

5TH GRADE CURRICULUM

Ending project: Energy Use Investigation of the School Computers

Lesson 1: 5th Grade

What is Energy?

- Brainstorming activities to begin discussion

Lesson 2: 5th Grade

What is Energy?: Investigations

- Experiments exploring energy conversion (ex. running in place–mechanical energy into thermal energy)
- Create Energy Matrix Conversion Charts
- Candle burning experiment–discuss potential energy

Lesson 3: 5th Grade

Reading EnergyGuide Labels

- Introduces the EnergyGuide labeling system for home appliances created by the U. S. Department of Energy (DOE)
- Teach students why this system is important
- Discuss how it could affect their families, and
- Teach students how to read the Energy Star Labels.

Lesson 4: 5th Grade

Reading a Utility Bill

Understanding Electricity: Watts and Kilowatt Hours (kwh)

- Provide students with the basic framework of our relationship with the utility company–how to de-code energy use and how to read the electricity portion of an utility bill.

Lesson 5: 5th Grade

Understanding Watts: Voltage, Current, & Resistance

- Discussion of current, voltage & resistance
- Exploration of what a watt represents

Lesson 6: 5th Grade

Lighting Comparison Study

CFLs and Incandescent Lighting

- Experiment with measuring temperatures of different kinds of light bulbs
- Discuss energy efficiency
- Life cycle analysis exercises

Lesson 7: 5th Grade

Energy Use Investigation: How to Use a Watt Meter

- Basic lesson on watt meters–what / how they measure
- Measuring the energy use of everyday appliances

Lesson 8: 5th Grade

Computer Energy Use Investigation

- Create hypotheses for project discoveries
- Create action plans for project execution

Lesson 9: 5th Grade

Continue the Computer Energy Use Investigation: Measuring

- Measure with computer energy use with watt meters
- Compile and graph data

Lesson 10: 5th Grade

Report Findings of Computer Energy Use Investigation: Chart & Graph Findings

- Compile Computer Energy Use findings—create visual and textual descriptions