

## Service Learning Lesson Plan

**Project Title:** Energy Night  
**Main Subject Area:** Science

**Grade Level:** 6-8  
**Theme:** Environment

**Duration:** 5 weeks

### Objective/Description

Students learn about the ways in which energy consumption is destructive to the earth. They educate their families and the community about energy efficiency and conservation by holding an Energy Night where attendees visit various stations set up by the students. At each station, students teach attendees how to conserve energy in their everyday lives.

### Common Core Content Standards

- **MS-PS3-3.** Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.
- **MS-ESS3-3.** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

### Driving Question

How do we educate the community about energy conservation strategies that will help save the planet for future generations?

### Investigation

**Research, class instruction, interviewing civic leaders and/or professionals, surveying neighbors or peers**

- Teach a lesson or unit on energy consumption and its effects on the earth.
- Bring in guest speakers from local energy companies to speak about energy-efficient practices.
- Invite guest speakers from local conservation groups to talk about the impact of energy use on the environment.
- Have students survey their peers and families about energy consumption habits.
- Have students research various ways that individuals can conserve energy in their everyday lives; as a class, share the ways that were discovered.

### Preparation

**Collaborative problem solving, planning, and task assignment by & with the students**

- See “Planning Tools” at [http://servicelearning.childreninc.org/?page\\_id=527](http://servicelearning.childreninc.org/?page_id=527).
- Brainstorm what students could do to help promote energy conservation; guide students toward the idea of hosting an Energy Night.
- Divide students into groups and have each group pick a type of conservation for which to develop an Energy Night activity.
- Have students research hands-on ways to demonstrate their chosen concept, and spend some class time allowing groups to brainstorm and/or discuss what they have found; a local energy company or the local chapter of National Energy Education Development (NEED) may have resources, such as “Energy Efficiency Kits,” that students can obtain. Students can also check websites like [www.juniorenergy.org/MiddleSchool.aspx](http://www.juniorenergy.org/MiddleSchool.aspx) or <http://www.conservationmart.com/c-183-energy-conservation-kits.aspx> for ideas.

- Have students brainstorm ways in which they could entice family and community members to come to the event, such as having a raffle or a “split the pot,” food, and “energy” games (for different ages and ability levels); they may want to consider piggy-backing with a conference night or a PTO meeting night.
- Students create all advertising media for the event.
- Ask students how they will measure the effectiveness of the Energy Night; have them create a survey to hand out at the event or some other measurement tool.

## Action

### **Service activities or methods used to address a social issue or community need**

Host the Energy Night and teach concepts about individual energy conservation.

## Reflection

### **Frequent assessment of students’ growing knowledge and developing skills; refer to driving question**

- See “Reflection/Evaluation” at [http://servicelearning.childreninc.org/?page\\_id=483](http://servicelearning.childreninc.org/?page_id=483).
- Before teaching the lesson/unit on energy consumption, have students answer the reflection questions “How does your own family consume energy? How and why might the levels of energy consumption be different in different parts of the world?”
- After students begin creating their activity for Energy Night, have them write the three most interesting facts they have learned so far about the concept they are teaching with their activity.
- After they host the Energy Night, have students look at the surveys they gave out at the event and share whether they think their methods of teaching about energy conservation were successful
- Have them take pictures of their activity at the event (to be used in the “Demonstration” step).

## Demonstration of Knowledge

### **Assessment of students’ knowledge/skills and project outcomes**

Have students create a PowerPoint or a tri-fold board about their activity and present the project to their Principal, the PTO, and/or the school board.

## Community Partners

### **Includes anyone who offers expertise to the project or who benefits from the project**

A local chapter of NEED (National Energy Education Development) and/or a local energy company. Local environmental conservation group.

## Outcome

### **Funds or goods generated, direct or indirect service provided, advocacy or education done**

Education night about energy conservation

## Secondary Subject Areas (All that apply are in bold)

- English, Reading, Language Arts
- World Languages
- Arts
- Mathematics
- Science
- **Economics**
- Geography
- History
- Government and Civics
- **Global Awareness**
- Financial, Economic, Business, and Entrepreneurial Literacy
- Civic Literacy
- Health Literacy
- **Environmental Literacy**

## 21<sup>st</sup> Century Skills (All that apply are in bold)

- Career Readiness
- Creativity and Innovation
- **Communication and Collaboration**
- **Critical Thinking and Problem Solving**
- Physical Education
- **Initiative and Self-direction**
- Flexibility and Adaptability
- **Consumerism**
- **Information Literacy**
- Media Literacy
- Technology Literacy
- Productivity and Accountability
- **Leadership and Responsibility**
- Social and Cross-cultural Skills