

Investigate Green Schools Classroom Visit Overview*

*depending on scheduling, some visits may be combined into one time period

1. First Visit: What's the Problem?

Overview

This visit will introduce the students to the project and some background information on human impact, energy use, and sustainability.

Sustainability is defined as meeting the needs of the current generation without compromising the ability of future generations to meet their own needs.

Process

1. Brief introduction to *Investigate Green Schools*
2. Have students take pre-assessment quiz
3. Review homework assignments and follow-up with Action Plan and/or Ecological Footprint activities
4. Introduction to the term "sustainability".

2. Second Visit: Introduction to Energy

Overview

This visit will introduce the students a basic understanding of the main sources of energy we use.

Energy is the ability to do work. In simpler terms energy is what makes things happen. Scientists that study energy have determined some rules about how energy behaves. The law of conservation states that in all processes occurring in an isolated system, the energy of the system will remain constant. **Energy may not be created or destroyed; only changed in form.**

Through interactive demonstrations, students will learn about the six forms of energy, the 10 sources of energy and energy transformations.

Process

1. Lead students through the "Forms and Sources of Energy" activity
2. Lead students through the "Chocolate Chip Cookie Mining" activity
3. Review how energy is produced and the environmental impact of energy consumption

Student Homework

- 1) How do we use energy at school? Students gather baseline data of energy and resource use at school.

3. Third Visit: What is a Green School?

Overview

During this visit, students will review how electricity is produced (through a variety of resources), review the term "green school" through brainstorming what it means and how it impacts each one of them.

A green school is a school building or facility that creates a healthy environment that is conducive to learning while saving energy, resources and money.

Process

1. Lead students through the “Coal Chain” activity
2. Review steps to minimize consumption
3. Define the term green school and discuss what it means to the students.
4. Define all related areas to “green schools” and determine how they relate back to energy.
5. Review baseline data gathered in homework and get feedback from the students.
6. Begin brainstorming what students and the school can do to help out.

Student Homework

1. Green School Facts: as they go, groups of students are “challenged” to research and come up with green school facts to present to EarthWays Center staff, teacher, and other students. Groups will earn points for each fact, and the winning team will receive a special award at the end of the semester.

4. Fourth Visit: Research

Overview

Visit four will involve researching your school’s use of energy and resources. During the classroom visit students learn how to analyze a power bill and discuss audits through the introduction of the audit toolkit.

The students will then be divided into teams to tackle the research jobs. The classroom teacher should be available to help work with the student teams outside of the visit as additional time will be needed.

When they complete their task, each group will summarize what they have learned from their research by writing a brief report and submitting it to the teacher to compile. The report will include information from the following: completed custodian interview questions, graphs of utility bill baselines, and completed energy and resource audit forms.

Process

1. Review students’ Green School facts.
2. Introduce consultant and describe their job.
3. Analyze a power bill.
4. Identify the purpose of the research and the subsequent student action project.
5. Introduce each research component of the audit including the custodian interview, energy and resource audit, and continuing the bill monitoring/baseline
6. Introduce the audit toolkit and give the students time to practice using the equipment.

Student Homework

1. Finish audit, analyze utility bill, interview custodial staff

5. Fifth Visit: Results, Discussion & Solutions

Overview

During this visit, the student teams will report their findings to the class and discuss the results. Students will start listing recommendations for changes that can be made at the school and will decide on a class project. Students will also begin work on board presentations.

Process

1. Review students' Green Schools facts.
2. Each team presents their findings of audits, utility bill analysis, and interviews.
3. Generate a list of important information from each group as they present.
4. Using the information listed, students begin making recommendations for changes.
5. Determine class project, create an action plan and assign tasks for each area.
6. Create an action plan and assign tasks for board

Student Homework

1. Work on class project and board presentations

6. Sixth Visit: Action

Overview

This is a time for EarthWays staff to check in and see how the project and presentation work are coming. If students need help with any part of their project, EarthWays staff will help.

Process

1. Review students' Green Schools facts.
2. Have groups give a report on progress of projects and report.
3. Review action plans and discuss problems the students may be having and solutions to those problems.
4. If desired, students can practice board presentation.

Student Homework

1. Continue work on class project and board presentations

BOARD PRESENTATIONS

7. Seventh Visit: Follow-up and Assessment

Overview

This visit will focus on assessment of projects and board presentations.

Process

1. Students give feedback on projects and assessment tools from presentations.
2. Have students take post-assessment quiz.
3. Final reflection and celebration of accomplishments for the whole class.

Teacher Homework

1. Final report including audit results and assessments from students.