

Smart Moves Lesson 2

Making Choices 2: Walking the Walk

Overview: In this second lesson on principles and citizenship, students recognize the complexity of environmental choices, explore a process for decision making, and create action plans based on their principles.

Objectives:

Students will be able to

- Recognize the complexity of "right/right" choices.
- Identify the parts of an environmental problem, including the science behind the problem as well as the human concerns.
- Explore a process for making decisions.
- Describe what they are willing to do about the problem.
- Create action plans based on their principles.

Time: 2 class periods

Materials:

- Student Handout: *Making Choices*

Procedure:

1. Review the students' principles that they wrote in the lesson "Making Choices 1" and point out that the values they have written can help them make decisions in their lives. One way people decide what to do or how to solve a problem is to let their values guide them.

2. Write the word *integrity* on the board and ask students if anyone knows what it means. Tell students that today they will explore integrity – matching their values with responsible behavior or actions. Explain that people who have integrity act on their beliefs and do what they say they will do. Ask the students: Would you call a minister who lies a person demonstrating integrity? Why not? What about a writer who quits his job creating advertisements for a cigarette company because he doesn't believe in glamorizing the product? Does his action show integrity? Why or why not?

3. Point out that the great thing about having sound principles is that you always have a way to measure your behavior, you always have a way to judge whether or not you are living the vision you have for your life. Tell students that today they will look at a real and pressing problem facing all of us and use their principles to help them decide what to do about it.

4. Pass out the handout *Making Choices* to each student and tell the class that you will use the handout as a basis for class discussion. Everyone should follow along and do the exercises.

5. Start the discussion by telling students that they will examine real problems, problems that aren't easy to solve.

Here's an example of a real problem: A girl sees a friend stealing from another student at school and knows she should tell the teacher. If she does tell, her friend will get in trouble and feel betrayed by her. If she doesn't tell, her friend will harm other students by stealing from them. The girl is right to want to be loyal to her friend and right to want to protect others. She has a real problem to solve.

6. Have students read the introduction to the handout *Making Choices* aloud and then give them time to read and respond to the first problem-solving step. Repeat this process for each step: have students read the information, work through the exercise individually, and then discuss together in whole group.

7. Point out that it is easy for us to intend to do the things we believe in, but it's often difficult to carry out good intentions. In the final step of *Making Choices*, Make a Decision, preview the example in the Personal Action Plan. Some students may say that they don't think they should have to reduce the miles they are driven. Encourage those students to come up with a plan for air quality. What other ideas do they have? Let them spend time researching the topic on the Internet and have them document their sources.

Discuss with the class other actions students might take that could minimize the use of cars and encourage the use of alternative transportation; for example, encouraging the drivers of cars to respect bicyclists or teaching a friend how to take the bus.

8. Tell students that the process they are using today can be one they apply to all the problems in their lives. The hard part of this process is actually following through – demonstrating integrity. It is one thing to make an action plan based on your beliefs; it is quite another to act.

9. Encourage students to take their plans with them and report back in a week on their progress. When students have completed their action plans, ask volunteers to share their plans. You might post a chart of the greenhouse gases that were not emitted by the class using alternative transportation.

Assessment Opportunities:

- Responses to problem solving steps in handout
- Class discussion
- Completed action plans
- Review and discussion of action plans

Extensions:

Forecasting

To demonstrate the power of individual actions, ask students to forecast the clean air

savings when each person conserves. What happens when one student walks two miles to the store instead of driving? What happens when every student in the class walks two miles to the store every week for a year? How many pounds of noxious gases are not emitted when 100 people walk two miles instead of driving?

Research Other Actions

Have students get on the Internet and discover what other students around the world are doing about air quality. What actions are young people taking? How can your students participate in this cause?

Benchmarks:

Career-Related Learning

Personal Management

Exhibit appropriate work ethic and behaviors in school, community, and workplace.

- Recognize and explain the differences between socially responsible and socially irresponsible behavior.

Problem Solving

Apply decision-making and problem-solving techniques in school, community, and workplace.

- Use information to make decisions and solve problems related to family, school, and community situations.

Organizations and Systems

Describe how individuals fit into organizations and systems.

- Compare and contrast simple systems and organizations, showing their common elements and relationships (e.g., families, schools, communities, and workplaces).

English

Reading

Demonstrate literal comprehension of a variety of printed material.

- Identify sequences of events, main ideas, facts, supporting details, and opinions in literary, informative, and practical selections.

Demonstrate inferential comprehension of a variety of printed material.

- Examine relationships, images, patterns, or symbols to draw conclusions about their meanings in printed material.

Draw connections and explain relationships between reading selections and other texts, experiences, issues, and events.

- Extend and deepen comprehension by relating text to other texts, experiences, issues, and events.

Writing

Communicate knowledge of the topic, including relevant examples, facts, anecdotes, and details.

- Convey clear, focused main ideas supported by details and examples in ways appropriate to topic, audience, and purpose.

Communication

Communicate knowledge of the topic, including relevant examples, facts, anecdotes, and details.

- Convey clear, focused main ideas with accurate relevant supporting details, including documentation of sources, appropriate to audience and purpose.

Mathematics

Calculations and Estimations

Compute with whole numbers, fractions, decimals, and integers using paper and pencil, calculators, and computers.

- Perform calculations on whole numbers, fractions, decimals, and integers using paper and pencil, calculators, and computers.

Social Science

Civics and Government

Understand the roles, rights, and responsibilities of citizens in the United States.

- Understand citizens' roles and ways of participating responsibly in the political process.

Resources:

A Framework for Ethical Decision Making

<http://www.scu.edu/SCU/Centers/Ethics/practicing/decision/framework.shtml>

Environmental Protection Agency

<http://www.epa.gov>

How Good People Make Tough Choices

<http://www.globalethics.org/pub/toughchoices.html>

HANDOUT: *Making Choices*

Most Americans agree that we should create a society based on the concept of the common good, a society that benefits all. But the disagreements start when people try to determine how we achieve this common good.

Below is one process for making ethical choices in your life – not only for public problems like pollution – but also for personal ones like figuring out who you want for friends or whether or not you should apply for a certain job.

I. Recognize a Real Problem

How do you know you are faced with a problem? Real problems are not those in which you must choose between right and wrong. Right and wrong are easy decisions: you know which one you should choose, even if you decide not to. Real problems are the ones where you must choose between **right** and **right**.

Keeping Our Air Clean Is a Real Problem

Almost everyone wants to keep the air clean, but not everyone can agree how we should do this. Some people argue that we should pass laws that make people reduce their driving since cars are a major source of air pollution. Other people argue that we should each take responsibility to conserve on our own. And there are even people who say they don't care about air quality; their right to drive cars come first.

Look at these quotes from citizens who wrote to the *Oregonian* on May 24, 2001 to express their opinions on energy and air quality issues:

"...we should use 21st century technology to reduce our reliance on costly, dirty, and nonrenewable sources such as oil and coal." Lake Oswego

"With all the concerns about energy conservation and methods to reduce air pollution, it seems that one of the easiest ways to help would be to turn off your car engine while idling. Turning off a car engine is comparable to shutting off a power mower, which is another highly recommended means to reduce air pollution and conserve energy." Tigard

"This is America! Government does not have the right to dictate the conditions of life to free Americans. If Americans want more energy, then that's what they are going to get."

Lake Oswego

The first two speakers argue for ways to keep the air clean. The last speaker is not so concerned about how the air will stay clean but about making sure that Americans get the energy they want. Both viewpoints are right. It's right to want to protect the air and it's right to want gas to drive your car.

Find the right versus right issues in the following quotes from other real citizens in our community:

"Everyone – individuals, businesses, and governments – needs to take prompt action to reduce emissions of greenhouse gases."

"Why should Americans have to conserve when other countries like China aren't doing their part?"

II. Get the Facts

When you are faced with a problem, one good practice is to gather as many facts as you can about the problem. Then you will be able to base your solution on knowledge rather than guesses.

Gather Facts on the Problem of Keeping Our Air Clean

"Carbon dioxide is a heat-trapping greenhouse gas. Its concentration in the atmosphere has risen about 30 percent since the late 1800's and is higher than it has been in at least

the last 400,000 years. Many scientists project the rising CO₂ level could reach between two and three times its late 19th-century level by 2100."

From the article "Plant Reveals Carbon Dioxide's Ties to Temperature" in the *Oregonian*, May 17, 2001

Global warming, greenhouse gas, ozone damage. You've heard these words in the news. But what do they mean? And how bad is the problem of air pollution anyway?

A Few Definitions

Global warming is a term that means the temperature of the Earth's surface is rising. This sounds like fun to have a warmer planet, but it turns out that warmer temperatures could cause more droughts in some regions, more rain in others, increased flooding, and other serious consequences to the planet and its inhabitants. The global average temperature has risen from 14.86 degrees Celsius in 1950 to 15.40 degrees Celsius in 1995.

Greenhouse gases result from both natural causes and from human activity such as burning fuels like coal and oil. These gases are compared to the glass on a greenhouse because they let in short-wave solar radiation, but prevent long-wave radiation from escaping. They trap and bounce the radiation back to earth, making it warm. The greenhouse effect is a natural phenomenon, but human activity has created too many gases that are now overheating the Earth.

Ozone is the protective layer in the atmosphere about 15 miles above the ground that absorbs some of the sun's ultraviolet rays and helps prevent potentially harmful radiation from reaching the earth's surface. Ozone damage is what happens when certain compounds such as chloroflourocarbons destroy ozone molecules.

So What?

One of the reasons we have trouble keeping our air clean is that we often can't see that we are polluting it. For the most part, auto emissions are invisible and people don't make the connection between driving – which is a major source of air pollution – and health and environmental problems. Carbon monoxide hinders our body's ability to utilize oxygen. Nitrogen oxides can cause asthma and other lung problems, and carbon dioxide is a greenhouse gas that contributes to global warming.

Recent advances in automobile technology and design have decreased the emissions from modern cars. But just when we were making progress with clean air, Americans increased their driving from one trillion miles per year in 1970 to approximately four trillion miles per year currently. If we keep increasing our driving, we will lose the gains we have made in clean car designs.

A Few Statistics

Take a look at these statistics from the Environmental Protection Agency and try out the math for yourself.

Greenhouse Gases and Pollution from Cars (Based on a fuel efficiency of 20mpg for cars)

Pounds of Carbon Dioxide (greenhouse gas)	Pounds of Nitrogen Oxides	Pounds of Carbon Monoxide
Cars emit carbon dioxide at a rate of approximately 0.98 pounds per mile or almost one pound per mile.	Cars emit nitrogen oxides at a rate of .0045 pounds per mile.	Cars emit carbon monoxide at a rate of .04 pounds per mile.
How many pounds of carbon monoxide does a 15-mile car trip generate?	How many pounds of nitrogen oxides does a 15-mile car trip generate?	How many pounds of carbon monoxide does a 15-mile car trip generate?
How many pounds of carbon monoxide does a 45-mile car trip generate?	How many pounds of nitrogen oxides does a 45-mile car trip generate?	How many pounds of carbon monoxide does a 45-mile car trip generate?
How many pounds of carbon monoxide would you generate driving from your home to your school?	How many pounds of nitrogen oxides would you generate driving from your home to your school?	How many pounds of carbon monoxide would you generate driving from your home to your school?

III. Evaluate the Options for Personal Action

The problem of air pollution is as big as the sky and it may seem that there is nothing you can do about it. But the problem really begins with individual actions that add up. How could you act in a way that would contribute to your definition of the common good? What behaviors would make a difference to the problem of air pollution? What are you willing to do? Think about the principles you hold and list as many options for action as you can:

IV. Make a Decision

Sometimes it is easy to say that you will do something and very hard to follow through. This is why we respect people who demonstrate integrity when they make a decision and act on it.

What's so hard about making a decision?

You might decide that reducing the amount of miles you drive (or are driven) is important to you and the environment. But using other modes of transportation can be inconvenient at times.

List the downside of using the following modes of transportation:

Bus

Bike

Walking

Skateboard

List times when you would need to use a car: for example, to take your mother to the hospital or to haul food and supplies to a party. When does it make the most sense to drive?

When does it make the most sense to use another mode of transportation?

Bus

Bike

Walking

Skateboard

Now look over the options for personal actions that you listed above. Consider all the pros and cons of each. Using your own values, make a decision about what you can and are willing to do about air pollution. Fill out the Personal Action Plan and bring it back to class when you have completed it. What was it like to try a mix of transportation modes?

Personal Action Plan

Example: Because I value my health and the environment, during the next weeks, I will try to reduce the number of miles I am driven and explore alternative modes of transportation by doing one or more of the following:

® Walking or riding my bike to _____ instead of having someone drive me.

A place to where I usually get a ride

² Take the bus to EPIC Center instead of having someone drive me there.

A place to where I usually get a ride

® Encourage _____ to take another means of transportation.

Someone who drives when he/she could take other transportation

² Other Actions: Check out the bus schedule to see if I can take the bus to the mall on Saturdays.

signature: Joseph "Duke" Smith

Personal Action Plan

Because I value my health and the environment, during the next weeks, I will try to reduce the number of miles I am driven and explore alternative modes of transportation by doing one or more of the following:

- Walking or riding my bike to instead of having someone drive me.

A place to where I usually get a ride

- Take the bus to instead of having someone drive me there.

A place to where I usually get a ride

- Encourage _____ to take another means of transportation.

Someone who drives when he/she could take other transportation

- Other Actions:

your signature: