

Description

In this lesson, students explore the concept of green building by completing a “green values spectrum” examining their beliefs and practices related to energy use, water use, land use, materials and resources, and indoor environmental quality.

Objectives

- Students will graph and interpret data related to their class’ ecological footprint.
- Students will examine case studies of green schools.
- Students will analyze their own assumptions and values related to green building.

Materials

- *Handout 2 Green Values Spectrum* (one copy per student)
- *Presentation 2 Green in Action*

Background

According to the Global Footprint Network, if each individual lived the lifestyle of the average American, we would need five Earths to provide enough resources for that individual. A notable portion of those resources are those related to our built environment. Schools across the country are making a difference in changing that footprint. From small changes, like implementing “No Trash Tuesdays,” to larger changes like renovating lighting systems, students and other school members are showing that green building is indeed for everyone.

Advance Preparation

Create a chart on the board to tally the results of the homework from *Lesson 1*. Towards the top, write the numbers one through eight, evenly spaced out across the board.

Do Now

As students enter class, have them place two tally marks on the appropriate place on the board to represent the results of their Personal Footprint Quiz. One mark should represent the number of Earths it takes to sustain their lifestyles and the other mark should represent the number from the individual they worked with for their homework assignment. If they shared the quiz with more than one person, they can add more tally marks. For students whose results were partial numbers, they should round up or down accordingly.

Mini-Lesson

1. Place students in pairs and have pairs create a bar graph of the quiz results in their notebooks. They should also calculate the average number of Earths it takes to sustain the lifestyles of those who took the quiz.
2. Help pairs analyze the results of the quiz by asking the following questions:
 - *Are these results surprising? Why or why not?*
 - *Do these results concern you? Why or why not?*
 - *What was the average number of Earths it took to sustain our lifestyle?*
 - *What does this result say about our present lifestyle?*
 - *Can we sustain our present lifestyle? Why or why not?*
3. Project the first slide of *Presentation 2 Green in Action* and share the statistics with the students. Generate a list of all of the buildings or built structures students visit in a day, and then ask them to identify the top two or three places where they have the most opportunity to make a direct impact. If they did not name their school, point out that they do have the ability to make a difference in their school.
4. Share one or more of the case studies on the remaining slides of *Presentation 2*. Ask students the following questions:
 - *How long do you think it took to implement this project?*
 - *How inexpensive or costly was this project?*
 - *What equipment and/or technological tools were needed?*
 - *What policies and/or administrators were needed?*
 - *How do you think this case study is related to green building?*
 - *How does this case study show how green building is for everyone?*

(**Note:** These case studies showcase Green Education Foundation's Green in Action award winners for 2011. Please visit the GEF website for additional case studies of students helping to green their school buildings.)
5. Wrap up by emphasizing to students that green building is for everyone, and there are varying degrees of projects that can help make a school (or home) green. In this course, they will learn about these

differences, and learn how to assess their options and make sustainable choices for themselves, the school, and the community.

Activity

1. Tell students that they are now going to take a “quiz” so that they can get a better sense of their awareness, opinion, and understanding of topics related to green building.
2. Distribute a copy of *Handout 2 Green Values Spectrum* and complete individually. Emphasize to students that the purpose of this “quiz” is to be informative, and they should take the time to answer honestly. (**Note:** The intention of the quiz is to begin the conversation about green building as it applies to students and their built environment. Consider adding or eliminating statements based on your classroom needs and goals.)
3. As students work, draw a spectrum on the board. Write “Very Important” on the right end of the spectrum and “Not At All Important” on the left end of the spectrum.
4. As time permits, have students share their responses to *Handout 2* by creating a human spectrum. Choose one or more statements to read aloud, and invite students to share their opinion by standing at the board in front of the appropriate place on the spectrum. Expect that some students may be unwilling to share their responses to some of the questions.
5. Facilitate a class discussion by asking the following questions:
 - *What was interesting or surprising about this quiz?*
 - *What is one thing you read about that you had not thought of before?*
 - *How was the quiz related to green building?*
 - *What are some things you would like to learn about green building?*
 - *What are some questions you would now like to ask about the school to learn more about how “green” (or not) it is?*

Assessment

Have students write a short paragraph in their notebook that explains how green building can help reduce our ecological footprint, rates their current level of awareness and understanding of green building, and identifies one area of green building they would like to learn more about in regards to their school.

Homework

Assign the reading, “Principles of Green Building.”