think this pattern would hold true for most people? Which metaphor do you believe is most widely held by people in your family, school, community, and nation?
- Do you believe that people's actions are influenced by their views of the world and the future? Explain why or why not.
- Explain how you might act differently if you perceive that you have control over your future.
- Explain the underlying values and attitudes that led to your choice. For example, how do beliefs and values about fate (predetermination) and freedom (self-determination) affect our perceptions?
- Which metaphor do you think someone would choose if he or she were a villager in India, a single mother in Zimbabwe, a Palestinian refugee, a homeless child in Chicago, or a banker in Brazil?
- What effect might their worldview have on the way our future turns out?
- What will you need to implement your own metaphor or view of the future? For example, if you chose a ship on the ocean, what tools and information would you need to navigate the water?

Further Resources

Book, *Ishmael* (1992) and *My Ishmael* (1998), by Daniel Quinn, Bantam/Turner. *Ishmael*, a gorilla rescued from a traveling show that has learned to reason and communicate, uses these skills to educate himself in human history and culture. *Ishmael* lays out a theory of what has gone wrong with human civilization and how to correct it – a theory based on the tenet that humanity belongs to the planet rather than vice versa. In the sequel, *My Ishmael*, Quinn focuses on the “Leavers” and “Takers,” his terms for the two basic, warring elements of human sensibility.



METAPHORS FOR THE FUTURE

1. The Future is Like a Great Roller Coaster on a Moonless Night.

It exists, twisting ahead of us in the dark, but we can only see the track that is just ahead. We are locked in our seats, and nothing we may know or do will change the course that is laid out for us. In other words, the future is predetermined and there is nothing we can do about it.

2. The Future is Like a Huge Game of Dice.

It is entirely random and subject only to chance. For example, a woman misses a plane by a few seconds and avoids dying when the plane crashes. Since everything is chance, all we can do is play the game, pray to the gods of fortune, and enjoy what luck comes our way. In other words, the future is totally random and we do not know how or if our actions make a difference.

3. The Future is Like a Great Ship on the Ocean.

We can travel freely upon it and there are many possible routes and destinations. There will always be some outside forces, such as currents, storms, and reefs, to be dealt with, but we still have the choice to sail our ship where we want to go. In other words, we can choose whatever future we want if we are willing to work with a purpose and within the knowledge and constraints of outside forces.

4. The Future is Like a Blank Sheet of Paper.

It is there for us to fill in with our actions and decisions in the present. If we choose the future we want and spend our daily lives trying to make it happen, it will probably materialize. If we leave it to the powers-that-be to decide upon and plan the future, we will have a very different kind of future—one dominated by the powerful. In other words, we have control over our future if we choose to act on it.

Activity 21

Microcredit for Sustainable Development

Overview

Participants research a developing country and then apply for a \$100 microcredit grant to start a small business, as if they were a person living in that country. A business plan and an illustrated poster are presented to a “sustainable development panel of experts” (participants) who determine whether or not the business plan is economically, socially, and environmentally sustainable.

Big Ideas

- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 2 hours



Inquiry

- ▶ What are some structural causes of poverty?
- ▶ What is sustainable development?
- ▶ What is microcredit and how can it help alleviate poverty?

Learning Outcomes

Participants will:

- ▶ Conduct online research on a developing country
- ▶ Prepare a microcredit business plan as if they were a person living in that country
- ▶ Evaluate their peers’ business plans
- ▶ Understand how structural solutions can help alleviate poverty

Materials/Preparation

- ▶ **Overhead:** *Sample Microcredit Business Plan*
- ▶ **Handout:** *Grant Application*, one copy per student
- ▶ **Handout:** *Microcredit Business Plan Presentation*
- ▶ Internet access for each student (or students can do their research out of class)

Vocabulary needed:

Sustainability: Meeting current needs without limiting the ability of future generations to meet their needs.

Sustainable Development: Practices in areas such as agriculture, economic development, healthcare, and education that lead to economic, social, and human progress, are locally appropriate, and meet the needs of current generations without limiting the ability of future generations to meet their needs.

Structural Solution: A solution to a critical problem, such as poverty, that addresses the underlying causes of the problem. Structural solutions often require action by governments or large institutions.

Microcredit: The business or policy of making small loans or grants to poor people for entrepreneurial (business) projects.

ACTIVITY

Introduction

1. Write this quote on the board or overhead and have participants do a free write on it: "Give a man a fish and he'll eat for a day, teach him how to fish and he'll eat forever." Have participants share their thoughts on the quote. What does it mean? What might fish represent? To what global issues might this quote apply?
2. Review the vocabulary words, if necessary.

Steps Part 1

1. Show participants the Sample Microcredit Business Plan and ask if they can figure out what it is. After participants have shared their ideas, explain that this is an actual application from a person in India who

applied for a microcredit grant from Trickle Up, a micro-granting organization that gives extremely poor people \$100 grants to start a business.

2. Tell participants that they are going to research a developing world country and, as if they were a person in that country, they are going to apply for a microcredit grant to start a small business.
3. Go over the assignment sheet, Microcredit Business Plan Presentation. This assignment includes Internet research, a business application, and a poster presentation.
 - Buy raw materials/merchandise
 - Food processing or making something
5. Give participants assignment deadlines when they will be required to bring their poster and business applications to the next meeting of the group (for example to the next class). They will need a few days of outside class time to complete their research, paper, poster, and business application. Alternatively, you can have the participants do some of the work in class if they internet access and poster supplies.

Steps Part 2

1. On Day 2 (and Day 3, if necessary) participants present their posters and business plans to a panel of experts that include a microcredit funder, an environmentalist, and a community activist.
2. Go over the panelist instructions on the assignment sheet. Each student will have a chance to present his/her business plan and serve on the panel.
3. Call on three participants to take the role of a panelist for each plan presented. Pass out the role cards and give them a few minutes to review their roles.

4. The panel will listen to the applicant’s presentation, ask questions, and then assign points (as indicated in the assignment sheet) to the business proposal.
5. Proposals receiving a minimum of 15 points will be granted a microcredit grant. Those that do not receive the minimum points will have a chance to revise their plan until they receive the grant.
6. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- How do you think it would feel if your life was like the person you represented in your business plan?
- What business would you start if you were given a microcredit grant?
- Does this process of micro-granting seem like it works well as a way to alleviate poverty?
- What can you do personally to help alleviate poverty?
- What do you think might be potential flaws or problems associated with microcredit?
- What are other ways to alleviate poverty aside from microcredit?

Further Resources

Film, *Credit Where Credit is Due*, Bruce, A. (2000). Bullfrog Films. 24 minutes, www.bullfrogfilms.com. This documentary film recounts how taking out a loan revolutionized the lives of village women Jahanara, Bilkis, Nargis, Minara, Majeda and Shonda – not only increasing their incomes but also helping to improve their health and the health of their children.

Film, *Small Fortunes: Microcredit and the Future of Poverty*, Van Wagenen, S. (2005). 60 minutes. This documentary describes the

impact that microcredit is having throughout the world through the stories of twelve microentrepreneurs living in Bangladesh, India, Kenya, Peru, The Philippines, and the United States. Microcredit luminaries and experts describe how microcredit is a powerful tool in fighting poverty and provide insights into the issues confronting the microcredit movement.

www.grameenfoundation.org – Grameen Foundation USA is a global nonprofit organization that combines microfinance, new technologies, and innovation to empower the world’s poorest people to escape poverty.

www.trickleup.org – The Trickle Up Program’s mission is to help the lowest income people worldwide take the first step out of poverty by providing conditional seed capital and business training essential to the launch of a small business.

www.globalpartnerships.org – Global Partnerships is an innovative leader in the fight against poverty around the world through microlending programs to help the poor help themselves, the development and sharing of model programs that offer sustainable solutions to poverty, and through the Initiative for Global Development.

TRICKLE UP PROGRAM BUSINESS PLAN

1999

PLEASE PRINT

Date: 01 / 11 / 99
day month year

Business No. IND / KSRA / 143 / 99

Initial Check Number: 935317

Our Country's currency is the: Rupees The exchange rate is 42.00 = US \$1. Please provide figures in local currency

PRODUCT

1. What is your product or service? CYCLE REPAIRING SHOP

2. Where is your product sold? In the market Door to door At Home Other

3. What is the name of your business? _____

COSTS

4. What do you need to start or expand your business? (List only items that last a long time, such as equipment and tools.)

Items	Cost
<u>MACHINE TOOLS</u>	<u>800</u>
One - Time Costs : No. 4 Total =	
	<u>800</u>

COSTS

5. What do you need to buy to keep your business going each month? (List items such as raw materials, rent transportation, animal feed.)

Items	Cost / Month
<u>BYCYCLE PART, TYRE-TUBE ETC</u>	<u>1300</u>
Monthly Operating Costs : No. 5 Total =	
	<u>1300</u>

6. Add No. 4 and No. 5 for total cost for 6 month of operations : $\frac{800}{\text{No. 4 Total}} + \frac{1300}{\text{No. 5 Total}} = \frac{2100}{\text{Total Cost 1st MO.}}$

MEETING THE COSTS

7. What will you bring to the business?

8. What will others contribute?

9. What will you buy with Trickle Up \$50 ?

10. Total resources available : (add 7,8,9)

Items (cash/tools/materials)	Cost
<u>MACHENIC TOOLS, AIR PUMP etc.</u>	<u>800</u>
<u>CYCLE PARTS, TYRE, TUBE</u>	<u>1300</u>
One - Time Costs : No. 4 Total =	
	<u>2100</u>

11. Are the total resources available (No. 10) greater than or equal to your total costs for the 1st month (No.6)? Yes No. If yes, please answer the rest of the questions. If no, you should reconsider your business plan.

PROFITS

12. How much money do you think you can make in SALES in month? 3500
Please refer to Worksheet calculations.

13. What are your COSTS 6 months (No. 5)?

14. (a) Your 6 Months PROFIT is $\frac{3500}{\text{Sales (No.12)}} - \frac{1300}{\text{COSTS (No.13)}} = \frac{2200}{\text{TOTAL PROFIT}}$

(b) What will your PROFIT be in three months (No. 14a X 3)
The Trickle Up Business Report is based on sales in a 3-month period

15. How will you use your profits? Check all that apply.

(a) Reinvestment Buy tools/equipment Buy raw materials/merchandise For savings

(b) For family/personal use

MICROCREDIT BUSINESS PLAN APPLICATION

Adapted with permission from Trickle Up

Page 1

Country: _____

Our country's currency is the: _____. The exchange rate is _____ = US \$1. (Provide figures in local currency)

PRODUCT

1. What is your product or service? _____

2. Where is your product sold? In the market Door to door At Home Other

3. What is the name of your business? _____

COSTS

4. What do you need to start or expand your business? (List only items that last a long time, such as equipment and tools.)

Items	Cost
One-Time Costs: No. 4 Total =	

5. What do you need to buy to keep your business going each month? (List items such as raw materials, rent, transportation, animal feed.)

Items	Cost/Month
Monthly Operating Costs: No. 5 Total =	

6. Add No. 4 and No. 5 for total cost for first month of operations: _____ + _____ = _____
No. 4 Total No. 5 Total TOTAL COST 1ST MO.

MEETING THE COSTS

7. What will you bring to the business?

8. What will others contribute?

9. What will you buy with the \$50?

Items (cash/tools/materials)	Cost
Investment: No. 10 Total =	

10. Total resources available: **(7, 8, 9)**

11. Are the total funds available (**No. 10**) greater than or equal to your total costs for the 1st month (**No. 6**)? Yes No
 If yes, please answer the rest of the questions. If no, you should reconsider your business plan.

MICROCREDIT BUSINESS PLAN APPLICATION

Adapted with permission from Trickle Up
Page 1

PROFITS

12. How much money do you think you can make in sales in 1 month?

_____ MONTHLY SALES

13. What are your costs each month (from No. 5)?

_____ MONTHLY OPERATING COSTS

14. (a) Your monthly profit is _____ - _____
Sales (No. 12) Costs (No. 13)

= _____ MONTHLY PROFIT

(b) What will your profit be in 3 months (No. 14a x 3)?
The Business Report is based on sales in a 3-month period

= _____ PROFIT FOR 3 MONTHS

15. How will you use your profits? Check all that apply.

(a) Reinvestment: Buy tools/equipment
(b) For family/personal use For savings

Buy raw materials/merchandise

16. Does your business involve? (check all that apply)

growing crops raising animals
 Services Buying and selling ONLY
 Other (please describe): _____

Food processing or making something

17. How will you use the \$50 grant? To start a new business

To expand an existing business

18. Will this be your main source of money? Yes No

19. Is this a family business? Yes No

20. How many people work in the business? _____ Of these, _____ are female, and _____ are male.

21. Is your business in a (check one) Rural area Urban area or Semi-urban/Suburban area?

LONG TERM GOALS

22. How will your business plan affect structural change and help to alter the cycle of poverty for you and your family?

23. How will the business plan be environmentally sustainable?

24. How will the business plan be socially and culturally sustainable?

I apply for a Conditional Grant of US\$100 for this business. I have read and agree to the following conditions:

1. I will start a profit-making enterprise that generates continuing income;
2. If this plan is approved, the microcredit funder will make an immediate payment of \$50 in the form of a conditional grant;
3. I will save or reinvest at least 20% of our profit in the business;
4. Each person in the business will work at least 250 hours within the first 3 months;
5. The final \$50 payment will be made only if our business is continuing and if we submit a Business Report within 12 months, showing that the conditions of the grant have been met.

Signature _____

RESEARCH AND MICROCREDIT BUSINESS PLAN PRESENTATION *Page 1*

The project consists of 3 parts:

- Internet Research – Research and take notes on a developing country, focusing on its economic situation
- Microcredit Business Plan – Prepare a Microcredit Business Plan and apply for a \$100 microcredit grant as if you were a person living in that country
- Poster Presentation – Present your Microcredit Business Plan to a panel of experts who will decide if your plan is economically, environmentally, and socially sustainable

Internet Research

Choose a developing region or country and identify an economic challenge there. For example, in India an economic focus could be farmers whose topsoil has eroded away. Research the following questions about your country and take notes:

- **What is the essential geography and demographics of the country?** (physical geography, such as climate and topography, and vital statistics of population density, GDP, per capita income, infant mortality, and other key quality-of-life indicators for the region)
- **What are the economic challenges and effects of long-term poverty in the region?**

Some good websites to start your research:

United Nations Development Program: www.undp.org

CIA Factsheets: <http://www.cia.gov/cia/publications/factbook/index.html>

World Resources Institute: www.wri.org

Population Reference Bureau: www.prb.org

Microcredit Business Plan

As you conduct the research, think about what sort of business plan you will offer as a solution to pressing economic challenges. Then, as if you were a local person from that region, complete a *Microcredit Business Plan* for a \$100 grant. Your plan should be convincing and promising in terms of the realities of the region and economy, as well as in terms of the hypothetical person that you portray as the business owner. In completing the application, you will address these questions:

- **Product:** What is a realistic product or service? Consider local resources, market, and skills.
- **Costs:** What are realistic one-time and on-going monthly costs?
- **Meeting the Costs:** What will the owner's monetary and capital investment be? What other financial resources will they need?
- **Profits:** Calculate and project monthly profit and 3 month profit.
- **Long Term Goals:** How will the plan affect structural change and help alter the cycle of poverty for the owner? His/her family? What are the environmental impacts of the proposed business? How will the business plan affect the local and regional culture?

POSTER PRESENTATION

You will present your *Microcredit Business Plan* in the form of a poster session before a 3-person committee representing different interests, including a **Microcredit Funder**, **Environmental**, and **Community Activist**.

- Your poster must include a business logo and other visual aids, such as a map, graph, table, diagram, flow chart, timeline, photographs, and drawings. Think about what type of business logo and visual aids will make your proposal more convincing and promising.
- When presenting your plan, be confident, knowledgeable, audible, clear, and organized.
- The committee will vote for or against funding your plan based on how factually convincing and how promising the proposal is in terms of **structural change/poverty alleviation**, **economic feasibility**, **environmental sustainability**, and **effect on society and culture**.

RESEARCH AND MICROCREDIT BUSINESS PLAN PRESENTATION *Page 2*

Panel of Experts

PROFITS

Each of you will also serve on the panel representing one of the 3 experts: **Microcredit**

Funder, Environmentalist, and Community Activist. As an expert, you will analyze the

business plan for its economic, environmental, and social sustainability.

12. How much money do you think you can make in sales in 1 month? _____
MONTHLY SALES

13. What are your costs each month (from No. 5)? _____
MONTHLY OPERATING COSTS

14. (a) Your monthly profit is _____ - _____ = _____
MONTHLY PROFIT

• Read your panel role carefully. - _____ = _____
• During the presentation listen carefully, pay close attention, and take notes.

• After the applicant presents his/her proposal you may ask questions from the perspective
(b) What will your profit be in 3 months (No. 14a x 3)? _____
PROFIT FOR 3 MONTHS

The Business Report is based on sales in a 3-month period

15. How will you use your profits? Check all that apply.
• Without conferring with fellow panel members, rate the plan for each of the 2 categories listed in the rubric below

(a) Reinvestment: Buy tools/equipment Buy raw materials/merchandise
 Grow crops/personal use Profit savings

(b) **Converse and debate with the other panelists.** You may ask panel members any clarifying question, but may disagree with their rating only if you can cite clear evidence why they should change their rating.

16. Does your business involve? (check all that apply)
 growing crops raising animals Food processing or making something

Present to the applicant the final (total from all 3 panelists) rating.
 Buy and sell only

Other (please describe): _____

A TOTAL FINAL RATING OF 15 IS REQUIRED FOR PLAN APPROVAL

CATEGORY	3 POINTS	2 POINTS	1 POINT
Is the plan convincing ? Does it rely on accurate information and include details that are relevant to your area of concern?	Very well researched, with thorough consideration of background information	Reasonably well researched, contains most, but not all relevant background information	Poorly or incompletely researched, lack of convincing background information
Is the plan promising ? Does it offer positive change for your area of concern?	Not only sensible, but offers exciting promise and does not contain significant obstacles	Offers significant promise, but some obstacles remain	Seems completely unrealistic and does not offer realistic promise
Your Assigned Points			
Total Points (From all 3 panelists)			

MICROCREDIT FOR SUSTAINABLE DEVELOPMENT

Panel Roles

Role: Microcredit Funder

You work for a nonprofit microcredit organization that grants money for microenterprises. Your job is to make sure their money is well spent. You must be rational in sorting out which plans deserve funding and which plans do not merit your limited financial resources. You are concerned with the success and longevity of microenterprises – as are your contributors!

Your primary concern is that your nonprofit organization’s microcredit grants go only to microenterprises that offer **convincing evidence** and **promising hope**.

Initially and over time, will the plan alter the cyclical and structural nature of poverty for the business owner, community, and region?

Role: Community Activist

You work for a local organization devoted to the integrity of regional culture and the promotion of democratic citizenship. You oppose the negative effects of modernization and globalization. You are passionate about preserving local culture – traditions, arts, and language. While you are concerned about poverty, you are unwilling to sacrifice quality-of-life for 1 individual’s short-term economic gain.

Your primary concern is that the microenterprise offers convincing evidence and promises that it will preserve and advance culture and democracy.

Initially and over time, will the microenterprise offer genuine progress, enhance local culture, and promote democracy for the business owner, community, and region?

Role: Environmentalist

You work for a large international nonprofit organization that is devoted to monitoring and preventing environmental degradation. Your job survival depends on how carefully you attend to possible environmental consequences of the microenterprises. You must be critical and creative in anticipating environmental effects of the microenterprise.

Your primary concern is that the microenterprise offers convincing evidence and promises that it will be ecologically sustainable. The plan should not be approved simply because it seems to be financially viable or meets the personal needs of the business owner.

Initially and over time, will the environmental impact (ecological footprint) of the microenterprise be acceptable for the business owner, community, and region?

Activity 22

Now Hear This

Overview

Participants see and hear a comparison between an average U.S. citizen's and Zimbabwean citizen's Ecological Footprint through a demonstration in which popcorn kernels – representing Ecological Footprints – are poured into a metal pan. This demonstration activity can be conducted on its own or as a companion to the other Ecological Footprint activities, “Watch Where You Step” and “When the Chips are Down.”

Big Ideas

- ▶ Connecting to Nature
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Respect for Limits
- ▶ Universal Responsibility

Time

- ▶ 5-10 minutes for demonstration



Inquiry

- ▶ How does the Ecological Footprint of an average U.S. citizen compare to that of an average sub-Saharan African citizen?
- ▶ How can people reduce the size and impact of their Ecological Footprint?

Learning Outcomes

Participants will:

- ▶ Hear a comparison between the environmental impact of an American lifestyle and that of the citizens of a country with a smaller Ecological Footprint
- ▶ Brainstorm ideas for reducing personal ecological footprint

Materials/Preparation

- ▶ **Handout/Descriptor:** *Definition and Components of an Ecological Footprint*
- ▶ 2,500 popcorn kernels (about 2 cups) placed in a container from which you can easily pour

ACTIVITY

Introduction

1. Explain and discuss the concept of Ecological Footprints using the handout/descriptor, *Definition and Components of an Ecological Footprint*.
2. Explain that people around the world have different environmental impacts or Ecological Footprints. Ask participants which citizens they think have the largest Ecological Footprint (Answer: U.S. citizens). Tell them that the average U.S. citizen has an Ecological Footprint of 24 acres. An acre is about the size of a football field, so participants should imagine standing in the middle of 24 football fields. There might be some cows grazing on part of the area for your beef consumption, and grain planted on another part for your bread and cereal. There would be an area for producing metal for your bicycle, car, refrigerator, and oven. There would be an area for fresh water and a landfill for all of the trash you create. By contrast, the Ecological Footprint of an average person living in India is just two acres. Their space is much smaller. They would likely have no cows, and the only metal they might have is for a bicycle and/or a watch.

Steps

1. Tell the participants that you are going to demonstrate the relative impacts of two countries' Ecological Footprints.
2. Hold ten popcorn kernels in your hand and tell the participants: "This is the impact of a person living in sub-Saharan Africa over the course of his or her lifetime." Slowly drop the ten kernels into the pan.
3. Now tell them: "By contrast, this is the impact of one person living in the United States over the course of his or her lifetime." Very slowly, pour the rest of the kernels into the metal pan. The slower you pour, the more dramatic the demonstration.
4. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- Discuss that although the average person living in sub-Saharan Africa may have a smaller impact, he or she does not have enough resources to survive. On the other hand, if everyone on the planet were to use the same amount of resources as the average U.S. citizen, we would need four more planet Earths to support all of us.
- Have the participants brainstorm ways to bring the two Footprints in the activity to a closer balance and ways to reduce their own personal Ecological Footprints.
- Discuss issues or problems in our world today that may be the result of, or fueled by, disproportionate consumption patterns throughout the world.

Further Resources

Film, *The Ecological Footprint: Accounting for a Small Planet*. (2005). Global Footprint Network, 30 minutes. In this documentary film, Mathis Wackernagel introduces the Ecological Footprint and paints a picture of our current global situation. Wackernagel explores the implications of ecological deficits and provides examples of how governments, communities, and businesses are using the Footprint to help improve their ecological performance.

Book, *Radical Simplicity: Small Footprints on a Finite Earth*. (2003). Jim Merkel, New Society Publishers.

www.rprogress.org – Redefining Progress' website has extensive information about Ecological Footprints around the world.

www.footprintnetwork.org – Global Footprint Network's goal is to increase the effectiveness of the Ecological Footprint as a tool for promoting ecological, social, and economic sustainability.

Activity 23

Partners for Health

Overview

Participants learn about the impact of today's most urgent global health issues (such as HIV/AIDS, malaria, and tuberculosis), and practical solutions to help address these issues. The activity concludes with an optional writing assignment in which participants research and develop a proposal to address a particular global health issue.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 30-45 minutes



Inquiry

- ▶ What are some of the world's most pressing health issues?
- ▶ What are some of the root causes of global health issues?
- ▶ What can be done to improve global health?

Learning Outcomes

Participants will:

- ▶ Understand the connection between poverty and poor health
- ▶ Understand how international organizations, NGOs, and local governments coordinate to address global health issues
- ▶ Learn how they can improve global health at the local level
- ▶ Understand the difference between treating and preventing global health issues

Materials/Preparation

- ▶ **Handout:** *Global Health Issue Cards*, make one copy and cut into individual cards
- ▶ **Overhead:** *Partners for Health Questions*

ACTIVITY

Introduction

1. Optional: Do a Sides Debate using the following prompts: “The U.S. government should regulate the consumption of fast food for people under the age of 18.” “The U.S. government should contribute more money to international health issues, such as combating HIV/AIDS, malaria, and malnutrition.” This exercise may be very difficult for students to do. The statistics are stark. It is easy to be overwhelmed by the immensity of some global health issues. It may be beneficial to start this exercise with a survey of recent initiatives aimed at improving global health. Talk about the Millennium Development Goals, Live Eight, and some local non-profit organizations that are involved in helping people around the world. Emphasize that there is hope and that the students can make a difference.

Steps

1. Walk around the room and have each student randomly pick a *Global Health Issue Card*.
2. Explain to the participants that each card has either a fact about the scope of a global health issue or a solution to that global health issue.
3. After everyone has picked a card, have each participant read their card aloud, in random order.
4. Have participants walk around the room and find their “partner” (the person who has the accompanying scope or solution to their global health issue).
5. Put up the overhead *Partners for Health Questions* and instruct the pairs of participants to brainstorm answers to the questions for a few minutes. Have them write their answers on a sheet of paper.
6. After the participants have completed the discussion questions, call on each pair to read their health issue fact and solution aloud (together) to the participants.
7. Bring the group back together and conclude with the following reflection questions.

Going Deeper: Critical Considerations

- Ask what they found most surprising, disturbing, and encouraging.
- Call on participants to share their answers to the three questions.
- Write on the board any common trends that emerge from the participants’ answers that highlight the connection between health and other global issues (poverty, population, education, governance, environmental damage, etc.).

Further Resources

Film, *Rx for Survival: A Global Health Challenge*, PBS (2005). 360 minutes. From vaccines to antibiotics, clean water to nutrition, bioterror threats to the HIV/AIDS pandemic, this 6-part series tells the stories of global health champions and the communities they strive to protect.

Film, *Silent Killer: The Unfinished Campaign Against Hunger*. DeGraaf, J. (2005). 57 minutes. Bullfrog Films, www.bullfrogfilms.com. Highlights promising attempts in Africa, and in South and Central America, to end world hunger.

Film, *Super Size Me*. 100 minutes. Spurlock, M. (2004). Spurlock documents his experiment to eat nothing but three McDonald’s meals a day for 30 consecutive days, and provides an entertaining and disturbing narrative about American culture’s trend toward obesity.

Film, *The Insider*. Mann, M. (1999). 157 minutes. A true story of a man who decided to tell the world what the seven major tobacco companies knew about (and concealed) the dangers of their product.

Film, *Fast Food Nation*. Schlosser, E. (2002). An exposé of the fast food industry and its agricultural, labor, and health impacts.

Book, *Invisible Enemies: Stories of Infectious Disease*, Farrell, Farrar, Straus & Giroux. (2005) this young adult book, Farrell discusses seven infectious diseases (smallpox, leprosy, plague, tuberculosis, malaria, cholera, and AIDS), highlighting the causes, history of treatment, popular notions and fears about the disease, and the story of how breakthroughs came about.

Book, *Mountains Beyond Mountains*. Kidder, T. (2003). Random House. A true story of Paul Farmer, a doctor who sets out to diagnose and cure infectious diseases and bring the lifesaving tools of modern medicine to people in Haiti.

Book, *Smallpox: the Fight to Eradicate a Global Scourge*. Kaplow, D. (2003) University of California Press. An analysis of smallpox policy focusing on two major points: smallpox has killed millions of people over the millennia, and the eradication of naturally occurring smallpox from the world has been one of humankind's most amazing success stories.

www.who.int – The World Health Organization is the United Nations specialized agency for health.

www.unicef.org – United Nations Children's Fund includes information on children's health, education, equity, and protection around the world.



GLOBAL HEALTH ISSUE CARD *1 of 3*

By the end of 2014, about 36.9 million people were living with HIV/AIDS worldwide and 1.2 million people died from AIDS-related illness.
www.unaids.org

Providing condoms at 3 cents each and educating about sexual health can reduce the spread of HIV/AIDS.
www.unaids.org

In 2014, 1.5 million people died from Tuberculosis, a curable respiratory illness spread by coughing and sneezing.
www.who.int

Treating Tuberculosis with antibiotics costs around USD\$2,000 per patient.
www.who.int

130-15 million people globally are infected with Hepatitis C, which severely damages the liver and can cause death.
www.who.int

Clean needles cost 5 cents each and can prevent millions of Hepatitis C infections.
www.who.int

In 2012, an estimated 1.5 million deaths were directly caused by diabetes.
www.who.int

Healthier eating and increased exercise can reduce the risk of Type 2 Diabetes by 60%.
www.cdc.gov

In 2012, there were 214 million malaria cases worldwide.
<http://mosquito.who.int>

Mosquito netting with anti-Malaria insecticide costs around \$3 and can reduce deaths in children by up to 20%.
www.who.int

GLOBAL HEALTH ISSUE CARD *2 of 3*

Each year Diarrhea kills around 760,000 children under 5.
www.who.int

A village well can provide clean water for 1,200 people at a cost of 12 cents per person each year, preventing children from dying of Diarrhea.
www.chrf.org

Malnutrition contributes to more than 50% of all childhood deaths worldwide.
www.who.int

It costs 50 cents to help prevent Malnutrition in a child through Vitamin A supplements, which can save about 250,000 lives a year.
www.jsi.com

In 2014, there were 114,900 Measles deaths globally.
www.who.int

Immunizing a child against Measles costs less than \$1 per child.
www.who.int

Trachoma is believed to be endemic in 51 countries, and is responsible for the visual impairment of about 1.8 million people, of whom 0.5 million are irreversibly blind.
www.trachoma.org

Basic surgery to prevent blindness by Trachoma costs around \$10 per patient.
www.sightsavers.org

Over 2 million women and girls in developing countries suffer from Fistula, a painful, preventable condition that occurs during childbirth.
www.endfistula.org

Providing family planning services to women could reduce birth related injuries such as Fistula by at least 20%.
www.endfistula.org

GLOBAL HEALTH ISSUE CARD 3 of 3

Hookworm infects an estimated 1 billion people globally, causing severe dehydration and stunting children's growth.
www.cdc.gov

Anti-hookworm medicine costs as little as 3 cents per dose.
www.unicef.org

Every 5 seconds a child dies because he or she is hungry.
www.who.int

19 cents a day can feed a hungry child through a school lunch program.
www.care.ca

Each year, over 17 million babies born to adolescent girls face almost twice the risk of dying during their first year of life than do babies born to adult women.
www.who.int

Education of girls and keeping them in school is a key solution to reducing adolescent pregnancy.
www.unicef.org

Half of those who smoke today - about 650 million people - will eventually die from tobacco.
www.who.int

Increasing taxes on cigarettes and preventing youth from smoking can significantly reduce deaths from tobacco.
www.who.int

PARTNERS FOR HEALTH

Questions

Discuss these questions with your partner and then write your answers on a piece of paper:

- 1. What might accelerate progress of this health solution?**
- 2. What else do I know or want to know about this issue?**
- 3. How is this health issue connected to other global issues?**

Activity 24

Seeking Asylum

Overview

Through simulation, participants experience the difficult choices and struggles facing refugees and internally displaced persons (IDPs) when they are forced to leave their homes. Participants learn about the root causes of refugee and IDP crises and the options and obstacles each group faces.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Universal Responsibility

Time

- ▶ 1 hour

Learning Outcomes

Participants will:

- ▶ Gain a sense of empathy for the hard choices facing refugee and IDP families
- ▶ Understand the root causes of refugee and IDP crises, and the root solutions for preventing these crises
- ▶ Learn about the asylum process, and the differences in protection offered to refugees and IDPs
- ▶ Be introduced to the debate with in developed nations over setting immigration policies

Inquiry

- ▶ Why and how does someone become a refugee or IDP?
- ▶ How do nations determine who qualifies as a refugee?
- ▶ How are refugee issues tied to other global issues?
- ▶ What are the impacts (negative and positive) of refugee and IDP populations on the environment, economies, and social fabrics of their host and home countries?
- ▶ What are some sustainable solutions to addressing the root causes of the refugee and IDP crises?

Materials/Preparation

- ▶ **Handout:** *Defining Refugees, IDPs, and Migrants*. One copy per student
- ▶ **Handout:** *Seeking Asylum-Items*. One copy per four participants
- ▶ **Handout:** *Citizen Certificate*, one copy
- ▶ Two large pieces of blank paper with “Asylum in Petrus” written in large letters on one piece and “Internally Displaced Persons” on the other. Tape the two signs on opposite sides of the classroom
- ▶ Two sheets of butcher paper and pens, place one sheet and pens by each area
- ▶ A jug of water and crackers (One or two crackers per student for about half your class) placed in an area by the “Asylum in Petrus” sign.

ACTIVITY

Introduction

1. (Optional) Do a Sides Debate using the following prompt: "The U.S. should allow more refugees into this country."
2. Show and review the handout, *Defining Refugees, IDPs, and Migrants*.

Steps

1. Divide the participants into families of three to four participants.
2. Explain to the group that, due to an outbreak of a civil war, all the families have to leave their homes immediately.
3. Tell them that each family can only take five items with them, selected from the handout *Seeking Asylum Items* that you will pass out to them. They will only have two minutes to agree on what to bring and then flee before the fighting reaches the home. They can only choose items that are on the list.
4. Pass out the list quickly and start timing for two minutes. Keep the pressure on them to complete their selections within the allotted time.
5. After the two minute period, have them put their pens down. Have a representative from each family read off their five items. Make a note to yourself of which families chose to bring identification cards.
6. After all families read off their list, take those families that chose identification cards to the "Asylum in Petrus" section of the room and take those families that did not list identification cards to the "Internally Displaced Persons" section of the room.

Note: if no families have chosen to bring identification cards, have everyone go to the IDP side. Randomly choose two families and tell them that if they can prove they're from their home country and are in need of asylum, they can go to the refugee camp. Or, have a family that brought money buy their way into the camp. The goal is to have

at least a couple of families in the refugee camp. Alternatively, if all the families bring identification cards, randomly select some families and move them to the IDP side of the room, telling them that their identification papers are not in order.

7. Explain that families often need to be able to prove where they come from in order to be granted asylum or protection by a neighboring country. Inform the families in the asylum section that they are now in the fictional country of Petrus, housed in the refugee camp operated by the United Nations High Commissioner for Refugees. This is why they have been given some basic food and drink (the water and crackers). The asylum families may eat the crackers and drink water.
8. Explain that people in refugee camps are often assigned jobs, so those in the refugee camp are going to brainstorm and write on the butcher paper what their camp will need to function. Good examples are kitchens, schools, doctors etc. Then identify the different types of jobs they might be doing.
9. Explain to those in the IDP area that families without identification papers are not granted asylum and are stuck in the middle of the civil war in their home country. No United Nations agency has the authority to look after each family so, at the moment, they do not have any food or drink. Tell the IDP families to brainstorm and write on the butcher paper what they will do to survive – they could try to set up their own camp using the items they chose to take with them, or they could try to enter Petrus illegally by bribing border guards with their items, etc.
10. After the participants have brainstormed for a few minutes, take all but one of the families from the asylum section and explain that the government of Petrus has determined that the civil war in the

refugees' home country has calmed down enough for them to return home. Explain that Petrus is sorry for the families that have nothing and that their homes are probably gone, but the refugees are using up the limited resources of their country and every family cannot be granted asylum forever. Take the families to the IDP section.

11. Finally, tell the one family remaining in the Asylum section that Petrus has agreed to resettle them, offering permanent residency. A local agency will help them find a home and a job. Give them the *Citizenship Certificate*.
12. Bring the participants back together for reflection questions.

Going Deeper: Critical Consideration

- How did you decide what to bring with you?
- How did you feel having such a short time to decide?
- Did you feel the asylum process was fair?
- Why do you think it is important to have identification cards?
- If you were to change the rules for countries granting refugees asylum, what would you do? Would you accept anyone who claimed refugee status?
- Are you a refugee? Is someone in your family a refugee? Are there refugees in your community? Where are they from? How are they treated? What agencies exist to help refugees in your community?
- Would you feel different about accepting someone who was not physically threatened by violence but couldn't find work in their own country?
- How do you think refugee and IDP crises affect other global issues like environmental destruction, poverty, and education?

- If the situation that cost a family to seek asylum is resolved but the family has nothing to go back to in their home country, should they still be sent home? Why? Under what conditions should refugees be sent home?
- Why do you think the United Nations helps refugees but is not authorized to help internally displaced persons?
- What could be a sustainable solution to preventing large-scale refugee and IDP crises? Economic development? Participatory and effective governance? Who should be in charge of implementing this solution?

Writing Connection

Have participants write a poem based on their experience in the activity, keeping in mind the things their family chose to bring and where they ended up. Have them use imagery, senses, metaphors, and descriptive words in their poems.

Have participants write a short memoir as if they were a refugee or IDP.

Further Resources

Visit www.itvs.org/beyondthefire/master.html For an interactive experience in which students listen to the stories of refugee teens from around the world.

Visit PBS' four documentaries that discuss the Syrian Refugee Crisis: <http://www.pbs.org/pov/blog/povdocs/2015/12/four-pov-documentaries-to-discuss-the-syrian-refugee-crisis/>

Film, *Refugee*, Spencer Nakasako, 2002, 60 minutes. Focuses on a boy from a tough neighborhood in San Francisco returning to Cambodia to meet his dad, who did not escape during Pol Pot's regime.
www.refugeethemovie.com

Book, *Under the Persimmon Tree*, Suzanna Fisher Staples, Farrar Straus Giroux, 2005. This young adult novel offers a new level of insight into Afghanistan in the month following the September 11th 2001 attack. The other alternative expresses the views of two survivors: young Najmah, a villager living in the Kunduz Hills, and Nusrat, the American wife of an Afghan doctor.

Book, *Of Beetles and Angels: A Boy's Remarkable Journey from a Refugee Camp to Harvard*, Mawi Asgedom, Little, Brown and Company, 2002.

www.unhcr.org – The office of the United Nations High Commissioner for Refugees official website.

www.theirc.org – Official website of the International Rescue Committee. The IRC provides emergency relief, rehabilitation, protection of human rights, post-conflict development, resettlement services, and advocacy for those uprooted or affected by conflict and oppression.



DEFINING REFUGEES, INTERNALLY DISPLACED PERSONS, AND MIGRANTS

REFUGEE Someone who crosses an international border seeking safety in another country because he or she has a well-founded fear of persecution for reasons of race, religion, nationality, membership of a particular social group, or political opinion.

ASYLUM Temporary protection granted to refugees under international law in the foreign country in which they have entered.

RESETTLEMENT Countries can choose to resettle refugees, officially granting them permanent residency within their borders.

INTERNALLY DISPLACED PERSON (IDP) Someone forced to leave his or her home for the same reasons as a refugee, but who is unable to cross international borders to obtain asylum. IDPs often have few resources and do not have the same rights and protections under international law.

MIGRANT Someone who chooses to leave his or her home country to legally or illegally enter and live in another country.

SEEKING ASYLUM ITEMS

Directions:

There's an outbreak of civil war in your country and you are being forced to leave immediately. Your family must choose only five of the items below to take with you. Review the list together and circle the five items you agree to take. You have two minutes to reach a decision!

Cooking Pot
Hammer and Nails
Water Jug
Radio
Sack of Grain
Waterproof Tarp
Identification Cards
Cooking Stove
Family Savings of Around \$35
Soap
Machete
Photo Album
Pet Dog
Rifle
Blankets
Lantern

CERTIFICATE OF CITIZENSHIP



FOR THE COUNTRY OF PETRUS

Activity 25

Shop Til You Drop?

Overview

In this simulation, participants experience how resources are distributed and used by different people based on access to wealth. Participants discuss and work toward personal and structural solutions to address the environmental impacts of resource consumption and to help alleviate poverty.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Learning Outcomes

Participants will:

- ▶ Determine and explain purchasing/consumption choices
- ▶ Compare different purchasing/consumption choices and their social and environmental effects
- ▶ Describe how relative affluence and high consumption patterns relate to environmental degradation
- ▶ Discuss and begin to implement personal choices they can make to reduce environmental impacts as well as develop and implement an action plan to help alleviate poverty

Inquiry

- ▶ What are the choices that people with relatively little access to wealth/income can make compared to people with relatively high access?
- ▶ What are the impacts of each of those choices and decisions?
- ▶ What personal choices can we make to help reduce some of these impacts, and what actions can we take to help alleviate poverty?

Materials/Preparation

- ▶ **Handout:** *Global Mall Dollars*, one card per student (there are six cards per sheet)
- ▶ **Handout:** *Global Mall Items*, one sheet per student
- ▶ **(Optional) Teacher master:** *Global Mall Impacts*, one copy as teacher reference
- ▶ Butcher paper, one sheet per group
- ▶ Marking pens, two to three pens for each group
- ▶ Make enough copies of the *Global Mall Dollars* sheet so that there is one card for each student. (Each sheet has three \$200 cards, two \$1,000 cards, and one \$2,500 card to reflect income distribution around the world. Therefore, more students will end up with \$200 cards and \$1,000 cards than \$2,500 cards.) Cut the sheets along the dotted lines and fold each card so the amount is not visible.

ACTIVITY

Introduction

1. Have the participants brainstorm human needs (food, water, energy, clothing, health care, etc.).
2. Tell the participants that today, as global citizens, they will have a chance to shop for these needs at the "Global Mall." The Global Mall sells all of the resources that humans depend on to live, as well as some "nonessential" items.

Steps

1. Pass out the handout, *Global Mall Items*, which lists the items available. Tell participants they can select items from the list to purchase with their *Global Mall Items*, but that they must first meet their basic needs by selecting items from the categories of food, water, and fuel, and only then can they buy any of the other items.
2. Pass around a basket with the *Global Mall Items*; instruct each student to take one card and not show it to anyone.
3. Instruct participants to write the items they purchase on the lines on their card (or on the back), along with the cost of each item (be sure they do this part of the activity individually).
4. While participants are making their purchasing choices, you should keep the pressure on to instill a sense of urgency. Ask, "Who's done shopping?" Say, "The mall is closing soon!" Participants with \$200 Global Mall Dollars will likely finish much sooner than those with \$1,000 and \$2,500.
5. When participants finish their shopping, have them break into three groups, putting participants with the same dollar amounts (\$200, \$1,000, \$2,500) together (there will be more participants with \$200; if necessary, subdivide groups so you have between three and five participants per group).
6. In their groups, have participants share and compare what they chose to purchase and why. Ask them to discuss anything they could not afford to purchase and how not having those items might affect their lives.
7. Have each group report to the whole larger group on the decisions they made and the impact that these decisions would have on their lives. You can choose to stop the activity here and conclude with the reflection questions below, or continue with the following part of the activity.
8. Give each group a large sheet of paper and some pens, and ask participants to list three to five items that members of their group purchased. Have them create two columns titled "Social Impacts" (effects of the choices on people) and "Environmental Impacts." For each item listed, have groups write all of the impacts they can think of, positive or negative, for each category. Give them the following example: "If your group chose 'Firewood Gathering,' you might list such Social Impacts as women and children spending their time gathering wood rather than going to school, harvesting food, cooking, or engaging in recreation activities. Environmental Impacts might include deforestation, habitat destruction, and soil erosion."
9. Circulate among the groups and suggest impacts they might not have considered. Use the handout *Global Resource Mall Impacts* as a teacher reference.
10. Have each group present and discuss their findings with the whole larger group.
11. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- What would your lives be like if you could not go to school?
- How would it feel to have to choose between food and health care?
- How many of you have ever been very sick or gone to a hospital or had friends and family who have? What would your life be like now if you had been unable to get medical care?
- What is the effect on people when a small group is consuming the majority of resources?
- What were the impacts caused by people with fewer *Global Mall Dollars*, and what were the impacts caused by people with more *Global Mall Dollars*?
- What are some specific examples of how to reduce the social or environmental harm of some choices? What are three things that every one of us could do in the next week to lessen our environmental impact?
- How do poverty and wealth afford people different options? Consider the fact that roughly one-fifth of all people worldwide survive on less than \$1 (U.S.) a day. How does this level of income limit their choices? How do the various sustainability big ideas apply to the fact that so many people around the world live in poverty?
- When you were choosing what to buy, did you think about the environmental impact? For those of you in the lowest income range, did you have a choice about the environmental impact you produced? If not, how did it feel to not have a choice?
- How is this activity like the real world?
- Which income group from this activity is most prevalent in our country?

Further Resources

Book, *Plan B: Rescuing a Planet Under Stress and a Civilization in Trouble*. Brown, L. (2003). W.W. Norton & Company, New York. Brown calls for a worldwide mobilization to stabilize population and climate before they spiral out of control. It provides a plan for sustaining economic progress worldwide.

<http://www.mercycorps.org> – MercyCorp (formally NetAid) is a non-profit organization that educates, inspires, and empowers young people to fight global poverty.

www.undp.org – The United Nations Development Program (UNDP) is the UN's global development network organization advocating for change and connecting countries to knowledge, experience, and resources to help people build a better life.



GLOBAL ISSUES CARDS

Global Mall Items

FOOD	Rice and beans once or twice a day \$75	Beans, vegetables, and rice daily, plus meat/dairy about once a month \$150	A variety of fast foods 3 times a day, such as hamburger, chicken sandwich, tacos, French fries, soda, and ice cream \$300	High quality food 3 times a day, including eggs, meat, fish, fresh vegetables, fresh imported fruit, bread, milk, imported cheese, chocolate, and other desserts \$500
WATER	Untreated water collected from a lake and carried 2 miles by women and children No cost	Untreated water collected from the village well 9 months a year, and from a river the other 3 months \$75	Purified water brought by government trucks every week \$200	Indoor plumbing with hot and cold running water, showers, and bathtubs \$400
HEAT/ FUEL	Firewood cut from local forest, sometimes hours away; work done mostly by children No cost	Coal purchased in the market and used for cooking and heating \$125	Oil used for gasoline, cooking, and heating \$300	Solar panels using the sun's energy to heat home and water; natural gas for cooking \$700
EDUCATION	Crowded school 1 hour away through grade 5 (free, but you must buy a uniform to attend) \$50	Elementary, middle school, and high school located in the local village \$125	K-12 education with college an option for most people \$400	Graduate degree preparing people for professions such as doctor, lawyer, professor \$900
HEALTH CARE	Walk or be carried 10 hours to the nearest village clinic, where they have a dozen medicines \$75	Good medical care available in a city 1 hour away by bus \$200	High-quality health care and hospital anytime you are sick and for yearly checkups \$500	High quality health care, including elective surgery such as knee repair and cosmetic and laser eye surgery \$700
LUXURY ITEMS	Radio running on batteries \$50	Small color television in your house \$150	Refrigerator and air conditioning in your house \$350	Hawaii surf vacation, airline ticket, and hotel \$700

GLOBAL ISSUES CARDS

Global Mall Items

FOOD	<p>Rice and beans <u>Environmental:</u> locally grown, no pesticides <u>Social:</u> lack of essential vitamins results in more malnutrition</p>	<p>Beans, veggies, meat <u>Environmental:</u> may be locally grown/raised, may include some pesticide use <u>Social:</u> better nutritional value</p>	<p>Fast foods <u>Environmental:</u> beef production means high water/feed use, deforestation <u>Social:</u> convenient, but unhealthy, high fat related to heart disease</p>	<p>High quality food <u>Environmental:</u> beef production, imports use more energy, chemicals, pollution <u>Social:</u> healthy but cash crops take away from staple food production</p>
WATER	<p>Untreated water <u>Environmental:</u> use of lake, stream water degrades habitat <u>Social:</u> disease, death, poverty (time spent away from school, work, etc.)</p>	<p>Village well <u>Environmental:</u> high use degrades aquifer <u>Social:</u> disease, death, poverty</p>	<p>Water trucked in <u>Environmental:</u> truck uses fuel, pollution, global warming <u>Social:</u> less disease, more convenient</p>	<p>Indoor plumbing <u>Environmental:</u> energy use, metal, and plastic for pipes <u>Social:</u> fast, easy, safe, convenient</p>
HEAT/ FUEL	<p>Firewood <u>Environmental:</u> deforestation, global warming, desertification <u>Social:</u> poverty (time away from school, work, food production), smoke linked to lung disease</p>	<p>Coal <u>Environmental:</u> air pollution, mining <u>Social:</u> easier to use than firewood, but may result in lung disease if cooking area is not ventilated, miners susceptible to lung disease</p>	<p>Oil/Gas <u>Environmental:</u> oil drilling, spills, pipeline impacts, pollution, loss of habitat, global warming <u>Social:</u> convenient, but results in dependency on oil/gas supplies</p>	<p>Solar panels <u>Environmental:</u> clean renewable source <u>Social:</u> convenient, expensive to install but saves money in the long run, no health risks</p>
EDUCATION	<p>School: 1-hour walk <u>Environmental:</u> lack of education related to population growth <u>Social:</u> illiteracy, few job skills, poverty</p>	<p>School in village <u>Environmental:</u> educated people have resources and knowledge to protect environment <u>Social:</u> allows access to jobs, money, health care</p>	<p>K-12 education <u>Environmental:</u> better able to protect resources, but may consume more <u>Social:</u> better jobs, higher income, health care, quality of life</p>	<p>Graduate school <u>Environmental:</u> better able to protect resources, but high level of consumption <u>Social:</u> better jobs, quality of life, but may be more prone to stress</p>
HEALTH CARE	<p>Clinic 10 hours away <u>Environmental:</u> high mortality linked to high birth rates, population growth impacts environment <u>Social:</u> illness, death, disease transmission, poverty</p>	<p>Medical care 1 hr away <u>Environmental:</u> low mortality linked to lower birth rates <u>Social:</u> less disease, lower mortality, may not get treatment except in critical situation</p>	<p>Hospital <u>Environmental:</u> low mortality linked to lower birth rates <u>Social:</u> less illness, disease, etc., but with high financial cost</p>	<p>Elective surgery <u>Environmental:</u> may use many resources, medicine, equipment <u>Social:</u> cure non-life threatening problems, increase quality of life and social status</p>
LUXURY ITEMS	<p>Radio <u>Environmental:</u> energy, batteries toxic to soil <u>Social:</u> access to information, enjoyable</p>	<p>Color TV <u>Environmental:</u> energy resources to manufacture <u>Social:</u> entertainment, access to information</p>	<p>Refrigerator <u>Environmental:</u> global warming, resources to manufacture, energy <u>Social:</u> better health, fresh food</p>	<p>Surf vacation <u>Environmental:</u> air travel contributes to global warming, heavy use of resources <u>Social:</u> lower stress, enjoyable, but expensive</p>

GLOBAL MALL DOLLARS



ITEM

COST



ITEM

COST



ITEM

COST



ITEM

COST



ITEM

COST



ITEM

COST

Activity 26

Sides Debate

Overview

Participants debate a controversial global issue, standing on opposite sides of the room depending on whether they agree or disagree with a statement provided by the teacher. They debate the issue and can switch sides if participants taking the opposite side convince them. This exercise can be used as a “hook” to introduce several other *Facing the Future* activities.

- ▶ Equity and Justice
- ▶ Interconnectedness
- ▶ Peace and Collaboration
- ▶ Universal Responsibility

Time

- ▶ 5-10 minutes

Materials/Preparation

- ▶ Two 8.5x11 pieces of paper with “Agree” written on one and “Disagree” written on the other, posted on opposite sides of the room

Inquiry

- ▶ How can we understand an issue from the perspective of another person?
- ▶ Can controversial issues always be resolved?

Learning Outcomes

Participants will:

- ▶ Take a stand on an issue and state their reasons
- ▶ Listen to arguments for multiple sides of an issue
- ▶ Have the opportunity to change their mind on an issue
- ▶ Describe why they changed their standpoint



ACTIVITY

Activity

1. Show the participants a controversial statement. There are Sides Debate statements included in the introductory sections of several activities throughout this guide. You can also develop your own statements based on controversial issues. However, when first introducing this activity, it is helpful to start with non-controversial issues that the participants can use to practice the debate exercise. For example, you can use a statement such as, "It would be better to be a dog than a cat" or "I'd rather live in the city than in the country." Follow the steps below using the non-controversial statement as an example, then move on to a controversial one. The first time you do a Sides Debate, take some time to establish the process and rules. Once participants get the hang of it, they will be able to Sides Debates quickly and effectively throughout the year.
2. Tell participants they will debate the statement standing by the "Agree" sign if they agree with the statement or by the "Disagree" sign if they do not agree with the statement. Give them the following rules (use computer/projector or write on the board):
 - a. Everyone must take a side
 - b. Everyone should be prepared to state their reason for agreeing or disagreeing with the statement
 - c. Anyone can switch sides if they are convinced by the opposing side
 - d. No one can speak a second time until everyone else has spoken once
 - e. Be convincing but respectful of others when making your arguments
3. Have the participants stand up and take a side (Note: if everyone takes the same side, ask a few participants to try taking the other side and demonstrate how one might argue for that side).
4. Going back and forth from side-to-side, have participants state their reasons for agreeing or disagreeing with the statement.
5. After everyone has spoken once (and/or the debate has been exhausted) and participants have finished switching sides, bring the participants back to their seats for either a reflection discussion or to begin an activity related to that statement.

Going Deeper: Critical Considerations

- What did you like or dislike about this debating process?
- Was everyone's opinion heard and respected? Why or why not?
- Would it have been difficult to take the other side? Why or why not?
- How does seeing the issue from someone else's perspective help to resolve an issue?
- Can controversial issues always be resolved?

Activity 27

Splash but don't Crash

Overview

Help participants see the effect of populations' growth rates on the Earth's carrying capacity through a simulation in which they move water from a container representing births and deaths into another container representing Earth.

Big Ideas

- ▶ Connecting with Nature
- ▶ Health and Resiliency
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Materials/Preparation

- ▶ Two clear containers, at least 1-gallon
- ▶ Blue food coloring to tint water
- ▶ Fill one container half full with water and add enough food coloring to makes the water appear blue, and fill the second container about $\frac{3}{4}$ full of water (do not add food coloring to the second container)
- ▶ Several measuring cups, ranging from $\frac{1}{4}$ cup to 1 cup in size
- ▶ Towel or tray to catch spills
- ▶ Population Reference Bureau's *World Population Data* found at www.prb.org under *Quick Links*

Inquiry

- ▶ What is the Earth's carrying capacity?
- ▶ What are the potential impacts of different rates of natural population increase on the this capacity?
- ▶ How can we reduce these impacts?

Learning Outcomes

Participants will:

- ▶ Model population growth rates of selected nations and regions
- ▶ Consider and discuss the social, environmental, and economic impacts of such growth and possible solutions



ACTIVITY

1. (Optional) Do a Sides Debate using the statement below: "Human Population does not yet seriously affect our natural environment because there is still so much open, uninhabited land in our world."
2. Explain and discuss the definition and concept of carrying capacity (the maximum number of people the Earth can support indefinitely).
3. Ask the participants how many people they think the Earth can support. Discuss how the carrying capacity of the Earth is a much-studied and hotly contested issue. Some people think that the Earth can support many more people than we have now, while others believe that we have already exceeded the Earth's capacity.
4. Tell the participants that they will do an activity to model natural increase (population growth and death rates) of a specific region and its effect on the Earth.

Steps

1. Have the group choose a country or region from Population Reference Bureau's *World Population Data Sheet* as a model for the simulation.
2. Explain that the container with the tinted water represents the Earth, the tinted water itself represent current population, and the air in the container above the tinted water represents the habitat for all other species on the planet. Explain that the clear water container represents population supply (i.e., births).
3. Divide the participants into two groups: one representing birth rates and the other death rates.
4. Give each group one measuring cup. Base the size of each group cup on the relative birth and death rates of the chosen country or region. For example, if the group uses Africa as the demonstration region, have them look up the birth and death rates for Africa in the PRB "World Population Data

Sheet" (41 per 1,000 birth rate and 15 per 1,000 death rate) and select measuring cups representing the relative percentages. For convenience, the group representing births might be given a one-cup measure, and those representing decks given a third-cup measure. If North America is chosen (14 per 1,000 birth rate and nine per 1,000 death rate), use one cup and half cup measure to approximate those values. Have each group line up on opposite sides of the room. Call on individual participants to come forward and do the following: a student from the birthrate group fills his or her cup from the supply container and adds that to the Earth container. The participants from the death rate group then fill their cup from the Earth container and dumps it back into the supply bucket. Keep the process going until the Earth container is dangerously full, and any more increase will cause an overflow. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- What did you observe happening for the exercise? (The Earth container's water level rose, and as "population" increased, habitat for the other species decreased.)
- What would have happened if we had continued the exercise (If population increase continued, the water would have reached the top, and all other species would be displaced. If the population had increased further, the container would have overflowed. If that overflow were real people, the results would likely be death from famine, war, or disease)?
- What signs could we look for as we approach the point of "overflow"?
- What happened to the color of the water in the Earth container? How might color change be related to depletion of the Earth's resources as carrying capacity is approached?

- Elaborate on how this scenario would impact your own life in terms of your environment, economy, and social institutions, both locally and globally.
- Discuss what policies you might implement to prevent the loss of habitat, the extinction of species, and the depletion of resources.

Writing Connection

Participants write an essay or illustrated short story that takes place in a crowded situation such as in an elevator, on a boat or airplane, or in a classroom full of participants. Ask participants to explain the effect that crowding has on them as individuals and the people around them. Is it uncomfortable or stressful? If so, how did they respond, and what would happen if everyone reacted that way? How did the way they and others respond to crowding play out in a larger global context? Have them explain what it would be like if that situation was permanent.

Further Resources

Film, *World in the Balance*. NOVA & WGBH Educational Foundation. (2004). 120 minutes. In Japan, Europe, and Russia, 433 shrinking in the population is aging. In parts of India and Africa more than half of the still growing population is under 25. World population is now careening into dramatically different directions. This video explores these directions. www.wgbh.org

www.prb.org – The Population Reference Bureau publishes an annual “World Population Data Sheet” which can be downloaded for free from their website.

www.populationaction.org – Population action International is an independent policy advocacy group working to strengthen political and financial support worldwide for publishing programs grounded in individual rights.



Activity 28

Systems are Dynamic

Overview

Participants experience the dynamic, interconnected, and self-organizing nature of systems through an exercise in which they move around an open space trying to keep an equal distance between themselves and two other people.

Big Ideas

- ▶ Connecting with Nature
- ▶ Interconnectedness
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 30 minutes

Inquiry

- ▶ What is the inherent nature of a system?
- ▶ How can understanding the nature of systems help us find solutions to large, complex problems?

Learning Outcomes

Participants will:

- ▶ Experience and discuss the dynamic, interconnected, and self-organizing nature of systems
- ▶ Consider how understanding the nature of systems can help us find sustainable solutions

Materials/Preparation

- ▶ No materials needed, but you will need a large open space to conduct the activity
- ▶ This activity works best if students have a very basic understanding of systems



ACTIVITY

Introduction

1. Ask participants to define a “system.”
What are some of the defining features of a system? (i.e., a system has many parts that work together; if you change one part it affects other parts; if you remove or add something it can change the whole system; a system is made of interconnected parts; a system can be something in nature, or it can be mechanical or human). Ask for examples of systems that they encounter, use, or are a part of.
2. Explain to the participants that they are going to do an exercise to help them understand the dynamic nature of systems.

Steps

1. Have the participants stand randomly in a large, open space either indoors or outside.
2. Give the following two instructions:
 - a. Mentally select two other people in the group, without indicating whom you have chosen.
 - b. Move so as to keep an equal distance between you and each of these two people at all times. This does not mean simply remaining at the midpoint between them.
3. To pursue this objective, participants will begin to circulate, each movement triggering many others in an active, interdependent fashion. Movement may speed up for a while, then may abate, accelerate, and once more slow down toward equilibrium, but it rarely reaches stasis.
4. Let the movement continue for three to four minutes, then, as activity lessens, have participants pause where they are and begin the reflection questions.

Going Deeper: Critical Considerations

- Have the participants describe what happened. Begin by asking, “What did you experience?” Their reflection may bring out some key features of self-regulating systems, such as the interdependence of all parts and the continuous process of seeking and maintaining balance. Participants may realize that they thought the point of the game was to achieve stasis, whereas in fact the game demonstrated that self-regulating systems require constant internal activity.
- Where was your attention focused when you were doing this activity? Were you focused on the big picture or the small details? Were you focused on your own actions or the actions of others? Why is this perception important?
- What other systems can you think of that are interconnected, dynamic, and self-regulating? (e.g., the human body, an automobile, a natural habitat, etc.)
- Why and how is it helpful to understand these aspects of a system? How can this understanding of systems help us to figure out solutions to large and complicated global issues?
- How far-reaching are the effects of one small, intentional change within a system? What might the implications of the intentional change be for making positive changes to a system?
- What kinds of feedback helped us to fulfill the function of the activity (staying equidistant from two others)? Could we have done it with our eyes closed? The ensuing discussion can address how not only visual perceptions but also feedback of all kinds guide us in our daily lives in the systems we co-create at home, work, and school.

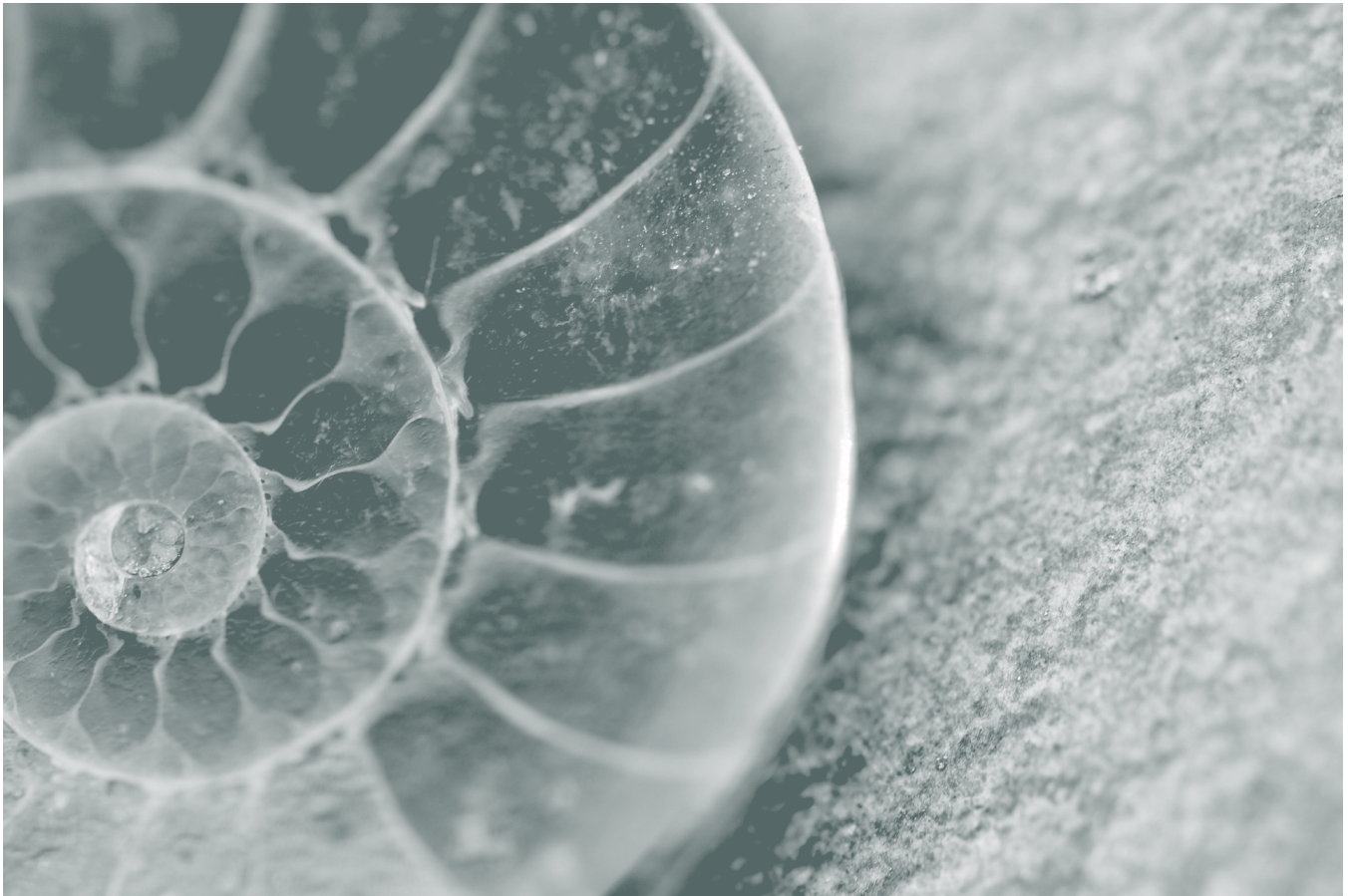
- Would anyone volunteer to organize this process? It is obvious that no party or person on the outside could direct the movements necessary to keep this system in balance.

Writing Connection

Have participants create a “cluster” graphic organizer following these guidelines: Choose a global issue and write that in the center of the paper. Write as many connecting issues as you can think of around the issue. Write as many other issues you can think of that affect or are affected by these issues and connect them with lines. Write a short summary explaining the cluster.

Further Resources

<http://donellameadows.org> – Donella Meadows Institute (previously The Sustainability Institute) focuses on understanding the root causes of unsustainable behavior in complex systems and, through projects and training, helps people shift their mindsets and restructure systems in ways that move us toward a sustainable society.



Activity 29

Take a Step for Equity

Overview

Participants are randomly assigned an economic group and then hear poverty and wealth statistics describing their economic group as they step forward in a line. Ultimately, a distance is created between the wealthiest and the poorest, illustrating the economic gap between the rich and poor. Participants then brainstorm and discuss ways to alleviate poverty and hunger.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 15-30 minutes

Learning Outcomes

Participants will:

- ▶ Experience what it feels like to be part of a specific economic group
- ▶ Consider social, environmental, and economic impacts of poverty and scarcity
- ▶ Consider and write about ways to help alleviate poverty and create a just and sustainable world

Inquiry

- ▶ How are resources distributed throughout the world?
- ▶ What are the factors contributing to the inequitable distribution of resources?
- ▶ What steps can be taken to alleviate hunger and poverty?

Materials/Preparation

- ▶ Construction paper, cardstock or tickets in four colors, one card/ticket per student
- ▶ **Teacher master:** *Take a Step for Equity Readings*
- ▶ Clear a large space in the room so that students can stand in a line in the back of the class and step about 25 feet forward
- ▶ Prepare/gather enough colored cards or tickets so that you have one for each student in accordance with the guidelines in the Table below:

ECONOMIC CLASS	% WORLD POPULATION	# OF STUDENTS AND CARD COLOR FOR CLASS OF 20	# OF STUDENTS AND CARD COLOR FOR CLASS OF 30
Wealthiest	20% (1.2 billion)	4 blue	6 blue
Middle Income	35% (2.1 billion)	7 red	11 red
Working Poor	25% (1.6 billion)	5 yellow	7 yellow
Poorest of the Poor	20% (1.2 billion)	4 white	6 white

ACTIVITY

Introduction

1. Ask participants what percentage of the people living on Earth do they think are poor. What percentage do they think are rich? Have them write down their estimates and hold on to them for later.

Steps

1. Have each student randomly select one of the colored cards.
2. Have participants line up at the back of the room facing forward.
3. Stand in front of the group and tell them, "Today, by random chance in the lottery, you now belong to a temporary economic group. Although there are more than 6 billion people living on this planet together, we are separated by our diverse fortunes and are divided by economic groups. Some of us are rich or poor by the circumstances of our behavior or opportunities, others by our birth."
4. Read aloud to the participants from the teacher master *Take a Step for Equity Readings*. Be dramatic in your reading, pause often, and make eye contact with the participants. Each economic group will be directed to step forward before hearing the description of their group. Participants in the wealthiest group will end up farthest away from those in the "poorest of the poor" group.
5. Conclude with a discussion, using the following reflection questions.

Going Deeper: Critical Considerations

- How did it feel to be in your economic group?
- Look back at the predictions you made before this activity. Were you surprised to learn what percentage of the world's people are poor? Middle group? Wealthy?
- Do you think people should work to change the statistics, or do you think there is not any way to change the situation?
- What questions do you have about hunger and/or poverty?
- What are some causes of hunger and poverty?
- How are poverty and hunger connected to other global issues such as population growth, environmental degradation, discrimination, and conflict?
- What are some of the social, environmental, and potential security consequences of poverty?
- What do you think some solutions are to these issues?

Writing Connection

Have participants write a diary entry of "A day in the life of [a person in their randomly assigned economic group]." Ask them to write a detailed entry of their day. Prompts may include: When I wake up; Where I live; A description of my surroundings; What I have for breakfast, lunch, and dinner; Details about my work; How much money I get paid; What my family is doing; How I feel; and What I am thinking about.

Further Resources

Film, *Small Fortunes: Microcredit and the Future of Poverty*. Van Wagenen, S. (2005). 60 minutes. This documentary describes the impact that microcredit is having throughout the world through the stories of twelve microentrepreneurs living in Bangladesh, India, Kenya, Peru, The Philippines, and the United States. Microcredit luminaries and experts describe how microcredit is a powerful tool in fighting poverty and provide insights into the issues confronting the microcredit movement.

www.un.org/cyberschoolbus – United Nations Cyber School Bus website includes articles and information on poverty.

TAKE A STEP FOR EQUITY

Readings - page 1

The Poorest of the Poor

Those of you with white cards please take one step forward. You are the world's poorest of the poor. There are about 1.2 billion of you. You are twenty percent of the world's population and you live on less than one U.S.– equivalent dollar a day. Seventy percent of you are women and girls. You own virtually nothing. You live in a train station in New Delhi and on top of a garbage dump in Guatemala City. You are a girl in Zambia orphaned at age two when your parents died of AIDS.

You are an Afghan farmer living through three years of drought, famine, and war. You tend to die young, whether from disease or a hidden land mine. You don't go to school, nor do you go to the doctor when you are sick. You and your family spend your entire day trying to feed yourselves. You're always hungry. About 24,000 of you die every day from hunger or hunger-related causes. That's one person every 3.6 seconds. Three-fourths of these deaths are children under the age of five. Sixteen billion dollars a year could meet the basic food needs of all of the world's poor. Many of you could have a sustainable livelihood. Programs promoting education, access to health care, and support of democratic governments could all help to break the cycle of poverty in your world. Everyone else please take two steps forward.

The Working Poor

Now the working poor, those of you with yellow cards, take one step forward. You represent about twenty five percent of the world's people, and you live on less than two U.S. equivalent dollars a day. You are the factory workers and farm laborers of the world. You make sport shoes in Vietnam, jeans in Mexico, and designer dresses in El Salvador. You produce the goods and services that are used by those wealthier than you. You own the simplest possessions—one or maybe two changes of clothes, and a few household items. You have no savings. In case of illnesses, accidents, and bad luck, you have no safety net. While there are exceptions, generally there are few opportunities for you to move up the economic ladder. In spite of the hardships you face, many of you often have close connections to family and to the land. The remaining people, those with the blue and red cards, take two steps forward.

The Middle Income People

Now, the middle-income people with the red cards take a step forward. You represent thirty five percent of the world's people. You are an industrious, hard-working group. You are striving to move up the economic ladder, to be part of the wealthy group. You have possessions—most of you own a television; some of you own a car. Many of you have been to school, some have a high school education, and a few of you have been to college. A handful of you may even have some savings. You occasionally eat at restaurants, although more often you eat fast food because you are on the run, working hard, and trying to stay on top. You are in a position to make changes in the world. Because of your numbers and status in the world's workforce, you have the power to change some things. You can do this by supporting policies that help the poor and provide for better working conditions. You can choose to spend your money on products from socially responsible companies. You can be a strong advocate for people with less than yourselves.

TAKE A STEP FOR EQUITY

Readings - page 2

The Wealthy

Now, those of you with the blue cards take three steps forward. You represent twenty percent of the world's population but you control about 86 percent of the world's resources. You own homes and cars and have closets full of clothes and shoes. Many of you fly around the world for business trips and exotic vacations. You have a diet rich in meat, dairy products, fresh vegetables, and fruit. Since most of you exceed your daily requirement of calories, you sometimes face health problems such as heart disease, diabetes, and obesity; however, you have access to the best health care in the world. Even among the wealthy there are the richest. One of you please take two more steps forward to represent the three richest people in the world. Your combined net worth is more than 115 billion dollars. You have more wealth than the 48 poorest countries. The wealthy have many opportunities to make a difference in the world. You can choose to buy from companies that are socially responsible, and you can reduce your consumption by choosing to use less. Because of your education, money, and resources, you have great power to help others. You have connections; you can gather networks of people. When you set your mind to something, you can make it happen.

Everyone

That's all of us. We live in a world where a few have a lot and many have very little. The world today produces enough food to supply everyone on Earth with about 2,700 calories each day. In the United States alone, 34.6 million people are hungry or don't have a secure source of food. Twenty-six million people could be fed if the amount of edible food wasted in the United States each day were reduced by one-third. The roots of hunger and poverty lie in the inequity of access to education, resources, and power. The results are illiteracy, illness, and powerlessness. But it doesn't have to be that way. The first step starts with imagining a world without hunger, poverty, environmental destruction, and deadly conflict; then we can work toward a just and sustainable future for all.

Activity 30

Taxes: Choices and Trade-offs

Overview

In this federal tax simulation activity, participants representing “special interest groups” discuss, recommend, and lobby for a budget allocation for federal tax spending. Interest groups include military, education, housing, healthcare, social security, and the environment. The exercise continues over consecutive years in which taxes are lowered and raised.

Big Ideas

- ▶ Equity and Justice

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour



Inquiry

- ▶ How are federal taxes spent and what role do special interest groups have in influencing this process?
- ▶ What are some of the trade-offs when taxes are raised, lowered, or reallocated?
- ▶ What role do citizens have in influencing the allocation of tax dollars?

Learning Outcomes

Participants will:

- ▶ Identify major spending categories for the federal government
- ▶ Recognize the role that special interest groups and citizens play in the federal budget process
- ▶ Understand the trade-offs involved in funding and cutting government programs

Materials/Preparation

- ▶ **Handout:** *Special Interest Cards*, copy and cut into six cards (one per group of three to four students)
- ▶ **Handout/Overhead:** *Tax Worksheet*, make one copy per group of three to four students and make overhead

ACTIVITY

Introduction

1. (Optional) Do a Sides Debate using the statement “Taxes are good for the health of a country.”
2. Tell the participants that they are going to do an activity in which they take on the role of special interest groups who will recommend a federal budget allocation to you, the President of the fictional country of Paradise. Tell them that the federal budget is a statement of the federal government’s planned spending and anticipated income for the upcoming year.
3. Ask participants to define taxes (i.e., money paid to the government by individuals and businesses in exchange for government services). You might also need to define social security. (i.e., a government insurance program that provides income and health benefits to retirees and others. Benefits paid are based on the monetary contribution an individual makes during his or her lifetime.)

Steps

1. Arrange the participants into six groups of three to four participants and have each small group randomly draw a *Special Interest Card*. Give the groups several minutes to “take on” their roles by reading, discussing, and completing the information on their identity card.
2. Give each group a copy of the *Tax Worksheet* and go over it with them using an overhead.
3. Begin the Year One budget cycle, which has a budget of \$25 million. Instruct groups to discuss and then pencil in a recommended dollar amount for their interest area on the *Tax Worksheet*.
4. Call the participants to order to begin the Year One budget negotiations. Call on each special interest group one at a time and have them describe who they are, what their specific objectives are, and why they care about their issue. Have them tell you their recommended budget amount for their area of interest.
5. As groups give you their recommendations, begin filling out the *Tax Worksheet* overhead (there is a strong likelihood you will change the final allocations, so use an erasable overhead pen).
6. If the recommended budget exceeds \$25 million (which is likely given that the Year One budget will not meet the basic needs of all special interest groups), have the groups begin lobbying you for their interest area. Have the interest groups debate the merits of their recommended budget amounts to help reveal the complexity and importance of all issues at stake.
7. Based on the interest groups’ input, debate, and pressure, you will now make a final decision on the Year One budget allocation.
8. Give groups a few minutes to respond and share with the whole larger group the question on the worksheet: “Briefly describe some of the implications of the Year One budget allocation. What spending areas might be negatively and positively affected?”
9. Begin the Year Two budget cycle. Announce that due to pressure from “Paradise Citizens Against Taxation,” you have authorized a tax cut of 20% so the total budget for Year Two has been reduced to \$20 million. Each tax-paying citizen (65,000 working adults) in Paradise will get a \$75.00 tax refund this year!
10. Repeat the budget allocation steps for Year Two with participants recommending and lobbying for a proposed budget for their interest area. As President, you will decide on the final budget for Year Two. Participants will respond to questions on the worksheet.
11. Begin the Year Three budget cycle. Announce that due to pressure from “Paradise Citizens for Greater Public Services,” there has been a 50% tax increase

to help address some of the budget shortfalls from the previous year, so the Year Three budget total is \$30 million. Each tax-paying citizen (65,000 working adults) in Paradise will pay an additional \$150.00 in taxes this year.

12. Repeat the budget allocation steps for Year Three.
13. Conclude with the following reflection questions.

Going Deeper: Critical Consideration

- What were some of the trade-offs when the budget was cut and when it was increased?
- Why are interest groups important? What role do interest groups play in shaping government policy? Why might an interest group form?
- What are some reasons a person might support a tax increase? What are some reasons a person might support a tax decrease?
- How might political factors influence allocation of the federal budget?
- How are federal taxes connected to global issues?
- How is the perspective of an interest group different from the perspective of the President when debating allocation of the federal budget?
- What trade-offs did your interest group have to make? How might these trade-offs impact people and the planet in the real world?
- If you were the President and were faced with the decision to raise taxes or cut government programs, which position would you choose and why?

Further Resources

Film, *Economics* (from “*Reinventing the World*” series). Springbett, D. & MacAndrew, H. (2000). Bullfrog Films. This 50 minute documentary examines the modern economic system and its purported benefits to global society.

Book, *The Ultimate Field Guide to the US Economy*. Heintz, Folbre & The Center for Popular Economics. (2000). The New Press. A humorous guide to economic life in America.

www.whitehouse.gov – U.S. government website where you can find, read, and download the federal budget.

www.nationalpriorities.org – The National Priorities Project is a nonpartisan and nonprofit organization that offers citizen and community groups tools and resources to shape federal budget and policy priorities that promote social and economic justice.

www.taxpolicycenter.org – The Tax Policy Center is a joint venture of the Urban Institute and Brookings Institution and is comprised of nationally recognized experts in tax, budget, and social policy.

SPECIAL INTEREST CARDS

You represent Paradise Veterans for Military Strength, a group of war veterans who support increasing military funding to protect the country from terrorists. You estimate \$7 million needs to go into the Defense budget just to meet the basic defense needs of your country.

**Discuss the specific objectives of your interest group.
Why does your interest group care about this issue?**

You represent members of the Paradise Association of Teacher Educators. You are devoted to the education of all young people in the country of Paradise. You need \$4 million in the Education budget to meet basic education needs in your country.

**Discuss the specific objectives of your interest group.
Why does your interest group care about this issue?**

You represent members of the Paradise Coalition for Universal Healthcare. You lobby your government to establish a universal healthcare system to provide quality and affordable healthcare for everyone. You need \$5 million in the Healthcare budget to meet basic healthcare needs in your country.

**Discuss the specific objectives of your interest group.
Why does your interest group care about this issue?**

You represent the Paradise Affordable Housing Corporation. You collaborate with local and national governmental agencies in setting public policy and priorities for more affordable housing. You need \$3 million in the Housing budget to meet basic low income housing needs in your country.

**Discuss the specific objectives of your interest group.
Why does your interest group care about this issue?**

You represent members of the Paradise Association of Retired Persons. You are concerned with quality of life issues for senior citizens. You need \$5 million in the Social Security budget to meet basic social security needs in your country.

**Discuss the specific objectives of your interest group.
Why does your interest group care about this issue?**

You represent members of the Paradise Environmental Network, the largest environmental organization in the country. You work together to protect and promote the responsible use of the Earth's ecosystems and resources. You need \$4 million in the Environment budget to meet basic environmental needs in your country.

**Discuss the specific objectives of your interest group.
Why does your interest group care about this issue?**

TAX WORKSHEET

Names: _____

You are members of the Special Interest Group _____
in the Country of Paradise.

Paradise is a small country with the following vital statistics:

- Total population: 100,000
- School-age kids: (20%) 20,000
- Working adults: (65%) 65,000
- Senior citizens (15%) 15,000
- Wealthy class: (20%) 20,000
- Middle class: (50%) 50,000
- Poor: (30%) 30,000
- Total land area: 8,000 sq miles (about the size of New Jersey or the country of El Salvador)
- Natural areas/wildlands (mountains, lakes, rivers, etc.): 2000 square miles

TOTAL BUDGET	MILITARY & DEFENSE <i>1 million = 100 soldiers trained and supplied</i>	EDUCATION <i>1 million = 5,000 students reached</i>	HEALTHCARE <i>1 million = healthcare for 7,000 school-age kids and senior citizens</i>	HOUSING <i>1 million = housing assistance for 10,000 poor people</i>	SOCIAL SECURITY <i>1 million = retirement for 3,000 senior citizens</i>	ENVIRONMENT <i>1 million = square miles of natural land preservation</i>
YEAR 1 \$25 MILLION						
BRIEFLY DESCRIBE SOME OF THE IMPLICATION OF THE YEAR 1 BUDGET ALLOCATION. WHICH SPENDING AREAS MIGHT BE NEGATIVELY AND POSITIVELY AFFECTED?						
YEAR 2 TAX CUT BY 20%						
BRIEFLY DESCRIBE SOME OF THE IMPLICATION OF THE YEAR 2 BUDGET ALLOCATION. WHICH SPENDING AREAS MIGHT BE NEGATIVELY AND POSITIVELY AFFECTED?						
YEAR 3 TAX INCREASE BY 50%						
BRIEFLY DESCRIBE SOME OF THE IMPLICATION OF THE YEAR 3 BUDGET ALLOCATION. WHICH SPENDING AREAS MIGHT BE NEGATIVELY AND POSITIVELY AFFECTED?						

Activity 31

Three Faces of Governance

Overview

Participants create a national energy policy via cooperation and negotiation among the three faces of governance: the State (Government), Civic Organizations, and the Private Sector. In small groups representing each of these areas, participants work to accomplish their individual policy goals while negotiating and forming coalitions with other groups to strengthen their overall energy policy. Policy proposals are presented, and one plan is selected to become a national energy policy.

Big Ideas

- ▶ Equity and Justice
- ▶ Interconnectedness
- ▶ Peace and Collaboration

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Materials/Preparation

- ▶ **Overhead:** *Questions for Energy Policy*
- ▶ **Handout:** *Policy Position Cards*, one copy per class, cut into cards
- ▶ **Handout:** *Strategy Worksheet*, eight copies per class (one per group)
- ▶ Eight large (legal size) pieces of blank paper, and colored pens or pencils
- ▶ Blank name tags, one per student

Inquiry

- ▶ How are government policies determined and who has a say in creating policy?
- ▶ What considerations should be taken into account when developing energy policies?
- ▶ How are government policies connected to other global issues?

Learning Outcomes

Participants will:

- ▶ Understand how the three parts of governance – the state (government), civic organizations, and the private sector – work together to create policy
- ▶ Experience the process of finding common interests and building coalitions with other organizations
- ▶ Recognize the difficult choices policy makers face in balancing the short- and long-term costs and benefits of their decisions
- ▶ Understand the role governance plays in other global issues

Vocabulary needed:

Policy: A plan of action for tackling political issues and is often initiated by a political party in government.

Vocabulary needed:

Governance: The exercise of economic, political, and administrative authority to manage a country's affairs at all levels. Governance is a process through which people and groups exercise their citizenship. There are three interconnected parts of governance: the state (government), the private sector, and civic organizations.

The State (Government): Includes elected officials, government agencies, and associated rules, regulations, laws, conventions, and policies of government at the local, state, and federal level.

The State (Government): Includes elected officials, government agencies, and associated rules, regulations, laws, conventions, and policies of government at the local, state, and federal level.

Private Sector: Business, companies, and professionals who trade products and services for income and profit.

Civic Organizations: Community group and non-governmental organizations (NGOs) that work on a broad range of issues that affect a community. The Sierra Club, Amnesty International, and the Boy Scouts of America are examples of civic organizations.

Coalition: An organized group of people, often from different factions, in a community working toward a common goal. A coalition can have individual, group, institutional, community, and public policy goals.

Subsidy: A direct (e.g. money) or indirect (e.g. tax break) payment from the government to businesses, citizens, or institutions to encourage something that the government believes is desirable.

ACTIVITY

Prior to the activity, on paper, divide the participants into small groups as follows:

THE STATE (GOVERNMENT)	CIVIC ORGANIZATIONS	PRIVATE SECTOR
PRESIDENT: TEACHER	FRIENDS OF THE ENVIRONMENT: 3-4 STUDENTS	COAL INDUSTRY: 3-4 STUDENTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION: 2 STUDENTS	CITIZENS OF ECONOMIC GROWTH: 2 STUDENTS	NUCLEAR POWER INDUSTRY: 3-4 STUDENTS
DEPARTMENT OF ENERGY: 2 STUDENTS	RURAL HOMEOWNERS ASSOCIATION: 3-4 STUDENTS	WIND POWER INDUSTRY: 3-4 STUDENTS

- (Optional) Do a Sides Debate to introduce this activity. "If a country holds elections to choose its leaders, that country is a democracy." "Once people have elected their political leaders, there is not much else they can do to participate in the governing of their country."
- Go over the vocabulary words for the activity.

Steps

- Tell the participants they are going to draft a policy that will determine the future of the small country of Loma. Some of the participants will represent the interests of the private sector, some of them will represent different civic organizations, and some will represent the state (government).
- Arrange participants into the eight groups specified in the Materials/Preparation section above. Have each group assign a note-taker and a reporter.
- Pass out to each group the *Policy Interest Cards* (one per group), nametags, a large piece of paper, and pens. Have each student write the name of their group on a nametag and attach it to their shirt.
- Give groups about five minutes to create a sign with a logo that represents their group. Have them tape the signs up in their group's area.

5. Begin by reading the following statement:

“I’d like to welcome you and thank you for coming to this important meeting. As you may be aware, the population and economy of Loma is growing rapidly. As President, I have decided that we need a plan that will assure a steady supply of energy to sustain our growth. I have invited representatives from civic organizations and the private sector to participate in the planning process alongside my Department of Environmental Protection and Department of Energy. I hope the final plan that I select will address Loma’s need for plentiful energy, while also considering environmental and quality of life concerns. Your job today will be to recommend to me an energy plan for our country. I will give more consideration to a plan that includes the widest number of interests and points of view.”
6. Show and go over the *Questions for Energy Policy* overhead. The position cards contain that group’s position on each of the issues. However, these may be compromised during negotiations to produce an energy plan with broad support.
7. Pass out and go over the *Strategy Worksheet* (one per group). Tell participants this will be used to help them form their strategy and to identify potential allies, obstacles, and points of negotiation.
8. Give them about ten minutes to complete the worksheet. Circulate and help groups that are having difficulty.
9. Next, tell the participants they will have ten minutes to form coalitions with other groups that will agree to submit a plan together and negotiate on the four issues required in the energy plan. Remind them that plans that are supported by more groups will get more consideration from you, especially plans that include a broad range of interests. They can belong to more than one coalition and have their interests represented in more than one plan. They cannot talk to you directly during negotiations, but they can discuss their ideas with the Department of Environmental Protection and Department of Energy.
10. Be sure to circulate during the exercise and make sure participants are participating and reaching out to other groups to negotiate and form coalitions. Encourage participants to speak with groups that would not appear to be likely partners, and try to find one or two issues they might agree on. Encourage participants in the government department groups to sit in on negotiations and get their interests heard as well. Do not let groups lobby you directly during the exercise. Tell them to talk to your government department staffers.
11. About seven to eight minutes through the exercise, announce that you are going to hold a cabinet meeting with your Department of Environmental Protection and Department of Energy. If there is anything the groups want to get across to the President, they should tell the department staffers right away.
12. Call over the participants in the Department of Environmental Protection and Department of Energy groups and tell the rest of the groups to continue negotiating while you meet. Meet with the Department groups for one to two minutes and take notes on which groups they have spoken with and their opinions on which groups they think have good ideas. You will reference this when making your final policy decision at the end of the exercise.
13. Call attention to the entire group and instruct groups to gather together in their coalitions, or get together with their original group if they did not form a coalition. If a group is part of more than one coalition, have them split their members between the coalitions.

14. Tell the coalitions (newly-formed groups) that they now have about five minutes to finalize their plans and complete question number five on their strategy worksheet, and then choose a representative to present the plan.
15. Call the meeting to order and ask the representative from each coalition to present their plan, going through their proposal for each of the four issues on the Policy Position Cards. During the presentation, you may want to ask the group these questions: What could be some of the negative side effects of the plan (e.g., pollution, high cost to consumers)?
 - a. Is this plan affordable?
 - b. Is this plan sustainable? (i.e. Will the plan meet the needs of people today and ensure that the needs of future generations will also be met? How does it affect the environment, the economy, and society?)
- c. After all the coalitions have presented, choose the plan to be submitted to the legislature and explain your reasoning behind the choice. The following can be reasons for choosing a plan and will also prompt a good follow-up discussion:
 - The plan with the broadest support
 - The plan that seems most sustainable over time
 - The plan that can be implemented most quickly and inexpensively
 - The plan recommended by your Department staffers
16. Bring the participants back together for reflection questions.

From Institute On Governance, Governance Principles for Protected Areas 3

Figure 1 illustrates four sectors of society, situated among citizens at large: business, the institutions of civil society (including the voluntary or not-for-profit sector), government and the media. A similar illustration for other countries could show a very different distribution of power. For example, the military of a political parts (see Figure 2) might occupy the largest part of the terrain. Government's role might be quite insignificant. In some settings, multinational corporations might play a dominant role.

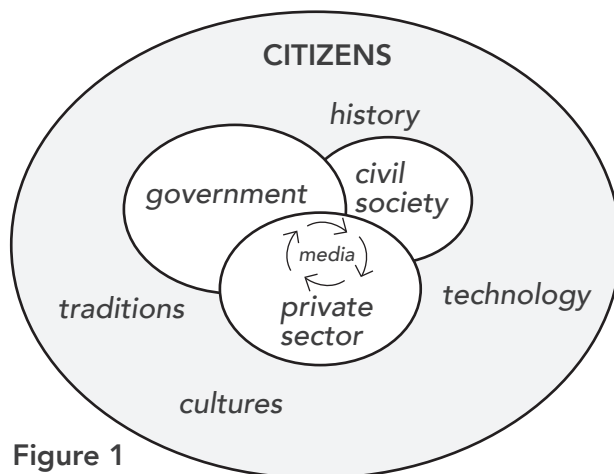


Figure 1

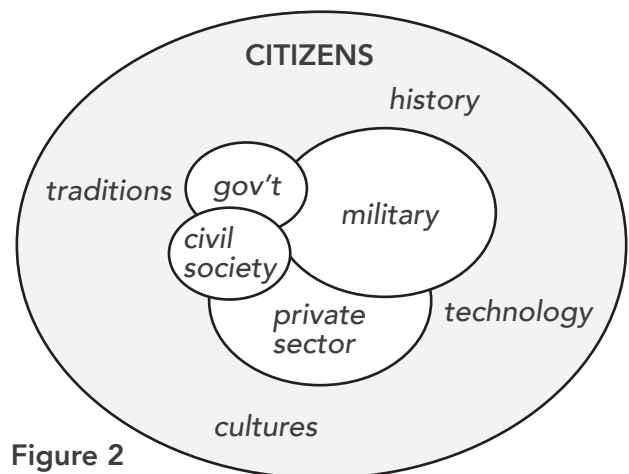


Figure 2

Going Deeper: Critical Considerations

- Were you satisfied with the final decision that was made? Why or why not?
- Which parts of Loma's population will benefit from this policy? Which will be burdened?
- Did you feel that other groups' opinions were listened to more than yours?
- Did you end up talking with any groups that you did not think you would have anything in common with at first?
- Which of the four issues/questions were most important to you? Why?
- Do you think the process you went through accurately reflects how policies are created today? Why or why not?
- Do governments have a responsibility to represent long-term interests (such as future environmental damage and impacts on future generations) when creating policies?
- Did you find yourself seriously compromising your interests so you would not be left out of a coalition?
- Were some members of the group more willing to compromise than others? How did you resolve differences within the group?
- What could be some of the consequences of a policy that is created without any input from either the private sector or civic organizations?
- What do you think groups can do to influence policy if they are left out of the formal planning process (e.g., sue in court, go to the media, arrange protests/rallies)?
- Do you feel that your real political representatives represent your concerns? Why or why not? What do you think you can do to get your interests heard by lawmakers?

Further Resources

<http://www.unescap.org/huset/gg/governance.htm> – United Nations article titled, "What is Good Governance?"

<http://magnet.undp.org/policy/chapter1.htm#b> – This United Nations Development Program (UNDP) document discusses the relationship between good governance and sustainable human development.

QUESTIONS FOR ENERGY POLICY

- **How will energy be produced?**
- **Where will energy production facilities be located?**
- **What should be done about pollution from the energy source?**
- **How will the energy facility be paid for?**

THREE FACES OF GOVERNANCE

Policy Position Cards

Department of Environmental Protection

- Energy should be produced in the way that is least harmful to the environment
- Energy facilities should be located away from water sources and natural habitats
- Energy facilities should be state regulated to prevent pollution
- Coal and nuclear industries should pay the costs of developing their facilities, but the government should give subsidies to wind power, since it is less harmful to the environment

Department of Energy

- Energy should be produced in the most affordable and quickest way possible
- Energy facilities should be located in both rural and urban areas
- The energy industry should voluntarily agree to pollute as little as possible
- Energy facilities that can produce the most power quickly and cheaply – primarily coal burning plants – are more likely to be subsidized by the government

Department of the Environment

- Energy should be produced in a way that is least harmful to the environment
- Energy facilities that generate pollution should be located away from water sources and should not destroy natural habitats
- The energy industry should be heavily regulated by the state to prevent pollution
- The government should offer subsidies to the wind power industry and not offer any subsidies to the coal and nuclear industries

Department of the Economic Growth

- Energy should be produced in a way that is most affordable for businesses and consumers
- Energy facilities should be located wherever land is most affordable
- The energy industry should voluntarily agree to pollute as little as possible
- Energy facilities should pay for themselves, but some government subsidies are acceptable if they lead to cheap and plentiful energy for consumers and businesses

Rural Homeowners Association

- Energy should be produced in a way that is low-cost to rural families and does not heavily damage our land
- Facilities should be located in or near cities since they use more energy
- There should be some pollution regulation, but it should not overburden the industry unnecessarily
- Rural landowners should not have to pay increased taxes for energy facilities since urban people will be using more of it

Coal Power Industry

- Coal is cheap, quick, efficient, and because of new technology, it does not produce much pollution
- We want to locate plants wherever it is most cost effective and provides enough space to build our facility
- We want to self-regulate our pollution - we don't need the state to regulate us
- We would like government subsidies, but can get by without them if we are allowed to produce the bulk of Loma's energy

Wind Power Industry

- Wind power is the cleanest energy source and the most sustainable
- We need to build plants in flat rural areas where there is a lot of wind
- We do not produce pollution, so we do not need to be regulated by the state
- We will need some government subsidies to build our facilities; however, once the facility is constructed it will generate a long-term inexpensive source of energy

Nuclear Power Industry

- Nuclear power is a clean and reliable source of energy. As coal reserves begin to run out, nuclear power is the best long-term energy solution
- We need to build our reactors in rural areas that are near water sources and open space
- We will accept some routine safety checks, but we do not need state regulation for pollution prevention because we will build our facility to the highest standards
- We need government subsidies to build our plants and dispose of and store our waste

THREE FACES OF GOVERNANCE

Strategy Worksheet

Four Issues facing Loma's Energy Policy

- How will energy be produced?
- Where will energy production facilities be located?
- What should be done about pollution from the energy source?
- How will the energy facility be paid for?

Group members: _____

Name of your organization/entity: _____

1. Your Position: Read your position card and discuss the four questions above. You should be able to answer each question based on the position stated on the card.

2. Potential Allies

Which other groups do you think share a similar view of what Loma's energy policy should be? Are there groups that may agree with you on some but not all four issues of the energy policy?

3. Potential Obstacles

Which groups may have different views than you on what Loma's energy policy should be?

4. Prioritize Objectives

Of the four issues in the energy policy, rank them from one (being most important and non-negotiable) to four (being least important and willing to compromise on).

1. _____ 2. _____

3. _____ 4. _____

5. Final Plan (complete this after the negotiations)

With what group/s have you formed a coalition?

1. How will energy be produced? _____

2. Where will energy production facilities be located? _____

3. What should be done about pollution from the energy source? _____

4. How will the energy facility be paid for? _____

Activity 32

To Fight or Not to Fight

Overview

Participants examine a variety of international and intra-national conflicts through a role-playing activity. They learn to identify the roots of conflict, to separate positions from interests in a conflict, and to experience mediating a conflict.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

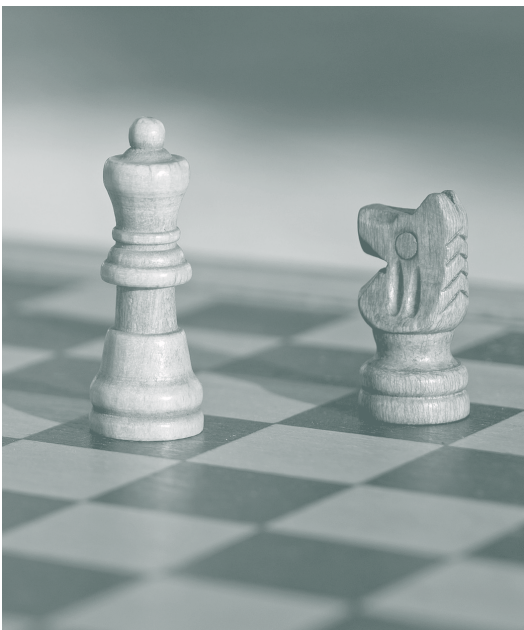
Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour



Inquiry

- ▶ What are the sources of conflict?
- ▶ How are these sources of conflict connected to global issues?
- ▶ How can outsiders (e.g. mediators) help resolve conflicts?

Learning Outcomes

Participants will:

- ▶ Understand the roots of conflict
- ▶ Learn to separate positions from interests
- ▶ Analyze conflicts from multiple perspectives

Materials/Preparation

- ▶ **Handout:** *Conflict Scenarios*, three copies per 15 participants (scenarios for each group are arranged in strips of three, so each student in a group will get one strip)
- ▶ **Handout:** *Conflict Resolution Worksheet*, two copies per student (copy the handout on both sides of a single sheet of paper)

ACTIVITY

Introduction

1. Ask participants to think of a conflict situation they have experienced recently. It could be a disagreement with family, friends, teachers, etc. Take a few minutes to have the participants think of (or write about) one or more conflicts they have had.
2. Ask for a volunteer to share his/her conflict situation with the group.
3. While participants are explaining the conflict, write the basic elements of it on the board or overhead, breaking out the conflict as follows:
 - a. Who were the parties involved in the conflict?
 - b. Why did the student think he/she was right? This is their Position. Explain how to identify a position by writing the following terms common to position statements on the board: "It's my right to," "I've always done it this way," "It's my responsibility/job to," or "My beliefs teach me that."
 - c. What was the conflict about? This is the participant's Interest. Did the individual want something he/she could not have? Was it an argument based on different values?
4. Tell the group they are going to role-play conflicts that take place around the world. Some of these conflicts arise from people competing for a scarce resource and others from differences in culture, religion, and ethnic identity.
2. Lead the participants in brainstorming how the conflict might be resolved, focusing on the interests they identified for each party.
3. Tell the participants they are going to repeat this process in small groups. Explain that each group will work on three scenarios. For each scenario, two participants will take opposing sides in the conflict, and one student will act as a mediator. The mediator will keep track of time during the exercise and can suggest resolutions to the conflict if the two sides reach an impasse during negotiations. The mediator's job is to objectively help both sides reach a resolution through empathy and compromise – without giving up their vital interests.
4. Explain that for each scenario, the two participants taking opposing sides in the conflict will have two minutes to read their scenario and fill out their *Conflict Resolution Worksheet*. They will have three minutes to present their positions and interests to the other side and try to reach an agreement. Be sure to emphasize that participants will not be graded based on reaching an agreement. Some scenarios may not have resolutions. Participants should keep in mind that they are representing an entire group or country in this negotiation, and that it is the student's duty to represent their best interests. Therefore, participants should think carefully before agreeing to a solution.

Steps

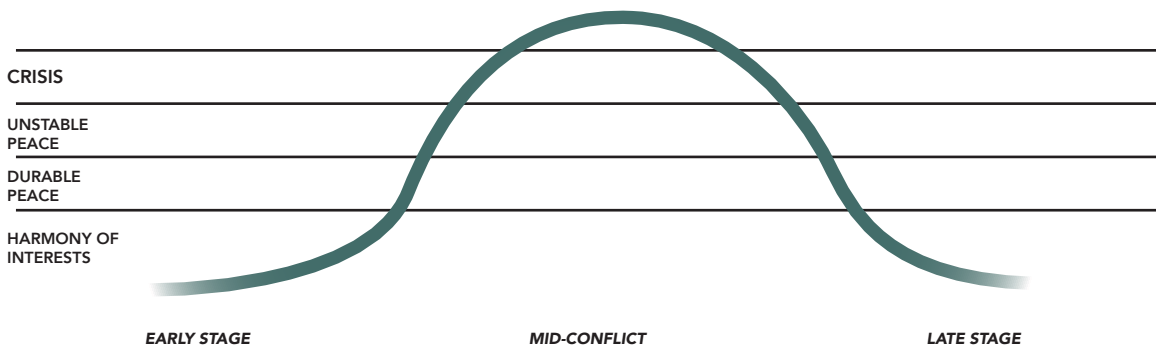
1. Read aloud one conflict scenario from the *Conflict Scenarios* handout and then walk participants through the *Conflict Resolution Worksheet*, having them identify the parties involved, each party's position (why they think they're right), and each party's interests (what they want).
5. Arrange the participants into groups of three and give each group three strips with the same three conflict scenarios. Give each student two (or one double-sided copy) *Conflict Resolution Worksheets*.
6. Have each student number off from one through three. Number One will mediate Scenario One, Number Two will mediate Scenario Two, and Number Three will mediate Scenario Three. For each scenario, the mediator will assign the other two participants to a side.

7. Have participants begin role playing each of their conflict scenarios, starting with scenario one and continuing until they finish the third scenario on their strip. Circulate around the room listening and helping as participants work through their scenarios.
8. After each group has completed its three scenarios (approximately 20 minutes), bring the participants back together for reflection questions.

Going Deeper: Critical Considerations

- How many of you reached a solution to at least one of the scenarios you role-played? (If time permits, have students briefly summarize one of their scenarios).
 - Did you have to give up something you wanted in order to reach a solution, or did you find a solution that gave both sides everything they wanted (met everyone’s interests)?
 - Did you think the mediator in your group was fair, or did you feel the mediator was favoring the other side? Did you trust the mediator?
 - Do you think the solutions you reached are sustainable (i.e., meet present human, economic and environmental needs without compromising the ability of future generations to meet these needs) or do you think there will be another conflict around the same issue in the future?
- What are some solutions that could be more sustainable? Do you think these sustainable solutions can happen without help from an outside party or entity? If you think a sustainable solution requires outside help, who should provide it?
 - Do you think the solution you arrived at might cause new issues to arise, such as making a resource scarcer, or alienating some people you either represented in negotiations or others who were not directly represented?
 - Which scenarios did you find more difficult to solve: conflicts over resources or conflicts over values, religion, and ethnicity? Were you willing to give up some of your values for a solution?
 - Conflicts over core values and identity issues are often intractable. It is often impossible to move beyond discussing positions to discussing interests, since any concession is perceived as a renouncement of your core values and a “win” for an enemy.
 - How does conflict resolution differ between international and intranational issues?

Life Cycle of a Conflict



Further Resources

Film, *Long Night's Journey Into Day: South Africa's Search for Truth and Reconciliation*. Reid, F. & Hoffman, D. (2000). 94 minutes. The film looks at South Africa's Truth and Reconciliation Commission, which examined crimes perpetrated during the apartheid era.

Film, *Prelude to Kosovo*. 52 minutes. Michalczyk, J. (1999). Shot on location in Serbia, Croatia, and Bosnia, this documentary film investigates the ideology of "ethnic cleansing" and the massacres resulting from a nationalist quest for political, cultural, and religious domination.

Film, *Voices in Wartime*. King, R. (2005). 74 minutes. A feature-length documentary that delves into the experience of war through powerful images and the words of poets, both unknown and world-renowned.

Book, *Earth and Ashes*. Rahimi, A. (2000). Harcourt, Inc. (English translation 2002). Set in Afghanistan, this short, lyrical novel tells the story of loss and human perseverance during the Soviet invasion of Afghanistan.

www.beyondintractability.org – Information on interest-based negotiation.



CONFLICT SCENARIOS Page 1

Each group of three students will need three strips with the same three scenarios. There are five strips, enough for 15 students. If you have more than 15 students, repeat the scenarios in different groups.

Scenario 1: Grazing vs. Farming Sides: Farmers and Ranchers

Soyland is a small country with a growing population. There is very little land left that is suitable for growing crops by Farmers. That same small amount of land is also used by Ranchers to graze their cows. The cows use a lot of land, but they can be sold for more money than the crops can be sold for. The people of Soyland rely on the crops grown by Farmers for food, and the Farmers rely on selling crops to support themselves.

Scenario 2: International Water Rights Sides: Electra and Foodville

A large river runs through two countries. In the past, the two countries have taken the same amount of water from the river. Now, Electra needs electricity and wants to build a dam on the river. Farmers in Foodville depend on water from the river to grow crops. If the dam is built, Foodville will have less water than before, and some farmers may not be able to produce as many crops.

Scenario 3: Forced Co-existence Sides: Corats and Lemaks

The people of the country of Bursia are divided into two ethnic groups: Corats and Lemaks. For many years, a much larger country strictly controlled Bursia and kept the Corats and Lemaks from fighting. Recently, the larger country collapsed. Now the Corats want to rule all of Bursia, since they believe it has always belonged to them. The Lemaks want to split Bursia in half and form their own country without Corats living there. The Corats do not want this, because most of the natural resources are in the area of Bursia that Lemaks want for their new country.

CONFLICT SCENARIOS Page 2

Each group of three students will need three strips with the same three scenarios. There are five strips, enough for 15 students. If you have more than 15 students, repeat the scenarios in different groups.

Scenario 1: Not in My Backyard! Sides: Capital City and Smithville

Capital City is a growing metropolis that produces tons of garbage every week. Recently their landfill used for their garbage became full, and city officials began searching for a new site to put the garbage. The efficient option was to dump garbage in an area near the small community of Smithville. Other options exist, but they will cost much more and may result in more taxes – slowing Capital City’s growth. Smithville doesn’t want to take Capital City’s garbage. Capital City is prepared to compensate residents of Smithville for having the garbage dump located near their community.

Scenario 2: Water for Peace Sides: Drylandia and Dustytown

Drylandia and Dustytown have been at war for many years. Drylandia captured and has controlled a piece of Dustytown’s territory for a long part of the war. In recent peace negotiations, Dustytown has offered to stop fighting if Drylandia will give back the piece of Dustytown’s territory it controls. Drylandia would like to stop fighting, but the piece of territory it controls contains a large aquifer, which Drylandia relies on to provide its country with fresh water. The region the two countries are located in is very dry, and fresh water is scarce.

Scenario 3: Family Planning Sides: Government and Elders

The population of the country of Alagura has grown rapidly for the past 50 years, and this has put a huge strain on Alagura’s limited resources. Recently, the Government of Alagura decided to offer free family planning services, in the hope of slowing population growth. The plan immediately met resistance from a group of powerful Elders, who believe it is against the deepest values of Alagurans to prevent people from bringing more life into the world. Many Alagurans look to the Elders for moral and ethical guidance, and many also rely on the Elders for help with food and education for their children when times are tough.

CONFLICT SCENARIOS Page 3

Each group of three students will need three strips with the same three scenarios. There are five strips, enough for 15 students. If you have more than 15 students, repeat the scenarios in different groups.

Scenario 1: Right to Nuclear Power? Sides: Ralcun and Celari

Ralcun and Celari share a border and have a history of fighting. The two countries have not fought a war for many years, but a recent announcement by Ralcun has raised tensions. Ralcun announced it intends to build a nuclear power plant for producing energy. Ralcun claims it has the right to build a nuclear power plant for peaceful purposes. Celari fears that Ralcun intends to use the plant to produce weapons. Celari has threatened to go to war with Ralcun if it continues with its plans to build a nuclear power plant.

Scenario 2: The Forest Sides: Villagers and Tourism Company

In the country of Tropicio, there is a forest the Villagers depend on for fuel to cook their food and heat their homes. The local Tourism Company leads trips into the forest, where visitors come to see the rare trees and animals that live there. As the population of the village grows and people collect more and more wood for fuel, the forest is disappearing at a rapid rate. The Tourism Company is worried that the forest will soon be destroyed.

Scenario 3: Ethnicity and Power Sides: Thalas and Zalas

The country of Izkara is populated by two ethnic groups: Thalas (the minority) and Zalas (the majority). Izkara has been ruled by its military for many years. Nearly all members of the military are from the minority Thalas ethnic group. Recently, the majority Zalas ethnic group has pressured the military government to step down, and asked for elections to be held. If fair elections are held, the Zalas will almost certainly come to power, since they are the majority. The Zalas have made it clear that if elections are not held soon, they will take up arms and fight a civil war against the military.

CONFLICT SCENARIOS Page 4

Each group of three students will need three strips with the same three scenarios. There are five strips, enough for 15 students. If you have more than 15 students, repeat the scenarios in different groups.

Scenario 1: Who Controls the Oil? Sides: Residents and Government

Oil was recently discovered in a poor area of the country of Garanga. The Residents of the poor area were excited at first, since they expected money from the oil to help them achieve better lives. But after months went by, the Residents discovered that the money was going to the Garangan Government, which was not spending any of it on improving the lives of the Residents. Instead, the Government invested the money in Garanga's more wealthy areas in the city. Additionally, since the oil drilling began, water and air in the poor area have become more polluted. The Residents have threatened to start attacking the oil operations if they are not given money from the oil sales.

Scenario 2: Growing Pains Sides: Burbists and Densers

More and more people have moved to Capital City looking for jobs, and soon there will not be enough housing for everyone to live there. Burbists want to build homes outside of Capital City, which they think is too noisy and dangerous. Many landowners are willing to sell their land to them to build on. Densers want to build taller apartment buildings within Capital City, and keep the land outside in its natural state. The Burbists, who give large amounts of money to provide services to the people of Capital City, recently threatened to move to another state if they are not allowed to build their homes where they want.

Scenario 3: A Holy Site Sides: Plantians and Journeyans

The Temple of the Saint is located on top of a hill in a city holy to two religions. The Plantians believe that this site is where their prophet rested before walking up a stairway to heaven. The Journeyans believe this same site is where their ancient king saw a wheel in the sky that kept burning. The Plantians control the holy city but many Journeyans live there. Over the years, relations between the two religions have grown increasingly hostile. It is now so bad that both religions believe it is an insult to their values if the other side even sets foot in the Temple of the Saint. This tension recently led to violence when worshippers from the Journeyans and Plantians tried to enter the Temple at the same time.

CONFLICT SCENARIOS Page 5

Each group of three students will need three strips with the same three scenarios. There are five strips, enough for 15 students. If you have more than 15 students, repeat the scenarios in different groups.

Scenario 1: Who Owns the Forest? Sides: Tribespeople and Government

The Tribespeople of Arborlandia have lived in the Big Forest for hundreds of years. Arborlandia is a poor country, and recently the Government decided that in order to raise money, it would start heavy logging in the Big Forest and sell the wood to people in the North. The Tribespeople have refused to leave the Big Forest, since it is their home and they do not believe the Government has the right to make them leave. The Government believes that selling wood from the Big Forest will bring in much needed income, which it will use to pay off debts and provide services to thousands of people in Arborlandia. The Government is willing to pay the Tribespeople some money to move out of the Big Forest.

Scenario 2: Intra-national Water Rights Sides: Farmers and Fisherfolk

Farmers in the Country of Aguaville depend heavily on the Blue River for water for their crops, which they sell to support their families. Fisherfolk in Aguaville also depend on the Blue River for fish, which they sell to support their families. Due to a long period of dry weather, there is increasingly less water in the Blue River. With the Blue River running low, the Aguaville Fisherfolk worry there will be less fish if the farmers continue to use the same amount of water for their crops.

Scenario 3: Oil and Ethnicity Sides: Bogians and Birdians

Augustus is a country split between a Bogian population in the North and a Birdian population in the South. The two populations have been fighting a civil war for many years over religious differences and competition for scarce farming land. Recently, a small reserve of oil was discovered in the middle of the country. Completely controlling the oil reserve would provide enough income for either side to win the civil war. Alternatively, the oil could also provide income to help rebuild the country if both sides could share, but there would need to be peace for this to happen. Many people on both sides believe that ending the war would mean admitting the other side had won. Finally, devoting land to drilling for oil will reduce the amount of already scarce farming land available to both Bogians and Birdians.

CONFLICT RESOLUTION

Worksheet

Group Member Names: _____

Directions:

- In your group of three, count off one through three. Number one will mediate Scenario One, number two will mediate Scenario Two, and number three will mediate Scenario Three.
- The mediator will assign sides to the two other students.
- Each side will read, discuss, negotiate, and fill out one worksheet for each of the three scenarios. The mediator's job is to objectively help both sides reach a resolution through empathy and compromise—without giving up their vital interests.

1. Read your assigned scenario and write answers to the following questions:

I am (the side you are representing): _____

My Position is (why you think you are right): _____

My Interests are (what you want/need to get out of this negotiation): _____

The Interest(s) I absolutely can't give up during negotiations are: _____

I think the other side's Interests are (what you think the other side wants/needs):

2. Discuss the conflict. Tell the other side what your positions and interests are. The mediator should assist with the discussion, urging sides to practice empathy (trying to understand the other side's position and interests) and compromise (giving up non-essential interests) to reach a resolution.

3. After your discussion and negotiation, briefly explain the resolution you reached (if any):

Activity 33

Toil for Oil

Overview

In this oil extraction simulation, students experience the increasing difficulty of extracting a limited, nonrenewable resource over several years. Students consider and discuss renewable energy sources.

Big Ideas

- ▶ Connecting with Nature
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Vocabulary needed:

Nonrenewable Resource: A resource, such as coal or oil, that cannot be replenished as it is consumed.

Renewable Resource: A resource, such as wind, solar, or geothermal energy, that can be replenished as it is consumed.

Inquiry

- ▶ What happens when a nonrenewable resource is extracted over several generations?
- ▶ What are the impacts of exploiting a natural resource?
- ▶ What renewable energy sources can be used to meet our energy needs, and what are the benefits of those sources?

Learning Outcomes

Participants will:

- ▶ Experience the increasing difficulty of extracting non-renewable oil resources over time
- ▶ Consider the social, environmental, and economic impacts of using a nonrenewable energy resource
- ▶ Identify clean, renewable, and sustainable energy sources

Materials/Preparation

- ▶ Two pounds of dried red beans, for a class of 25 or fewer students
- ▶ 2/3 cup of dried black beans, for a class of 25 or fewer students
- ▶ Two medium size bowls per 25 students, (put one pound of red beans and 1/3 cup black beans in each bowl)
- ▶ Timer, or watch with a second hand, to time activity
- ▶ **Handout:** *Oil Extraction Data Sheet*, one copy per student

ACTIVITY

Introduction

1. (Optional) Do a Sides Debate using the following statement: "As humans, it is our right to extract as much oil as we want to meet our everyday energy needs and strengthen our economies."
2. Review the vocabulary, introducing the concept of renewable and nonrenewable resources.
3. Tell the participants that today they are going to "drill" for oil, a nonrenewable resource, and they will model the extraction of oil reserves over three years.
9. Have those same participants plus the remaining participants in each oil company representing the third year gather around the same bowls and repeat the activity for 30 more seconds.
10. Have each oil company report their total number of barrels.
11. Have participants individually or in their groups complete the questions on the *Oil Extraction Data Sheet*.
12. Conclude with the following reflection questions.

Steps

1. Give each student one copy of the handout *Oil Extraction Data Sheet* and go over it with them. Show them the bowls, explaining that the red beans represent dirt and the black beans represent oil.
2. For a group of 25 or fewer, divide the participants into two groups. Each group will represent an oil company.
3. Have each oil company choose a name.
4. Place the bowls with the red and black beans in different areas of the room.
5. For each oil company, have four participants representing the first year gather around the bowl filled with the mixed beans. The remaining participants will wait while the year one participants extract the oil.
6. Give participants 30 seconds to extract the oil by picking out the black beans from the bowl and leaving the red beans in the bowl.
7. At the end of the 30-second period, have the participants stop extracting, count their barrels of oil, and record their oil extraction on their data sheets (each black bean is equal to one barrel of oil).
8. Have the same four participants, plus three more participants representing year-two oil drillers, gather around the same bowls and repeat the activity for 30 more seconds, extracting and recording.

Going Deeper: Critical Consideration

- What happened to the oil production as the number of oil drillers increased with each year? What might this simulate? (e.g. population increases, increased use per person.)
- With each year, was it easier or harder to extract the oil? (More drillers are able to extract more oil, but then oil also runs out faster. It becomes increasingly more difficult to extract the oil, thus simulating the difficulty of extracting oil as the nonrenewable resource depletes and wells have to be dug deeper and deeper.)
- Are there any resources that are less available now than were available for your grandparents? What are some of these resources? How does this affect you?
- Do you ever think about future generations (your potential children and grandchildren) when you use resources today?
- Discuss and list ways to reduce the use of nonrenewable resources.
- Discuss and list clean, renewable energy sources (and their benefits) that could be used in place of nonrenewable sources.

- How is this activity similar to the extraction of real nonrenewable oil reserves?
- How is the use of a nonrenewable resource different from the use of a renewable resource?
- What happens to a resource when you have infinite population growth and a finite resource?

Further Resources

Film, *French Fries to Go*. Donner, H. (2003). 15 minutes, www.greenplanetfilms.org. French Fries is the story about a guy, his truck, and a bunch of used vegetable oil. This funny and inspiring piece follows Charris Ford as he makes the rounds in his veggie fuel powered rig.

Film, *Oil on Ice*. Djerassi, D. (2004). Bo Boudart Productions. 90 minutes, www.greenplanetfilms.org. A vivid, compelling, and comprehensive documentary connecting the fate of the Arctic National Wildlife Refuge to decisions the U.S. makes about energy policy, transportation choices, and other seemingly unrelated matters. Caught in the balance are the culture and livelihood of the Gwich'in people and the migratory wildlife in this fragile ecosystem.

www.wri.org – World Resources Institute is an environmental think tank that goes beyond research to find practical ways to protect the earth and improve people's lives. Their website includes extensive data on renewable and nonrenewable energy use worldwide.



OIL EXTRACTION

Data Sheet

Student Name: _____

Oil Company: _____

Keep track of your oil company's total barrel extraction. Each black bean is equal to one barrel of oil.

	YEAR 1 <i>(total for all oil drillers in your company)</i>	YEAR 2 <i>(total for all oil drillers in your company)</i>	YEAR 3 <i>(total for all oil drillers in your company)</i>
BARRELS OF EXTRACTED OIL			

1. How many drillers did your company have in Year 1? _____ in Year 2? _____ in Year 3? _____

2. In which year was the largest number of barrels extracted? _____

3. In which year was the second largest number of barrels extracted? _____

4. Which year had the least number of barrels extracted? _____

5. How does this activity mirror real oil extraction? _____

6. Explain the difference between a nonrenewable energy source and a renewable energy source.

7. List five things you can do personally to conserve energy _____

8. List three policies, laws, manufacturing practices, or other types of legislation that could be implemented to reduce dependency on nonrenewable energy sources.

Activity 34

Watch Where You Step

Overview

Participants identify the components of an ecological footprint by creating a web diagram of all the resources they use in their everyday lives and the mark – or footprint – this consumption leaves on the environment. The activity emphasizes the interconnectedness of lifestyle, population, and environmental impacts and focuses on solutions to reduce the ecological footprint.

Big Ideas

- ▶ Connecting with Nature
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Respect for Limits
- ▶ Universal Responsibility

Time

- ▶ 1 hour

Materials/Preparation

- ▶ Butcher paper, one sheet for group of three to four students
- ▶ Marking pens, colored, two to three times per group of three to four students
- ▶ **Overhead or Descriptor:** *Definition and Components of an Ecological Footprint*
- ▶ **(Optional) Handout:** *Hamburger, Fries, & a Cola*

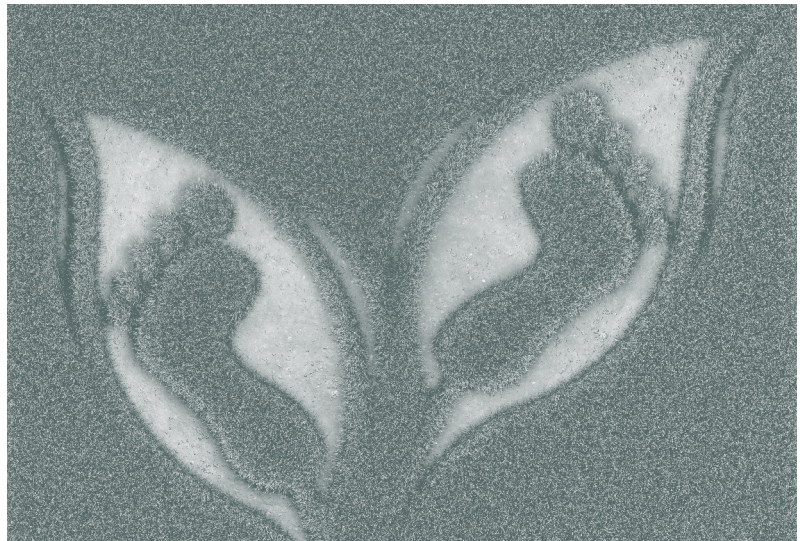
Inquiry

- ▶ What are the environmental, economic, and social impacts of a typical US diet and lifestyle?
- ▶ What would be the consequences if the rest of the world adopted a US lifestyle?
- ▶ What can we do to reduce impacts associated with resource consumption?

Learning Outcomes

Participants will:

- ▶ Identify the resources, processes, and impacts embodied in everyday activities
- ▶ Describe the interconnectedness of population, lifestyle, economics, and environmental issues
- ▶ Discuss, create, and implement ways to reduce ecological footprints



ACTIVITY

Introduction

1. (Optional) Do a Sides Debate using the statements below: There are enough resources to meet needs of everyone on the planet. The U.S. gives more to the world, and therefore can take more from the world.
2. Introduce the concept of Ecological Footprint using the overhead or descriptor *Definition and Components of an Ecological Footprint*. Tell participants that in order to understand this concept, they will create a diagram illustrating everything that is associated with one component of their Ecological Footprint.

Steps

1. Give the following directions before grouping participants and assigning their Footprint component: In groups, brainstorm and map all the resources, processes, and impacts associated with one component of the Ecological Footprint, such as a meal, mode of transport, favorite object, or item of clothing. For example, for favorite meals, you would first agree on a meal you like, write and or draw it in the center of the paper, and then write and/or draw the resources and processes it took produce it.
2. Do a shorter verbal example together with the participants. Ask them what it takes to create a hamburger (cow, bun, lettuce, etc.). There are a few steps between the cow and the burger itself. What are they (e.g. grass, butcher, meat grinder)? Between the cow and the burger, we have the slaughterhouse, the transportation of the meat to the restaurant, the energy to heat the stove to cook the burger, and so on. Now think about all the steps required to make your item, including the resources needed to produce, process, deliver, serve, and dispose of it (e.g., farmland, water, farm, machinery, fertilizer, pesticides, petroleum fuels, electrical energy, transportation, refrigeration, markets, and restaurants) What impacts result from each of those processes and technologies (e.g., soil erosion, pesticide runoff, air pollution, freeway crowding, and urban sprawl)? Use the optional handout *Hamburger, Fries & A Cola* as an example of what goes into producing the common U.S. meal.
3. Arrange participants in groups of three or four.
4. Assign each group one of the following scenarios that illustrates one component of an Ecological Footprint, and have them begin their web diagrams (if you have a large group, you can assign items to more than one small group):
 - a. My favorite food
 - b. How I traveled here today (mode of transport)
 - c. My favorite object (a toy, sports equipment, etc.)
 - d. My favorite piece of clothing
5. Allow about 20 minutes for this portion of the activity. Encourage participants to be creative and think of everything that is related to the object. Remind them to include items such as transportation of a product, the marketing of popular brand items, the treatment of health issues, and protocol for waste disposal.
6. After completing their diagrams, participants brainstorm and list on the back of their butcher paper ten things that they can do personally to reduce their Ecological Footprint (in relation to the item they mapped).
7. Have each group present their diagrams and report their findings and solutions to the large group of all participants. As participants present their footprint reduction solutions, be sure to emphasize that they do not need to give up everything they like, but rather they should focus on ways to reduce their impact. For example, they do not need to say that people should

never drive cars; rather, they could say that people could ride a bike to school when possible or once a week.

- Bring the participants back together for reflection questions.

Going Deeper: Critical Consideration

- The average size of an Ecological Footprint of a person living in the United States (about 24 acres) as compared to someone living in India (about two acres). What impacts might result if twice as many people lived in our community and enjoyed the same meals, transportation, clothing, etc.?
 - What impacts might result if everyone in the world were to enjoy the same lifestyle? How would that impact you economically, environmentally, socially, and politically? How might that impact your access to education, employment, and recreation?
 - What would be the consequences of 12 billion people having the same lifestyle? Would that be sustainable? How might your life change in response?
 - If only a small percentage of the world's people were able to enjoy such a meal, mode of transportation, or clothing while the rest of the world did without, what might the environmental, social, and security consequences be?
 - Why would stabilizing the U.S. population have a major impact on trends in global resource consumption and environmental damage (despite the fact the United States constitutes less than five percent of global population)?
 - Does lessening our impacts necessarily mean reducing our quality of life? Are there ways of enhancing your quality of life while reducing your impacts (e.g., driving a higher mileage car, generating less waste, saving money by using more efficient appliances)?
- How else could you maintain a comfortable and fulfilling lifestyle but lower the associated environmental impacts?

Further Resources

Participants can calculate the size of their own Ecological Footprint and compare it with people around the world by visiting www.myfootprint.org.

Film, *The Ecological Footprint: Accounting for a Small Planet*, Global Footprint Network, Bullfrog Films, www.bullfrogfilms.com, 2005, 30 minutes. In this documentary film, Mathis Wackernagel introduces the Ecological Footprint and paints a picture of our current global situation. Wackernagel explores the implications of ecological deficits and provides examples of how governments, communities, and businesses are using the Ecological Footprint to help improve their ecological performance.

Book, *Stuff: The Secret Lives of Everyday Things*, John C. Ryan and Alan Thein Durning, Northwest Environmental Watch, 1997. *Stuff* follows a typical day in the life of a fictional, middle-class North American, and tracks her consumption. www.northwestwatch.org

Book, *Material World: A Global Family Portrait*, Peter Menzel, Sierra Club Books, 1994. Award-winning photojournalist Peter Menzel brought together 16 of the world's leading photographers to create a visual portrait of life in 30 nations.

www.rprogress.org – Redefining Progress works with a broad array of partners to shift the economy and public policy towards sustainability.

www.footprintnetwork.org – Global Footprint Network supports a sustainable economy by advancing the Ecological Footprint, a measurement and management tool that makes the reality of planetary limits relevant to decision-makers around the world.

DEFINITION AND COMPONENTS OF AN ECOLOGICAL FOOTPRINT

Ecological Footprint:

The area of the Earth's productive surface (land and sea) that it takes to produce the goods and services necessary to support a person's lifestyle

Components of an Ecological Footprint:

- Oxygen (e.g. trees for absorbing carbon dioxide)
- Food (e.g. meat, dairy, fish, fruits and veggies)
- Water (e.g. drinking, cooking, washing)
- Fiber (e.g. clothes, wood, upholstery)
- Energy (e.g. fuel for cars, heat for cooking)
- Infrastructure (e.g. highways, hospitals, water facilities)
- Waste Disposal (e.g. garbage dumps, landfills)
- Recreation (e.g. soccer fields, golf courses)

HAMBURGER, FRIES, AND A COLA:

What did it take to Produce this American Meal?

The meat came from cattle raised initially on public or private land. About ten percent of all public lands in the western United States have been turned to desert by overgrazing, and about two-thirds of public lands are significantly degraded. Streamside lands, where cattle graze, have been especially damaged.

It took approximately two pounds of grain to produce that quarter-pound of meat, and that grain production cost five times its weight. Topsoil has been lost due to erosion from unsustainable farming methods. Producing that grain also took substantial amounts of pesticides and fertilizers (half of all fertilizer in the United States is applied to feed corn for animals), some of which ran off into surface water or seeped into groundwater supplies. By the time the steer was finished in the feedlot, it took 600 gallons of water to produce that hamburger patty. Once slaughtered and processed, the meat was frozen, shipped by truck, kept cold, and then cooked on a grill using natural gas.

The five-ounce order of fries came from one 10-ounce potato grown in Idaho on half a square foot of soil. It took 7.5 gallons of water to raise that potato, plus quantities of fertilizers and pesticides, some of which ran off into the Columbia or Snake Rivers. Because of that runoff and the dams that generate power and divert water for irrigation, the Snake River sockeye salmon is virtually extinct. A number of other species are also in decline because of these production practices.

The potato was dug with a diesel-powered harvester and then trucked to a processing plant where it was dehydrated, sliced, and frozen. The freezing was done by a cooling unit containing hydro-fluorocarbons, some of which escaped into the atmosphere and likely contributed to global climate change. The frozen fries were then trucked to a distribution center, then on to a fast food restaurant where they were stored in a freezer and then fried in corn oil heated by electricity generated by hydropower.

The meal was served in a fast food restaurant built on what was once originally forest, then farmland, then converted to commercial and industrial uses as the city expanded. The ketchup in aluminum foil packets came from Pittsburgh and was made from Florida tomatoes. The salt came from Louisiana.

The cola came from a Seattle processing plant. It is made of 90% water from the Cedar River. The high fructose corn syrup came from Iowa, as did the carbon dioxide used to produce the fizz, which is produced by fermenting corn. The caffeine came from a processing plant that makes decaffeinated coffee. The cola can was made from one-third recycled aluminum and two-thirds bauxite ore strip-mined in Australia. It came to Washington State on a Korean freighter and was processed into aluminum using an amount of energy equivalent to a quart of gasoline. The energy came from some of the dams mentioned earlier that have contributed to a 97% decrease in the salmon runs of the Columbia Basin.

The typical mouthfull of food consumed in the United States traveled 1,200 miles for us to eat it. Along the way, it required packaging, extensive use of energy, roads, bridges, and warehouses, contributing to atmospheric changes, adverse health effects, and traffic congestion.

Activity 35

What's Debt Got To Do With It

Overview

Participants model the impact of debt on the social and economic health of developing countries. Working in “very poor country” groups, participants choose how to allocate limited funds to different sectors of their country’s economy. The groups take on loans to help their country develop and experience what happens when their funds are diverted to debt repayment and away from investment.

Big Ideas

- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Learning Outcomes

Participants will:

- ▶ Experience how to budget for development with limited funds
- ▶ Understand the impact of debt on a poor country’s budget
- ▶ Understand how debt contributes to a cycle of poverty
- ▶ Be introduced to the concept of microcredit and its growing role as a tool for poverty alleviation

Inquiry

- ▶ How do poor countries plan and allocate for sustainable development?
- ▶ How does debt contribute to the cycle of poverty in developing countries?
- ▶ Should donor nations consider forgiving debt?

Materials/Preparation

- ▶ Poker chips (nine chips per group of three to four students)
- ▶ **Handout/Overhead:** *Debt Vocabulary and Facts About Developing World Debt*, one copy per student or one overhead
- ▶ **Handout:** *Resource Allocation Sheet*, one copy for every three to four students

Vocabulary needed:

Debt: Money that is owed to a person or organization.

Debtor: A person, company, or country owing debt.

Creditor: An entity to whom debt is owed.

Developing World Debt: (also called Third World debt) The debt of a developing country owed to outside creditors.

Vocabulary needed:

Developing World Debt Relief: The partial or total forgiveness of debt, or the slowing or stopping of debt growth, owed by developing world countries.

International Monetary Fund: An international organization of 184 countries whose primary function is to provide temporary loans to poor countries. Money loaned from the IMF can only be used to help a country balance its budget.

World Bank: An independent specialized agency of the United Nations that provides loans and grants to poor countries. Money loaned and granted from the World Bank can be used for development projects.

ACTIVITY

Introduction

- (Optional) Do a Sides Debate using the following prompt: "Poor countries should have their debts forgiven."
- (Optional) Ask participants if they have ever bought something with a credit card. Ask how many of them (or their parents) have ever made a partial payment on their card. Tell them that if this is the case, they have accrued debt and paid interest on their credit card loan. Give this example: They buy a computer for \$2000 using their credit card with an 18 percent interest rate. If they make a minimum payment of \$50 per month, it will take five years to pay for their computer and they will have paid \$1077 in interest for a total of \$3077.
- Write on the board or overhead: "\$40,000 per person" and "\$660 per person." Tell the group that these two amounts (in U.S. dollar equivalents) represent the annual average amount of money earned per person in two different countries. This is the total Gross National Income (GNI), or all the money that is generated in that country divided by the country's total population. These numbers represent a very wealthy country (U.S.) and a very poor country (Burundi). Ask the participants what they think might be some of the implications of this difference. Ask what they think very poor countries do to meet the needs of their people. How can a poor country get the money it needs? Participants may or may not raise the issue of borrowing money.

- Go over the vocabulary list.

Steps

- Tell the participants that they will work in small groups, with each group representing a poor country (like Burundi) of about eight million people with very few resources. In order for their country to survive, they must take out loans to invest in their country's health care, education, and infrastructure (e.g., roads, water projects, hospitals). However, the loans must be paid back with interest (Note to teacher: There are other areas in which countries spend money, such as military defense; however, the three areas of health care, education, and infrastructure were chosen for this activity because they are essential elements of a country's development).
- Show the *Resource Allocation Sheet* and tell the group that they will be allocating their funds using this sheet. Go over the four areas where they can allocate funds.
- Break the participants into groups of three to four participants. Give each group one copy of the *Resource Allocation Sheet*, have them choose a name for their country, and write their own names on the sheet.
- YEAR 1:** Tell the participants that they will begin in year one, and the starting budget of their country is \$600 million dollars. This includes some past loans that the country must pay back. They will receive six poker chips each worth \$100 million. Pass out six chips to each group.

5. Tell them that since the countries must pay back their loans, \$200 million (two of the poker chips) must be placed in the "Debt" section on the *Resource Allocation Sheet*. The groups must decide where to invest the remaining \$400 million (four poker chips). Give them a few minutes to decide where they will allocate the four remaining poker chips and have them place those chips in the section indicated on the allocation sheet. Have them fill out the Year One lines, indicating how much they allocated in each sector.
6. YEAR 2: Tell the participants that it is now year two and the International Monetary Fund and the World Bank have agreed to give their country another loan (at a lower interest rate) to help with their debt and invest in their country's development. Each country will receive \$300 million dollars (three additional chips) and can move \$100 million dollars (one chip) currently in the "Debt" section to another sector on the *Resource Allocation Sheet*. However, they will have to pay back this new loan in a few years, along with interest. Hand out three additional poker chips to each group, and give participants a few minutes to allocate those chips and the chip from the Debt section. Have them fill out the Year Two lines.
7. YEAR 3: Tell the participants that it is now year three, and while their country's economy has improved a bit, it has not grown nearly enough to pay off all their loans and interest. To pay off the loans, they must move more of their budget to the "Debt" section or they will not be able to borrow any more money in the future. Tell the participants to select \$300 million (three poker chips) currently invested in Health, Education, and/or Infrastructure, and move them to the "Debt" section. Have them fill out the Year Three lines.
8. YEAR 4: It is now year four and unfortunately they are falling further into debt. They must therefore move another \$300 million (three poker chips) into the "Debt" section and fill out the Year Four lines.
9. YEAR 5: Tell the participants it is now the fifth year of their country's budget, and the IMF, World Bank, and other lenders have agreed to grant their country debt relief. The groups can take all the money (chips) in the "Debt" section and allocate them to other sectors on the *Resource Allocation Sheet*. Since this relief is permanent, they will not have to move any money back to the "Debt" section. Give the groups a few minutes to complete their final reallocation of money (chips) and fill out the Year 5 lines.
10. Bring the participants back together for reflection questions.

Going Deeper: Critical Considerations

- What happened in years three and four when you had to allocate most of your budget to debt? How did your country's debt affect other areas of development?
- How does investment in health, education, and/or infrastructure contribute to a poor country's development?
- When you did not have to put money in the Debt section, where did you choose to invest it and why?
- Had you wished there was another budget area to choose from? Instead of taking money only from Health, Education, or Infrastructure, can you think of another budget area to cut?
- Do you think it is fair that your country should have to pay back loans and interest even if there is no money for schools or medicine? What about the countries that gave you the money – is it fair that they do not get paid back?
- If you were to divert money from another area not represented on the sheet, what would the consequences be? What deleterious social effects might have been avoided?

- Who do you think bears more responsibility for the debt cycle in this exercise – the IMF and World Bank for giving the loan and charging interest, or the government of the country for taking out the loan and spending the money?
- If it turned out that your government mismanaged the loan and invested in the wrong things, should your country still receive debt relief?
- Often a country accepting an IMF loan must give up control of resources like electricity, oil, and telephone lines to private companies, including companies from outside the country. Do you think this makes sense? Why do you think the IMF would make this a condition of the loan?
- Should donors be responsible for ensuring their loans are not used for projects that destroy the environment or hurt people? What if the project will generate a lot of money for a poor country but will also cause heavy environmental and/or social damage?
- What do you think are the root causes of debt in the developing world? How could the legacy of colonialism be connected to developing world countries' debt? (Note: An Internet search for "developing world debt legacy of colonialism" will bring up some interesting resources on this topic).
- How might this cycle of debt actually benefit rich countries? (Note: According to some development experts, the IMF, World Bank, and governments of rich countries are implicated in perpetuating the cycle of poverty in heavily indebted countries. The theory goes that when increasing debt payment and falling rates of foreign aid are coupled with the takeover of natural resources, the very poorest of the world effectively help to make rich countries richer).

Further Resources

www.imf.org – International Monetary Fund includes information on their Heavily Indebted Poor Countries (HIPC) Initiative.

www.worldbank.org – Click on "FAQs" on the homepage, then click on "Debt Relief" for extensive information on the debt relief debate, along with an explanation of the World Bank's position against forgiving all debt.

RESOURCE ALLOCATION SHEET

Name of country:

Students in group:

HEALTH CARE \$ amount allocated	
YEAR 1	
YEAR 2	
YEAR 3	
YEAR 4	
YEAR 5	

EDUCATION \$ amount allocated	
YEAR 1	
YEAR 2	
YEAR 3	
YEAR 4	
YEAR 5	

INFRASTRUCTURE \$ amount allocated	
YEAR 1	
YEAR 2	
YEAR 3	
YEAR 4	
YEAR 5	

DEBT \$ amount allocated	
YEAR 1	
YEAR 2	
YEAR 3	
YEAR 4	
YEAR 5	

Activity 36

What's in the News?

Overview

In this media literacy activity, participants use an *Iceberg Model* to analyze the global patterns and underlying structural causes that drive events in the news.

Big Ideas

- ▶ Equity and Justice
- ▶ Interconnectedness
- ▶ Peace and Collaboration
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Materials/Preparation

- ▶ One sample news article to model the activity
- ▶ **Overhead:** *Iceberg Model*
- ▶ A variety of news articles, two or three per group. Gather articles from online, newspapers, and/or magazines about significant events in the world (you can gather the articles yourself and/or have students bring in articles).
- ▶ Butcher paper, one sheet per group
- ▶ Marking pens, colored, three to four pens per group

Inquiry

- ▶ What are the economic, political, and social forces that drive the dramatic events we see reported in the news?
- ▶ How are news events connected to each other in terms of their underlying causes?
- ▶ What are some positive ways we can address the structural causes of many negative world events?

Learning Outcomes

Participants will:

- ▶ Analyze several news articles using a model that helps identify the particular global patterns and economic, political, and social forces (i.e. structural causes) behind the story.
- ▶ Diagram the events, patterns, and underlying structures in a news article
- ▶ Identify connections among news articles
- ▶ Discuss structural solutions to address these events
- ▶ Write an article about the emerging patterns and underlying causes of a particular current event



ACTIVITY

Introduction

1. Ask the participants to define media literacy (the ability to read, analyze, evaluate, and produce communication in a variety of media forms such as websites, podcasts, social media, print media, and television)
2. Tell them that they are going to explore an aspect of media literacy by analyzing some news articles using a tool called the *Iceberg Model*.

Steps

1. Share with the participants your sample news article about an important current event, such as a significant conflict, an environmental disaster, an economic situation, or a criminal activity.
2. Ask participants to paraphrase the event depicted in the sample article.
3. Use the overhead, *Iceberg Model*, to lead a group discussion about the relationship between current events and the global patterns and underlying economic, political, and social forces that propel them to prominence in the news. Explain that what we read about most often in the news are events – the newsworthy, exciting, and dramatic things that happen in our world. Events in the news are like the tip of an iceberg. The visible part of an iceberg is only about ten percent of its total mass and the remaining 90 percent is underwater and never seen. However, it is this hidden 90 percent that the ocean currents act on and which determine the behavior of the iceberg's tip. Likewise, news events "at the tip of the iceberg" may be things such as war, or the crime in our community, or a massive flood in China. On the news, these events are witnessed as dramatic and isolated incidents—the forces that create and shape them (what happens "underwater") are not often revealed. When we notice the occurrence of similar events (wars or terrorist attacks in other parts of the world, or other extreme natural disasters such as earthquakes or a tsunami), we are seeing the emergence of a pattern. It may appear that more of these events are happening, or it may be that the media is reporting these events more often. For example, we might read a news article in the paper today about a local robbery (an event). Over the course of a year we may notice that there are several articles about robberies and other crimes committed in the same area of town (a pattern). Does this indicate that crime is up or just that we are hearing about it more frequently? Patterns underlie and act upon events, so they are shown just below the tip in the iceberg model. Finally, deep beneath the surface are the underlying structures or root causes that drive the events and patterns – just as the underlying ice mass drives the tip of the iceberg. These underlying structures or causes can be economic, political, or social. For example, the underlying cause of the robberies and other crimes may have to do with the economics of the area. Perhaps schools in that area are unable to offer quality education or unemployment rates may be high. Underlying structural causes may be the growing gap between the rich and poor, or a lack of education, job opportunities, or other forces that preclude sustainable livelihoods. Are underlying structural causes such as these typically revealed in news stories? If not, what effect does this have on how we understand an event and how we perceive the people who are involved in the event?
4. Go back to the sample news article, and together with the participants use the *Iceberg Model* to analyze it. Ask them, "Has this type of event been in the news before? Is it a recurring event? If so, can you identify a global pattern that is driving these events? What are some possible root causes of these patterns? For example, is the event related to poverty, lack of education and/or health care, or development practices that are not environmentally sound? Does the article discuss some or all of these root causes?" If you use an article about a war in

Zimbabwe, you might look for a discussion in the article about Africa's colonial past, arbitrary boundaries, population growth, the HIV/AIDS epidemic, environmental destruction, and poverty.

5. Before moving on, be sure participants understand how to use the iceberg model to analyze a news article in terms of the events, emerging patterns, and underlying causes.
6. Arrange the participants into groups of three to four participants, and give each group two to three different news articles, one sheet of butcher paper, and one set of pens.
7. In their groups, have the participants read the articles, choose one, and use the iceberg model to analyze the event and look for patterns and root causes. Have participants discuss whether they have noticed other similar events in the news. Then have them brainstorm, discuss, and list on a separate piece of paper all of the root causes they can think of that might contribute to the event.
8. Have each group create an iceberg diagram of their news article by gluing or taping the article onto the top of the paper, listing and/or drawing the patterns they have noticed, and finally listing and/or drawing the underlying root causes. Their final diagram should have a shape similar to an iceberg with the news article at the top (the event), the pattern below, and the underlying causes at the bottom.
9. Have each small group present their iceberg models to the larger group of all participants. Discuss how many of the events presented connect to each other through similar underlying causes. For example, wars, social unrest, and environmental damage are often closely linked by factors such as poverty, lack of education, and limited resources.

10. Have each group discuss structural solutions that could be implemented to address the root causes of events and patterns identified in their articles.
11. Conclude with the following reflection questions.

Going Deeper: Critical Consideration

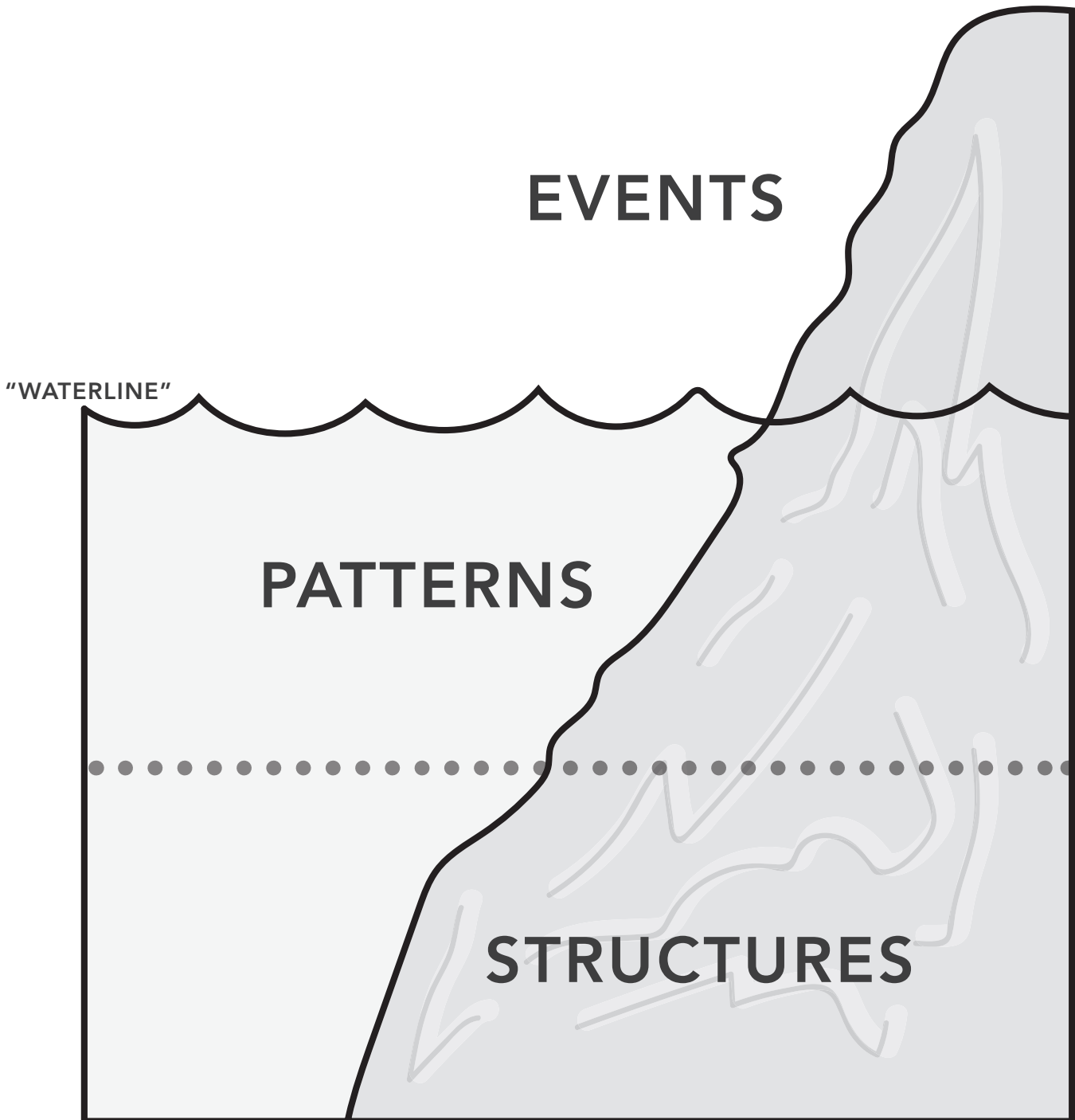
- How did using the *Iceberg Model* to analyze the news articles help in your understanding of events, patterns, root causes, and their connections?
- How does the *Iceberg Model* fall short as an analysis tool? In other words, are there news stories and/or events that would not fit this model?
- What was the most surprising thing you found in your analysis?
- How could you use the *Iceberg Model* to improve your reading skills (reading for content versus understanding)?
- What can we do to address the underlying structural problems of the events and patterns you studied?

Further Resources

www.indymedia.org – The Independent Media Center is a network of collectively run media outlets for the creation of radical, accurate, and passionate telling of the truth.

www.fair.org – Fairness and Accuracy in Reporting is a national media watch group working to invigorate the First Amendment by advocating for greater diversity in the press and by scrutinizing media practices that marginalize public interest, minority, and dissenting viewpoints.

ICEBERG MODEL



Activity 37

What's up with the GDP?

Overview

In this economics simulation, participants graph changes in the personal incomes of different community residents and in the community's proportion of the Gross Domestic Product (GDP) following an oil spill. The activity explores the effect of an environmental disaster on the GDP, and the accuracy of GDP as a measurement of a community's overall health.

Big Ideas

- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 90 minutes - 2 hours

Materials/Preparation

- ▶ Tape and scissors
- ▶ **Handout:** *Role Cards*, copy and cut as many as the table below indicates. One set of role cards is enough for a class of 30.
- ▶ **Handout:** *100-Dollar Bills*, copied and cut into strips (refer to amounts in table below: for 20 students, 180 bills or 12 sheets; for 30 students, 270 bills or 18 sheets)
- ▶ **Handout:** *Income Graphs*, one per student

Inquiry

- ▶ How do we measure the economic, social, and environmental health and well-being of a community?
- ▶ What are the limitations of using the GDP to measure the health and well-being of a community?
- ▶ What are other ways we can measure progress?

Learning Outcomes

Participants will:

- ▶ Graph and evaluate the change in personal income and proportion of the GDP of a fictional community before and after an environmental disaster
- ▶ Consider the appropriateness of GDP as a measurement of the overall health of a community
- ▶ Identify and discuss other indicators to measure a community's health and well-being



COMMUNITY ROLES	PERCENT OF COMMUNITY	A CLASS OF 20 STUDENTS	A CLASS OF 30 STUDENTS	BEFORE SPILL \$100 BILLS PER STUDENT <i>total \$\$ per person</i>	AFTER SPILL \$100 BILLS PER STUDENT <i>total \$\$ per student</i>
OIL EXECUTIVE	5%	1	1	20 (\$2,000)	+15 (\$3,500)
ATTORNEY	5%	1	2	15 (\$1,500)	+15 (\$3,500)
DOCTOR	5%	1	2	15 (\$1,500)	+10 (\$2,500)
RETAIL BUSINESS OWNER	5%	1	2	10 (\$1,000)	+5 (\$1,500)
ENVIRONMENTAL TECHNICIAN	10%	2	3	10 (\$1,000)	+5 (\$1,500)
OIL PIPELINE WORKER	25%	5	7	10 (\$1,000)	-3 (\$700)
SERVICE WORKER	20%	4	6	5 (\$500)	-2 (\$300)
COMMERCIAL FISHER	25%	5	7	5 (\$500)	-4 (\$100)

ACTIVITY

Introduction

1. Begin by defining and discussing Gross Domestic Product (GDP): GDP is the total market value of the goods and services provided within a region's borders. Explain that GDP is often used as a primary means of measuring a nation's economic health. Tell the participants that they are going to examine the applicability of GDP as a measurement of the overall health of a community and explore other possible indicators of a community's health and progress

Steps

1. Read the following scenario to the participants:

You are a community of people living in the town of Salmon Bay, Alaska, located on the Pacific coast adjacent to Salmon Sound, an area containing an important ocean fishery. Salmon Bay's economy is based primarily on oil development, commercial fishing, and small retail/service businesses. The Majestic Oil Company's pipeline, carrying 2,000 gallons of oil per minute, runs through the town of Salmon Bay. Each of you will represent one of the following roles in the community: Majestic Oil Company chief executive officer, a doctor, an attorney, a business owner, an oil pipeline worker, an environmental technician, a commercial fisher, and a service worker (restaurant cooks and waiters, grocery store clerks, hotel workers, etc.).

2. Randomly assign roles (pass out role cards) and give each student his or her starting money as indicated in the table above (the oil executive gets twenty 100-dollar bills, the doctors get fifteen, the retail business owners get ten, etc.).
3. Have participants write their name on their role card.
4. Have each student tape his/her 100-dollar bills together to form a lengthwise strip and then tape their role card, with their name written on it, to the bottom of the strip.

5. Holding their strip of money, participants line up in a row in order of shortest to longest strip, forming a human graph of income distribution in the town of Salmon Bay.
6. Have them tape the strips to the wall or chalkboard in the same order as step five, keeping the bottom edges even to form a graph. Make sure role cards and student names are visible at the bottom of the strip.
7. Pass out the handout *Income Graphs* and have participants make a bar graph of "Individual Incomes in the Starting Economy" based on amounts from the main graph posted on the board.
8. Calculate the total income in the starting economy and write it in the space next to the graph.
9. Arrange participants in groups based on their community roles (put all the fishers together, etc.). Group the CEO, attorney, doctor, and business owner together. If needed, subdivide the groups so each has no more than five participants.
10. Read the following scenario:
A pipeline worker accidentally runs a piece of heavy equipment into the pipeline, causing a severe rupture. The pipeline rupture is right next to an estuary that opens directly into the Salmon Sound fishery. Oil begins to flow out of the ruptured pipeline at the rate of 2,000 gallons per minute, directly into the estuary and into Salmon Sound. It takes Majestic Oil Company four hours to discover the damaged pipeline and stop the flow of oil. Officials from the Environmental Protection Agency (EPA) and the Department of Oil and Gas (DOG) arrive on site to assess the damage.
11. Ask the participants to predict how this event will affect their personal income and Salmon Bay's overall proportion of the GDP.
12. One at a time and starting with the lowest economic group, give each group the *After*

Spill Card that pertains to them, and have them read the card aloud to the group and follow the card's instructions. Some participants will make more money and others will lose their money. Participants either cut their dollars off the top of their strip or tape new dollars onto it, depending on what the card says.

13. Have participants complete the bar graph of *Individual Incomes Post-Spill* and calculate the total post-spill income using the bottom graph on the handout.
14. Conclude with the following reflection questions.

Going Deeper: Critical Consideration

- What happened to personal incomes and the GDP? Is this what you predicted would happen?
- What professions/vocations seem to benefit the most? Which suffer the most? Explain why.
- What happened to the health and well-being of the community?
- Do you think people in Salmon Bay were happier/better off before or after the oil spill?

- What happened to the health of the environment? What are some of the long-term consequences of the oil spill?
- What are some indicators in your community that you could look at to determine the health of your community?
- Is there a difference between well-being and progress? Explain.
- Did the GDP give an accurate picture of the community's overall health? If not, where did it fall short and why?
- What are some indicators besides GDP that could more accurately gauge the well-being of the Salmon Bay community (education levels, health, number of parks, air and water quality, etc.)?

Further Resources

www.iisd.org – The International Institute for Sustainable Development (IISD) website has background information and a directory of community-based projects that have developed and used alternative indicators of progress.

www.rprogress.org – Redefining Progress (RP) works with a broad array of partners to shift the economy and public policy towards sustainability. They have developed the Genuine Progress Indicator, an alternative to the GDP for measuring progress.

GLOBAL ISSUES CARDS Page 1



CHIEF EXECUTIVE OFFICER
Majestic Oil Company



ATTORNEY
Salmon Bay Law Firm



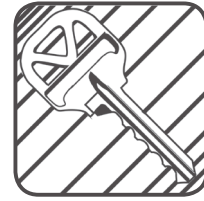
ATTORNEY
Salmon Bay Law Firm



DOCTOR
Salmon Bay Clinic



DOCTOR
Salmon Bay Clinic



RETAIL
Business Owner



RETAIL
Business Owner



ENVIRONMENTAL
Technician



ENVIRONMENTAL
Technician



ENVIRONMENTAL
Technician



OIL PIPELINE
Worker



OIL PIPELINE
Worker



OIL PIPELINE
Worker



OIL PIPELINE
Worker



OIL PIPELINE
Worker

GLOBAL ISSUES CARDS Page 2



OIL PIPELINE
Worker



OIL PIPELINE
Worker



SERVICE WORKER
Restaurant, Retail Clerk,
Hotel Worker



SERVICE WORKER
Restaurant, Retail Clerk,
Hotel Worker



SERVICE WORKER
Restaurant, Retail Clerk,
Hotel Worker



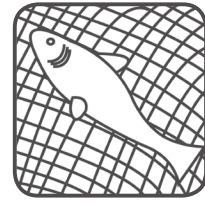
SERVICE WORKER
Restaurant, Retail Clerk,
Hotel Worker



SERVICE WORKER
Restaurant, Retail Clerk,
Hotel Worker



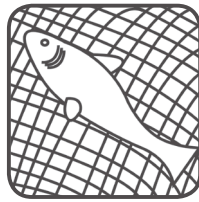
SERVICE WORKER
Restaurant, Retail Clerk,
Hotel Worker



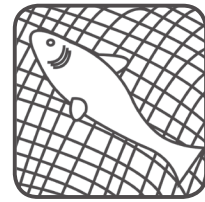
COMMERCIAL
Fisher



COMMERCIAL
Fisher



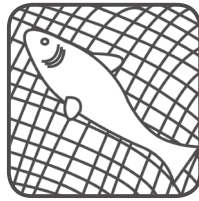
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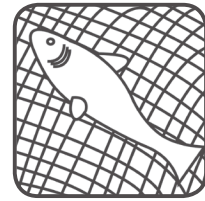
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COMMERCIAL
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COMMERCIAL
Fisher



COMMERCIAL
Fisher

AFTER SPILL CARDS *Page 1*



CHIEF EXECUTIVE OFFICER MAJESTIC OIL COMPANY

Majestic Oil Company will spend up to \$2 million on cleanup operations and legal fees. We will hire the best law firm in town to fight any lawsuits. However, the company plans to raise the per-barrel price of our oil from \$15 to \$20 to pay these costs. Unfortunately, the company has decided that I must step down from my duties as CEO, but in honor of my many years of service, I have received a "golden handshake". The CEO earns \$1,500.



ATTORNEYS WITH SALMON BAY LAW FIRM

We are pleased to announce that Majestic Oil Company has just hired the Salmon Bay Law Firm to defend it in a lawsuit filed by "Save Salmon Bay". Majestic Oil is willing to pay whatever it costs to win this pending lawsuit. We are working day and night on this case, and therefore our incomes double. Attorneys earn \$1,500 each.



DOCTORS WITH SALMON BAY CLINIC

As a result of the oil spill, several Majestic Oil Company workers have been exposed to toxic fumes and require immediate medical attention. Salmon Bay's fresh water has also been contaminated, and many townspeople have come to the hospital complaining about headaches and stomach problems. Because of this increase in medical demand, our income increases by almost 70 percent. Doctors earn \$1,000 each.



RETAIL BUSINESS OWNERS

We are sorry to say that some oil workers and fishers are out of work and are now spending less at the grocery store, movie theaters, and gas stations. However, the good news is that hotels and restaurants have been very busy since the spill, as there are many officials in town reviewing and monitoring the cleanup operations. We are experiencing a 50 percent increase in business. Business owners earn \$500 each.

AFTER SPILL CARDS *Page 2*



ENVIRONMENTAL TECHNICIANS

The environmental technicians have started immediate oil-spill monitoring and cleanup operations. We are monitoring wildlife impacts, testing water quality, and starting oil cleanup procedures. We are very busy these days, and our incomes have increased by 50 percent. Each technician earns \$500.



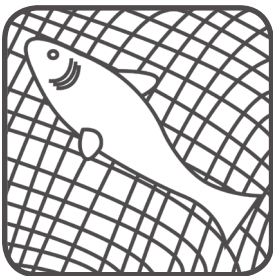
OIL PIPELINE WORKERS

Since the spill, regular operations on the pipeline have stopped and a few of us have been laid off, although some of us are working overtime on pipeline operations. Because of the spill, we also have medical costs from exposure to toxic fumes and contaminated water supplies. Our overall income is reduced by 30 percent. Each pipeline worker loses \$300.



SERVICE WORKERS

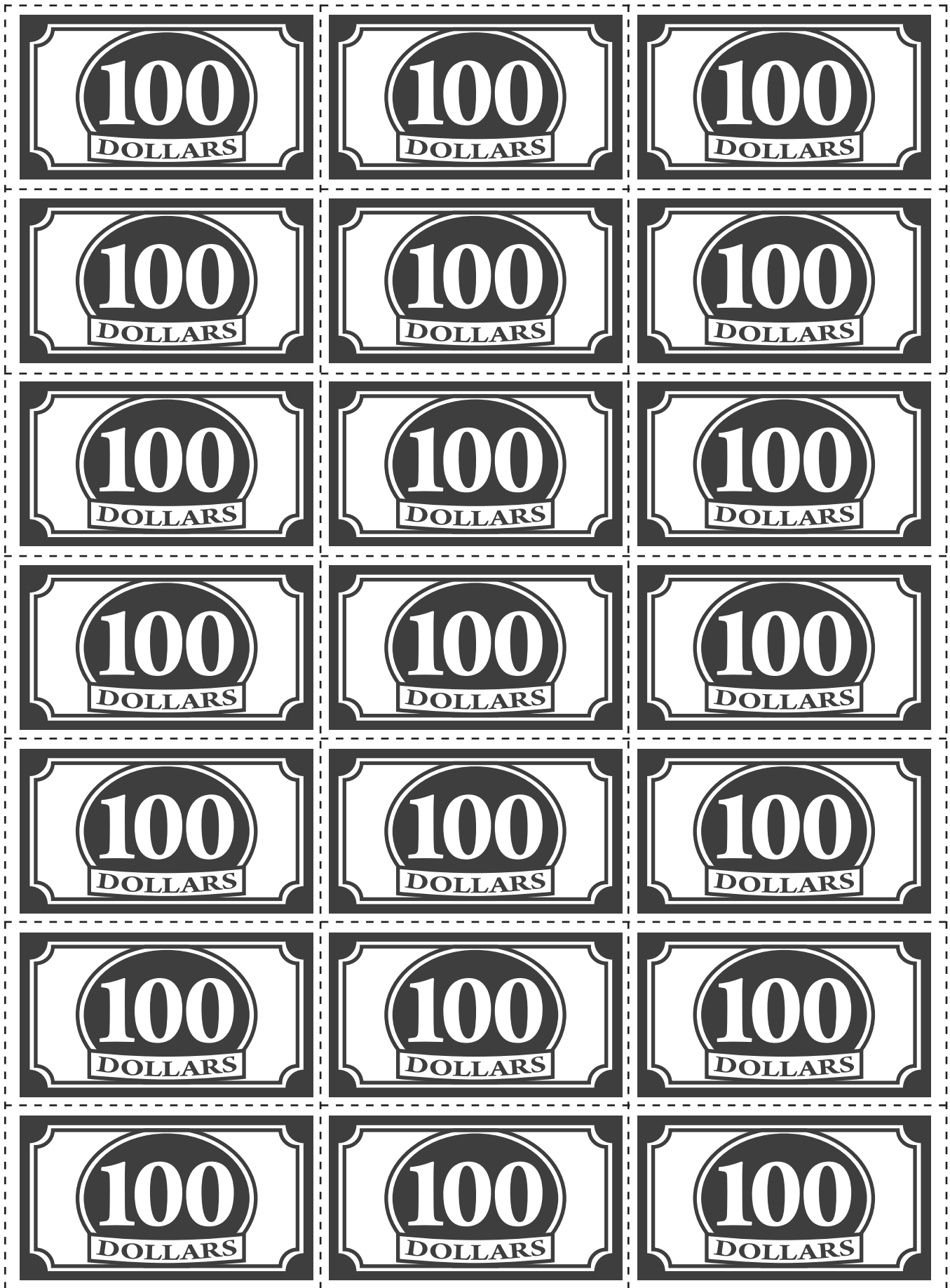
Salmon Bay's commercial business is booming these days because there are so many government officials and news reporters here looking over the cleanup operations. However, we haven't been feeling too well since the spill because our water supply is now contaminated. We are spending our money on bottled fresh water and on doctor visits. Service workers each lose \$200.



COMMERCIAL FISHERS

The Salmon Sound fishery has been wiped out by the oil spill. The oil dumped into the Sound killed most of the adult fish, and the fish breeding ground in the bay is devastated. There will be no fishing in this area for several years. We will have to take our fishing boats out of the Sound and look for fish in other areas. Each fisher loses \$400.

DOLLAR BILLS



Activity 38

When the Chips are Down

Overview

Participants model three patterns of Ecological Footprint growth over four generations, using poker chips to represent Ecological Footprints and maps that they create to represent countries. The activity emphasizes the impact of changes in population growth rates and consumption patterns over relatively few generations, and possible solutions to these impacts.

Big Ideas

- ▶ Connecting with Nature
- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 90 minutes

Learning Outcomes

Participants will:

- ▶ Design and draw maps of their ideal country
- ▶ Model different Ecological Footprint growth rates over four generations
- ▶ Consider and discuss impacts of the different Ecological Footprint growth rates
- ▶ Consider, discuss, and debate a number of “structural” solutions to impacts associated with Ecological Footprint growth

Inquiry

- ▶ How does an increase in Ecological Footprints impact countries?
- ▶ What are the impacts of different Ecological Footprint growth rates when carried out over several generations?
- ▶ What personal and structural solutions could be implemented to address impacts identified in this activity?

Materials/Preparation

- ▶ **Overhead:** *Definition and Components of an Ecological Footprint*
- ▶ Butcher paper, one sheet per group (each sheet should be no larger than 25" x 30")
- ▶ Marking pens, colored, three to four pens per group
- ▶ Poker chips, 500 for a class of 20 or fewer, 1,000 for a class of more than 20
- ▶ Count out the poker chips for each group and each generation according to the table below, and put the larger stacks in labeled plastic bags



ACTIVITY

Introduction

1. Use the overhead, *Definition and Components of an Ecological Footprint* to discuss the concept of Ecological Footprint.

Steps

1. Explain the following directions: In groups, design and draw a map of your ideal country, including the following components: farmland, housing, water, forests, recreation, energy sources, infrastructure, waste disposal, defense, and open space/wilderness. Decide on a name for your country and the type of government you want, and write those on the map.
2. Divide the participants into three groups for a group of 20 or fewer, six groups for a group over 20 (with six groups, you will need to double the number of chips indicated in the above table).
3. Give each group a piece of butcher paper and a set of marking pens. Have them brainstorm, discuss the components to be included, and then draw their country maps. Instruct them to draw their maps as if they were looking down on it from an airplane flying above (e.g. small squares for houses, areas for food cultivation, roads, etc.). Encourage participants to be creative and to think about everything they might want to include in their ideal country. Give them plenty of time to create their maps so they are proud of their country and have an emotional connection to it.
4. When the groups are finished creating their countries, place the maps side by side (with edges touching) on a large table or on the floor, and have each group (or two representatives from each group) stand next to their country maps. Be sure that all the participants can see the maps.
5. With the participants gathered around, have each group briefly present their country map to the larger group of all participants.
6. Read (or paraphrase) the following directions to the participants:

You will model three different patterns of Ecological Footprint growth (based on population and consumption increase) over four generations, using poker chips to represent Ecological Footprints and the maps to represent countries. Each poker chip represents an Ecological Footprint. Ecological Footprints of individuals and nations vary depending on both population size and consumption patterns. Larger populations have a larger footprint because more people require more resources to support them. Higher consumption lifestyles have a larger footprint because they require more resources per person to support those lifestyles. For example, eating an animal protein-intensive diet requires much more farmland than a vegetarian diet. Automobile use requires roads, repair shops, and parking lots, thus eliminating habitat for other species. You will place the Ecological Footprints (chips) on areas of the map where you want your impacts to be. For example, you might want to place the chips in areas designated for housing, roads, or farmland, since those are areas you have designed to be impacted. On the other hand, you probably do not want to place Ecological Footprints in your wilderness areas, if you want to keep them undeveloped.
7. Point to one map and tell them that this country represents a traditional agrarian society. They are doubling in population each generation, but their average consumption per person remains the same so their Ecological Footprint is doubling each generation. Place two chips, representing the first generation, on this country.
8. Point to the next country and tell them that this country represents a more developed

society that has reduced its population growth rate, but is still experiencing a 50 percent increase in population and is doubling its consumption, so its total Ecological Footprint is tripling each generation. This is representative of some rapidly industrializing “Asian Tiger” nations, such as Thailand. Place three chips, representing the first generation, on this country.

9. Point to the third country and tell them that this country represents a society that is doubling both its population and its per capita consumption each generation. Therefore, its Ecological Footprint will quadruple each generation. This is representative of highly affluent societies such as the United States. Place four chips, representing the first generation, on this country.
10. Emphasize that chips cannot be placed outside the borders of countries and that chips cannot be placed on top of each other since an Ecological Footprint is a measurement of surface area and cannot be stacked (Note: Be careful not to say that they must keep their chips on their own country; placing chips, which represent Ecological Footprints, on other countries is allowed and even encouraged).
11. Hand out the second generation of chips and have the groups place the chips on their maps, modeling one “generation” of Ecological Footprint growth at a time. After each cycle is complete, hand out bags of pre-counted chips (as indicated in the above table) for the next generation. As you hand out the bags of poker chips, tell each group to decide where they want to place the Footprints. As they progress through the generations, they will have to decide which resources they want to impact or “cover up” with the Footprints.
12. Have the participants briefly stop and observe the progression of the three models after each generation cycle. The group modeling a doubling of Footprint size will finish their task quite soon and with minimal difficulty. The group modeling a tripling of Footprint size will probably take somewhat longer, and will confront decisions about how to handle growth and how to allocate impacts. The group modeling a quadrupling of Footprint size will take much longer and need much more room. Allow enough time for participants to consider alternatives, but force the play rapidly enough so there is a sense of urgency and stress.
13. Participants modeling the faster growth patterns (tripling and quadrupling) will be forced to decide which resources to deplete to accommodate their needs, since not all of the chips will fit on their maps without overrunning the resource base (you may need to remind participants that the only rules are that they cannot stack the chips or place them off the paper; however, there is no rule about putting chips on another country). Situations that may arise include deforestation, loss of habitat, migration, border incursions, “brain-drain” (migration of educated people in search of better jobs), and invasion of neighboring countries to support population and consumption needs. Participants may decide they need to impose draconian policies to halt population and consumption growth and “suspend” democratic principles. Some participants may decide to build border walls and store weapons to deter invasion of neighbors. The game will likely end in frantic activity, with participants pushing piles of chips across borders, other participants throwing chips off the table, and still other participants trying to block other countries from placing chips on theirs, etc.
14. Bring the group back together for reflection questions.

Going Deeper: Critical Consideration

- What two things can make a country's total Ecological Footprint bigger?
- How did you feel when you saw how the other countries were dealing with their growth?
- What would happen if the chips game continued for two more cycles? What other decisions might each country have to make?
- What different choices would you have made in your country if you had known what was going to happen?
- How would careful planning have changed the outcome of the activity?
- Which decisions made in the activity actually occur in real life? What are the real-life impacts of those decisions, and what effect might they have on quality of life and social institutions? What type of government might emerge in response to the increased stress?
- Discuss the difference between personal and structural solutions to the impacts produced in the activity (e.g., a personal solution may be to reduce your own Footprint size by using alternative transportation rather than driving a car solo to school or work everyday. Structural solutions may include helping people in developing nations become economically self-sufficient, providing access to reproductive and community health care, and developing sustainable technologies).

Further Resources

Book, *Anno's Magic Seeds*, Mitsumasa Anno, Puffin Books, 1995. A children's story about a man who plants seeds that double every year, incorporating concepts in math, economics, and the environment.

Book, *Collapse: How Societies Choose to Fail or Succeed*, Jared Diamond, Viking Adult, 2004. Diamond examines how ancient and modern societies have collapsed due in large part to overconsumption of resources and population growth.

www.rprogress.org – Redefining Progress is one of the creators of the Ecological Footprint calculator.

www.prb.org – Population Reference Bureau's website includes extensive country-specific demographic data.

Activity 39

Who are the Nacirema?

Overview

Participants read a short story about the body-related rituals of a cultural group called the Nacirema, and then use the same literary device employed in the original story to write their own short stories about rituals of the Nacirema. This writing exercise spurs a discussion on cultural awareness, assumptions, and worldviews.

Big Ideas

- ▶ Connecting with Nature
- ▶ Equity and Justice
- ▶ Interconnectedness
- ▶ Peace and Collaboration

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour

Materials/Preparation

- ▶ **Handout:** *Body Ritual Among the Nacirema* by Horace Miner, one copy per student

Inquiry

- ▶ How does our cultural worldview influence and inform our perception of people from other cultures?
- ▶ How can we be aware of and change our assumptions?
- ▶ How can we benefit from understanding our own cultural worldview and how it affects our relationships with other cultures?

Learning Outcomes

Participants will:

- ▶ Identify and discuss a specific “cultural group” described in an anthropological study
- ▶ Write their own anthropological study on the same cultural group
- ▶ Discuss “cultural worldview” and how it informs different cultural perceptions and understanding between cultures



ACTIVITY

Introduction

1. Choose a cultural group that the participants will have some knowledge of and write it on the board or overhead. This could be a group of people they are currently studying, one that is in a piece of literature they are reading, or a cultural group that is currently in the news. Have the participants brainstorm a list of what they know about this cultural group, focusing on specific cultural practices.
2. Tell the participants that they are going to read an anthropological account of a cultural group.
5. Have the participants write one or two paragraphs describing another ritual of the Nacirema either from the brainstorm list or one they think of on their own, using the same techniques Minor uses in his story.
6. Have participants read their paragraphs to the group and have the group identify the ritual.
7. Conclude with the reflection questions below.

Steps

1. Pass out the handout *Body Ritual Among the Nacirema* to each participant and have the group begin an aloud “read-around.” Do not tell them that it is a fictional account.
2. After reading the first few paragraphs, stop and ask participants if they are familiar with the cultural group described in the article. Ask those who are familiar to not reveal what they know about the Nacirema until all of the participants have finished reading.
3. After reading, ask how many participants now know who the Nacirema are. What made it hard to identify who they are? How does Minor’s description of the Nacirema affect our ability to identify them? What are the techniques Minor uses to describe the Nacirema? (He uses a distinctly anthropological form of observation and writing called “ethnography,” in which he merely reports what he observes without the benefit of understanding the culture he describes. It is as though he is from another planet.)
4. Brainstorm other rituals of the Nacirema that might seem odd to someone from another culture or even from another planet (e.g., playing a particular sport, preparing and eating food, watching TV, shopping, going to a party, etc.).

Going Deeper: Critical Consideration

- Were you surprised when you figured out who the Nacirema were (Americans)? Explain why or why not.
- How does *Body Ritual Among the Nacirema* help us understand our own view of other cultures and how we are viewed by others?
- Why do some of the practices and rituals of other cultures seem odd or foreign to us? How do our own cultural norms affect our understanding and perception of other cultures?
- What assumptions do we make about other cultures? What are some examples of practices in other cultures that we find odd and hard to understand (e.g., arranged marriages, eating and preparing unusual foods, ritual body piercing, rites of passage)?
- Go back to the brainstorm list created earlier about a specific cultural group. What are the assumptions in the list based upon? How does our own cultural worldview affect how we perceive this specific group?
- What techniques can we use to notice when we are making assumptions about others, and how can we avoid doing this?

Further Resources

Film, *Koyaanisquatsi*, Godfrey Reggio, 1982, 87 minutes. The title is a Hopi Indian word meaning “life out of balance”. The film is an apocalyptic vision of the collision of two different worlds – urban life and technology versus the environment.

Book, *Zoom*, Istvan Banyai, Puffin Books, 1995. A wordless picture book that visually reveals different levels of perspective.

www.unesco.org – United Nations Educational, Scientific and Cultural Organization (UNESCO). Click on Culture link for information and resources.



BODY RITUAL AMONG THE NACIREMA

*Adapted from "Body Ritual Among the Nacirema" by Horace Miner,
American Anthropologist Magazine 58(3), 1956, pp. 503-7*

Page 1

The ritual of the Nacirema was first brought to the attention of anthropologists twenty years ago, but the culture of this people is still very poorly understood. They are a North American group living in the territory between the Canadian Cree, the Yaqui and Tarahumara of Mexico, and the Carib and Arawak of the Antilles. Little is known of their origin, although tradition states that they came from the east.

Nacirema culture is characterized by a highly developed market economy, which has evolved in a rich natural habitat. While much of the people's time is devoted to economic pursuits, a considerable portion of their day is spent in ritual activity. The focus of this activity is the human body, the appearance and health of which appear as a major concern in the people's belief. While such a concern is certainly not unusual, its ceremonial aspects and associated philosophy are unique.

The main belief underlying this ritual activity appears to be that the human body is ugly and that its natural tendency is to weakness and disease. Captive in such a body, man's only hope to avert these characteristics is through the use of ritual and ceremony. Every household has one or more shrines devoted to this purpose. The more powerful individuals in the society have several shrines in their houses and, in fact, the grandeur of a house is often referred to in terms of the number of such ritual centers it possesses.

The focal point of the shrine is a box or chest, which is built into the wall. In this chest are kept the many charms and magical potions without which no native believes he or she could live. These preparations are obtained from a variety of specialized practitioners. The most powerful of these are the medicine men, whose help must be rewarded with large gifts. However, the medicine men do not provide the potions for their clients, but decide what the ingredients should be and then write them down in an ancient and secret language. This writing is understood only by the medicine men and by the herbalists who, for another gift, provide the required charm.

Beneath the charm-box is a small font. Each day every member of the family enters the shrine room, bows his or her head before the charm-box, mingles different sorts of holy water in the font, and proceeds with a brief rite of cleansing. The holy waters are secured from the Water Temple of the community, where the priests conduct elaborate ceremonies to make the liquid ritually pure.

BODY RITUAL AMONG THE NACIREMA

*Adapted from "Body Ritual Among the Nacirema" by Horace Miner,
American Anthropologist Magazine 58(3), 1956, pp. 503-7*

Page 2

The medicine men have an imposing temple, or latipso, in every community of any size. The more elaborate ceremonies required to treat very sick patients can only be performed at this temple. These ceremonies involve not only the miracle-worker, but also a group of assistants who move quietly about the temple chambers in distinctive costume and headdress. The latipso ceremonies are so harsh that a fair proportion of the really sick natives who enter the temple never recover. Despite this fact, sick adults are not only willing, but eager to undergo the long and drawn-out ritual purification, if they can afford to do so. No matter how ill or how grave the emergency, the guardians of many temples will not admit a client if he or she cannot offer a rich gift.

The Nacirema have an unrealistic horror of and fascination with the mouth, the condition of which is believed to have a supernatural influence on all social relationships. Were it not for the rituals of the mouth, they believe that their teeth would fall out, their gums bleed, their jaws shrink, and their friends desert them. They also believe that there is a strong relationship between oral and moral characteristics. For example, there is a ritual cleansing of the mouth for children, which is supposed to improve their moral character.

The daily body ritual includes a mouth-rite. This rite involves a practice which strikes the unfamiliar stranger as revolting. It was reported to me that the ritual consists of inserting a small bundle of hog hairs into the mouth, along with certain magical pastes, and then moving the bundle in a highly formalized series of gestures.

In addition to the private mouth-rite, the people seek out a holy-mouth-man once or twice a year. These practitioners have an impressive set of tools, consisting of a variety of augers, awls, probes, and prods. The use of these items in removing the evils of the mouth involves almost unbelievable ritual torture of the client. The holy-mouth-man opens the client's mouth and, using the above mentioned tools, enlarges any holes which decay may have created in the teeth. Magical materials are put into these holes. If there are no naturally occurring holes in the teeth, large sections of one or more teeth are gouged out so that the supernatural substance can be applied. In the Nacirema's view, the purpose of these religious functions is to arrest decay and to draw friends.

Our review of the ritual life of the Nacirema has certainly shown them to be a magic-ridden people. It is hard to understand how they have managed to exist so long under the burdens which they have imposed upon themselves.

Activity 40

Worldwide Mingle

Overview

Participants experience what it is like to stereotype and to be stereotyped based solely on brief identity descriptions (labels placed on participants' backs) of people from particular backgrounds. The label identities are related to population, economic status, and the environment.

Big Ideas

- ▶ Connecting with Nature
- ▶ Equity and Justice
- ▶ Health and Resiliency
- ▶ Interconnectedness
- ▶ Local to Global
- ▶ Peace and Collaboration
- ▶ Respect for Limits
- ▶ Universal Responsibility

Related

Facing the Future Readings

- ▶ *Exploring Global Issues*
- ▶ *Big World, Small Planet*

Time

- ▶ 1 hour



Inquiry

- ▶ How do our own views of the world and cultural background affect how we view our world?
- ▶ How can we be aware of stereotyping people who are different from us?
- ▶ What are the disadvantages of stereotyping?
- ▶ What is worldview and how does it affect our actions?

Learning Outcomes

Participants will:

- ▶ Experience what it is like to be labeled, judged, and stereotyped based solely on a brief description of their identity
- ▶ Consider how their own worldview shapes their perception of others
- ▶ Discuss and describe their experience of judging and being judged
- ▶ Discuss ways to be aware of and to shift their mental models and worldview

Materials/Preparation

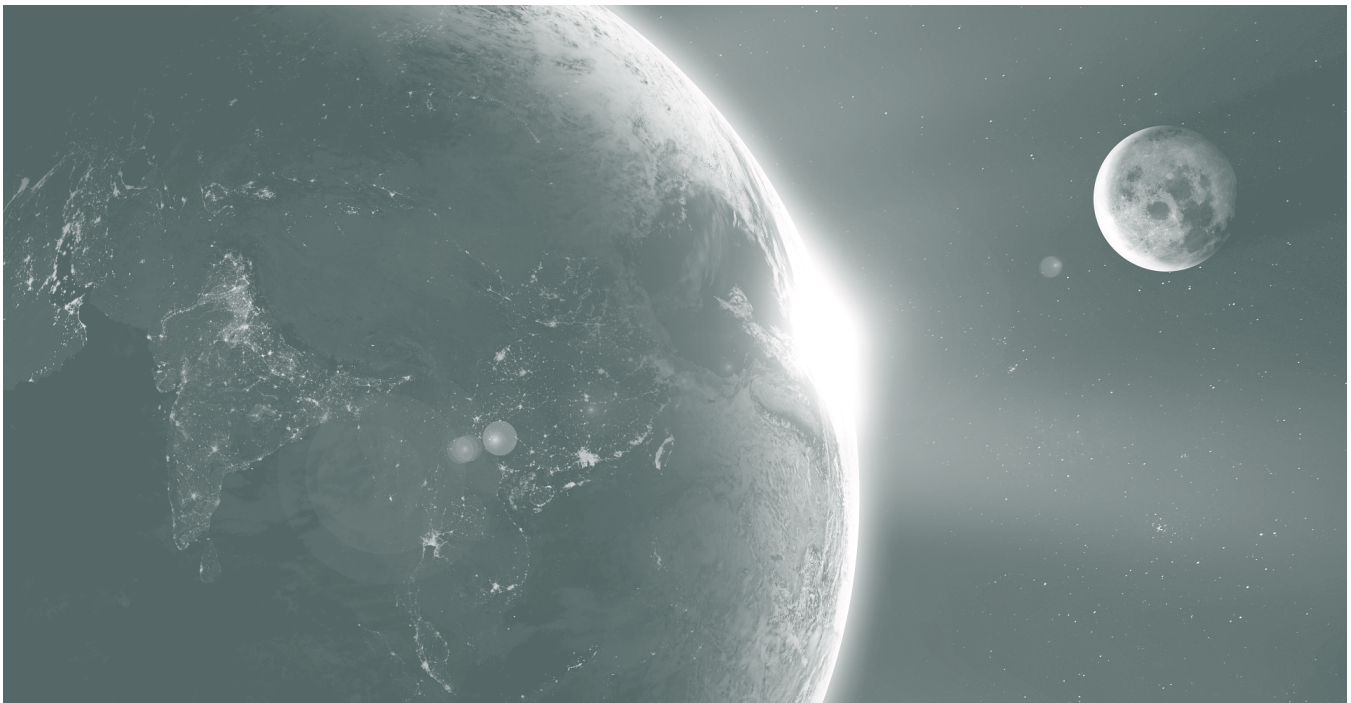
- ▶ **Handout:** *Worldview Mingle Labels*, copy and cut so that you have one label for each student. (There are 21 labels so there may be more than one label with the same identity depending on the class size. If so, you can make up new labels.)
- ▶ Tape

ACTIVITY

1. The purpose is not to tell the other person his or her identity but, rather, to respond to each other's identity with questions, judgments, statements, etc. (You may want to model this for the participants using one of the labels or one that you make up) written on his/her own label.
2. Tell the participants to start mingling. Encourage participants to keep moving around the room and responding to each other's labels. You can also walk around the room, listen participants have talked to everyone and/or figured out their own identity, have them sit in groups of three or four. If there are participants who have not yet figured out their identity, have the group tell them what it is.
3. Have participants discuss in their group how it felt to be judged, and to judge, based solely on a label.
4. Have the groups summarize their discussion to the whole group.
5. Conclude with the following reflection questions.

Going Deeper: Critical Considerations

- What surprised you about the responses you received?
- Does this mirror the real world?
- Discuss the concept of "worldview" and how our own worldview influences the way we interact with others. Use the following ideas and questions to lead the discussion: "Worldview is to humans as water is to fish. It's the stuff we swim around in and don't even recognize. Think of fish in a bowl of water. They swim around and don't even think about the water around them. Worldview is our 'water', and many times we don't even realize we are surrounded by it until we step outside our own culture. Worldview is the lens through which we interpret the past and which helps determine our future. Worldview is what we believe is true about the world, but which other people in the world may not believe is 'true.'"
- What surprised you about the responses you received?



- Give participants the following (or another personal) example of cultural worldview: “If you visited India, you might be shocked to see cows wandering around freely. That’s because in the United States, cows are owned by farmers and ranchers and kept in pens. In India, however, cows are considered sacred and can roam freely. Before visiting India, you might have assumed that throughout the world cows are owned and kept contained – that would be your worldview. Here’s another example of worldview: In the United States we have a strong focus on the ‘individual’ – your success is often based on what you have accomplished on your own. In some cultures your identity has more to do with your family or community, and therefore talking about what you have done or want to do may be considered rude.”
- Ask if any participants have been somewhere (in or out of this country) where people had different ways of doing things that seemed strange or even “wrong.” What did they learn about themselves and others from the experience?
- How does our own worldview affect how we perceive others?
- How does understanding someone else’s worldview help us understand him or her?
- How do our actions reflect our own worldview?
- Does our worldview influence how we solve global issues?
- How can we change our worldview if it no longer serves us well?

Writing Connection

Have participants write a journal entry about their “different identity” experience. Or have them write a short story detailing the life of the person identified on their label, including enough details in the story to explain the person’s worldview.

WORLDVIEW MINGLE LABELS

U.S. married suburban mother of three	CEO of Multinational Oil Company	U.S. single unemployed father of two
Palestinian man from Gaza refugee camp	Married woman with no children	Immigrant farm worker in the U.S.
Iraq War veteran	U.S. unmarried teenage mother	Poor Pakistani mother with 6 children
Poor Ethiopian father of five	U.S. homeless teenager	"Pro-life" activist
"Pro-choice" activist	Somalia woman with HIV/AIDS	Doctor who provides abortions
U.S. Real Estate Developer	Greenpeace (environmental) activist	Out-of-work logger
Yanomamo Indian from Brazil	Muslim exchange student in the U.S.	Guatemalan Rebel



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