

Ethics Lesson for the Air Module: Dirty Air and Bright Lights

Purpose

Students are asked to think about their use of electricity, particularly around the holidays, and how it affects their quality of life and the lives of all of us. Students explore the issue by tracing the connections and discussing how and why we consider the consequences (near and far in time or space) in the decisions we make in our daily lives.

Overview

Students are presented with the relationship of bright lights, holiday lights and other intense uses of electricity in terms of the effects on air quality, and the subsequent effect on human health. If dirty air makes people sick, what can be done to reduce air pollution from electricity production? Students are asked to consider this question and develop recommendations for personal, policy, and advocacy actions.

Time

2-3 class periods

Key Concepts

Ethical questions are about right and wrong, good and bad, just and unjust.

Our individual behavior affects the environment and our quality of life.

Ethical decisions are made on the basis of effects on ourselves and others not only in the near term but also in the long term. Ethical decisions are based on effects we can see and also those effects that occur as the result of a chain of events or accumulation of actions that are not plainly visible to us.

Moral decisions are based on what we value (for example, clean air, or bright lights).

Skills

Upon the completion of this activity, students will be expected to be able to:

1. Make a personal decision about their daily behavior.
2. Identify how their own and other's values lead to decisions in daily life.
3. Plan to persuade others through verbal or written means.
4. Consider the role of advocacy in a democratic society.

Materials

The Case

Round sheets

Approaches to Ethics

Background

Connection to the Air/Asthma Module

The AMBIENT Air Module develops a scenario in which students explore factors within their own school and community that may cause some students health problems. The module helps students understand the choices they make which contribute to their own immediate air quality, and to understand risk factors over which they have no personal control. The following ethics case study raises the issue of personal choice individuals make that influence societal actions (i.e. energy policy) which, in turn, affect everyone's air quality.

The Case

Your family enjoys a brightly lighted house, especially during the holidays. Well, everyone but Dad, who is always walking around turning lights off. He is, of course, a cheapskate and a spoilsport – not to mention a Scrooge! The house is decorated with boughs and wreaths and a big holiday tree inside, and outside there are lights all around the house, along the gutters and around the trees. People come from all around the region to see the houses on your street because they are all so beautiful.

So what's the big deal with such festive illumination? Why does it bother your dad so much? There are of course, several possible reasons:

- He is just cheap and hates to pay the light bill.
- He's a grouch and wants to make life dark and grim.
- He wants to save energy so we don't have to depend on oil from the Middle East.

Well, these are all possible reasons, but what do any of them have to do with environmental health and ethics? Surely being cheap or grouchy is not likely to have obvious connections with environmental health ... What about energy? It might be a good economic or political strategy to reduce reliance on foreign oil – and maybe even good ethics – but where's the health angle? How is Dad contributing to environmental health (perhaps unintentionally)?

Consider how the oil is actually used to make energy: It is burned. This burning oil is used to boil water to produce steam to drive turbines – which produce electricity. The burning also produces some air pollution. Dirty air can make people sick. So maybe there are some other reasons Dad might have for not using too much electricity.

- He believes that every action affects everything, so we have to choose carefully.
- He values a clean Earth environment, so he thinks about being Earth-friendly in everything he does.

Problem definition – Central question(s) or issue(s)

This case might make you feel tense. Everybody likes pretty lights, especially at the holidays. Indeed, though, we rely on electricity for many activities of daily living. Surely environmental ethics does not require us to live in darkness!

The key question here should be put broadly – not, “Is it OK to turn on the living room light at 9 p.m. on Thursday?” Or “Do we have to give up decorating for the holidays?” but “To what extent do all electricity users have a duty to reduce consumption as much as possible?”

If you live in the southern parts of the US, air conditioning results in high-energy use. In the northern parts of the US, heating requires high-energy use.

Analysis – What are the facts? What can be done? How do we understand the problem through reasoning? How do we uncover them? What is relevant? Who are the stakeholders?

According to the World Health Organization, “An estimated 3 million people die each year because of air pollution; this figure represents about 5% of the total 55 million

deaths that occur annually in the world. It is possible, because of uncertainty in the estimates, that the actual death toll is anywhere between 1.4 and 6 million annually.”
<http://www.who.int/inf-fs/en/fact187.html>

In fact, many of these people die in other countries, where pollution is worse. But U.S. air is as clean as it is in part because of increasingly strict governmental regulations. Although power plants are major point source generators of air pollution, they actually have been controlled a lot relative to air pollution in the US. Governments regulate how much pollution an electricity plant can generate – not how many lights you can keep burning at once! And policy can shape what is economically desirable to produce. Consider, for example, how different sources of energy (wind, coal, hydroelectric) are regulated and/or encouraged in different ways. Notice also, how different uses are regulated in different ways. For example, the contribution of cars and trucks to air pollution is significant and has been regulated to varying degrees - not necessarily commensurate with their contribution to the problem. Why not?

Conclusions – What should be done? What do we value in a conclusion/solution? Appeal to values to choose the best option. Identifying what makes an option the best option.

This is an opportunity to weigh values and make personal decisions about one’s own behavior day to day. It should end not with a rejection of holiday lights, but a nuanced understanding of the grander costs of electricity for our health. Moderation and lack of waste should characterize the conclusions. The definition of what is acceptable in terms of our values and if we need to compromise to get our needs met are part of the discussion.

Actions/Follow-up – policy, personal, advocacy, environmental justice. Who is responsible going forward? For what? Why? To what end?

The following is a list of sources of energy. Which are the cleanest? Dirtiest? Why? What environmental compromises have been made for some of them?

- Coal
- Nuclear
- Hydroelectric
- Solar
- Geothermal
- Natural gas
- Wind

Discussion should pick up on this point about government regulation and turn to controversies related to policy about supply and demand, lifestyle and environmental protection, e.g., <http://www.greenaction.org/powerplants/press/simerc111501.shtml>
 Discussion may also turn to why certain energy sources are less controversial than others. For example, we use a lot of coal as well as oil to generate electricity but it does not relate as directly to the issue of Middle East dependency. Nevertheless, it is a major environmental pollutant.

Procedure

Since this case is about connections between daily personal energy use and pollution of the air, the activities are designed to put decision-making in the context of consequences. This is not unlike the strategy we often use for behavior management in that we try to slow students' reactions down so they can make a considered decision about whether to punch someone out, rather than just doing it and having to live with the pain of being punched back or being punished for behaving violently. Or when we forbid plagiarism and go to great lengths to give students strategies to avoid it during the research process (citing sources, paraphrasing, asking their own questions) since the easiest thing to do is just copy text.

The basic flow of the activities is a series of rounds in which the essential question is reconsidered based on additional information, insights, and discussion. The result is individual students deciding what they will do and how they would persuade others to consider the issue and/or change their behavior. The group product is a recommendation about how policy could be used to affect individual energy consumption.

Essential question: "To what extent do I (and all electricity users) have a duty to reduce consumption as much as possible?"

Grouping

Divide the students into heterogeneous groups of 3-5. Assign roles, or allow them to choose if they are used to working collaboratively. These roles represent the different values behind behavior:

1. What I do won't make a difference! I'm just one person.
2. What I do makes a difference – everything is part of a system.
3. I like my holiday lights ... it's my right ... it's only once a year.
4. I conserve energy in other ways.
5. I'm not convinced there is a connection between my use of energy and air pollution.

The Case

Round 1: Take a position

Create the policy groups. Give students the essential question and the case to read, discuss what they think the issue is, and then state their positions (from the roles) on the essential question. Jigsaw them into role groups to develop support for their position on the duty of individuals. For homework, have them decide if this is their position on the issue, and write their own personal response to the question.

Round 2: Choose an ethical approach

Have students return to their policy teams and share the support for their position on the duty of individuals, then their own personal positions. Jigsaw them into role groups again. Give them the description of different ethical approaches to choose from to support their position on individual duty or modify it. For example, students representing role #3, "I like my holiday lights... it's my right" might choose a "Rights approach" but then realize they need to look at how their choice may affect others free right to choose for themselves (by creating dirty air for everyone, even those who conserve energy). For homework, have them write support for their personal position from one or more of the ethical approaches.

Round 3: Develop a policy

In policy teams, have students share the how one or more of the ethical approaches supports or informs, or changes their position. Jigsaw the groups and ask them to consider policy that might encourage moderation and decreased waste for their role. For example, role #3 might be influenced to use fewer lights by limiting the energy available during holiday periods, or allowing only every other day lighting. Have the policy groups approve or disapprove the individual policies. For homework, have students consider what might influence them, or others to take their position on individual duty.

Round 4: Persuade others

In pairs, have students share their own position, rationale, and policy that might encourage others to act on that belief about individual duty. Individually, have them write a persuasive piece (letter to the editor, an elected representative, or their neighbors).

Extension/Enrichment

1. Ask students to identify other areas of personal behavior that have larger environmental health implications.
2. Ask students to investigate the actual contribution of individual behavior change around energy use to air quality. You may also wish them to compare that with corporate contributions to air pollution and the effect of regulation.

Student Assessment

1. Ask students to review each other's persuasive pieces and develop criteria for how well they address the essential question.
2. Use the student developed criteria to have them rate their own and each other's presentations. Use the criteria to rate them yourself.
3. Ask students to use magazines, newspapers and the Internet to identify analogous cases.

The Case: Dirty Air and Bright Lights

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This case might make you feel tense. Everybody likes pretty lights, especially at the holidays. Indeed, though, we rely on electricity for many activities of daily living. Surely environmental ethics does not require us to live in darkness!

The essential question here:

Is NOT: “Is it OK to turn on the living room light at 9 p.m. on Thursday?”

Is NOT: “Do we have to give up decorating for the holidays?”

BUT IT IS: “***To what extent do I (and all electricity) users have a duty to reduce consumption as much as possible?***”

Your task is to figure out where you stand on this issue of individual duty and support your position. To help you do this, you will consider some different positions people might take. You will be part of a policy team that will come up with policies. You will also be part of a position group that will argue for its perspective. You will have four rounds to figure this out.

Round 1: Take a position

Here are the positions. You will play one role, but develop your own along the way.

Role #1: What I do won't make a difference! I'm just one person.

Role #2: What I do makes a difference – everything is a system.

Role #3: I like my holiday lights ... it's my right ... it's only once a year.

Role #4: I conserve energy in other ways.

Role #5: I'm not convinced there is a connection between my use of energy and air pollution.

1. Read the essential question and the case.
What questions do you have about the case? Write them here:

2. In your role, tell the group what you value and why. Give reasons for your position in your answer to the essential question - ***“To what extent do I have a duty to reduce consumption as much as possible?”***

3. Now meet with other people who have your same role and find more reasons for your position and ways to explain it. Write them here so you can share them with your policy group.

4. For homework, decide what you value and what your position on this issue of individual duty is. Write your response to the question with your reasons in one page or less.

Round 2: Choose an ethical approach

1. Share your values and reasons with your group. Listen to how the other people in your group think about the issue of individual duty to reduce air pollution. Write down what they say that will help you with your answer to the question:

2. Meet with your role group again and read about the different ethical approaches. Decide which one(s) best fit your role. For example if you are in the group for role #3, "I like my holiday lights... it's my right" you might choose a "Rights approach"

Ethical approach we chose:

How does this approach fit your thinking?

How does it change your thinking?

3. For homework, choose an ethical approach and add to your answer to the question.

Different Approaches to Ethical Decision-Making

Philosophers have developed different ways to think about ethical issues. Of course, you have to gather the facts, consider the stakeholders, and develop several alternatives, but ethical decision-making requires more than that. We have to think about what we value in a decision. Here are five different approaches.

Utilitarian

Making decisions from a Utilitarian approach means seeking the choice that provides the greatest good for the greatest number. Jeremy Bentham and John Stuart Mill developed utilitarianism in the 19th century. The process of utilitarian choices includes examining what the options are, who is affected and how, and making a decision which will bring the least harm and the most good to the most people. In environmental health, utilitarian approaches would look for decisions that would not harm people, habitats, animals, and other resources while providing the greatest gain to those affected by the decision.

Common Good

Philosophers, such as Plato, Aristotle, Cicero, supported the common good approach to ethical decision-making. Here, the highest value is placed on the shared goals of the community. This approach looks at the social systems and environment we all depend on and advocates using them in ways that all community members needs are addressed.

Virtue

Virtue is one of the oldest concepts in ethics, appearing in writings by Homer and Sophocles. Aristotle's virtue theory became the foundation of moral discussion, supported by many others, such as Thomas Aquinas. Virtuous decision-making is choosing actions from a place of the highest possible human character. Virtue is based on an ideal set of characteristics of morality and the idea that each person can extend him/herself into acting in accordance with these moral characteristics. Virtue leads us to make decisions that encourage the moral development of ourselves and our community.

Rights (Kant)

In the 18th century, Immanuel Kant promoted the rights approach to ethical problem solving. Kant proposed that people can only be thought of as ends and never as means. Each person has dignity and rights as a human being. Everyone can choose their own freedom and others need to respect their choices. Decision making from this perspective involves looking at how our choice may affect others free right to choose for themselves. Some of the rights outlined by Kant are the right to the truth, to privacy, to be free from harm, to what is agreed upon. In environmental terms, rights may be extended to a right to clean drinking water or the right to the truth about the toxicity of a public resource.

Justice (Aristotle)

Justice involves fair treatment, decision making that does not favor or discriminate. Aristotle labeled two kinds of justice: distributive and corrective. Distributive justice rewards people for the merits they have. Corrective justice removes inequality by removing advantage from one party and giving it to the disadvantaged party.

1. In your policy team, share how one or more of the ethical approaches supports or informs, or changes your position. Listen carefully to how people think about their choices and see what it teaches you. Write down ideas you can use for your own answer here:
2. Meet with your role group again and develop a policy that might encourage moderation and decreased waste for your role. For example, role #3 might be influenced to use fewer lights by limiting the energy available during holiday periods, or allowing only every other day lighting. Write your policies here: (come up with at least 3 alternatives). Take it back to your policy team for approval.
3. For homework, consider what might influence you, or others to take your personal position on individual duty around energy use.

1. Working with a partner, share your personal position, reasons and policy ideas. Write down their questions, ideas, and thinking about your position.

2. Write down what you learned about how they presented their position that will help you.
3. Now on your own, take what you have written and turn it into a persuasive piece (letter to the editor, an elected representative, or their neighbors) to convince others of your position on individual duty