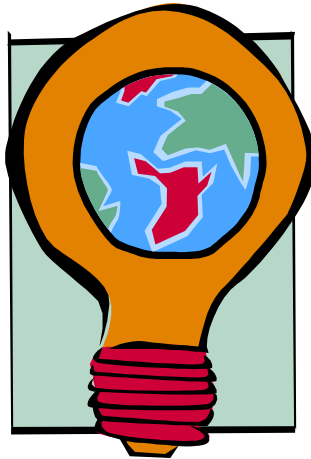


KILOWHAT?

A GRADE 9 ACADEMIC SCIENCE ECOKIT

A hands-on investigation of kilowatt hours, students' energy consumption and practical conservation strategies.



Highlights of this EcoKit:

- ✓ Four 50-minute lesson plans & a suggested 'Class Action!' culminating activity
- ✓ All required materials, including a teacher resource binder, student worksheet package and energy meters
- ✓ Activities include:
 - Comparing electrical consumption using an energy meter
 - Energy audit of home and/or school
 - EnerGuide webquest
- ✓ Easy to order for a 2-week borrowing period
- ✓ Free shipping available

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Purpose

This program, based on the Grade 9 Academic Ontario Science Curriculum, is designed to help students understand how the kilowatt hour is used to measure the energy consumption of appliances, the cost of electrical energy to consumers and practical energy conservation practices.

Curriculum Links

Grade 9 Academic Science

Physics: The characteristics of electricity

Overall Expectations

E1. Assess some of the costs and benefits associated with the production of electrical energy from renewable and non-renewable sources, and analyse how electrical efficiencies and savings can be achieved, through both the design of technological devices and practices in the home.

Specific Expectations

E1.3 Produce a plan of action to reduce electrical energy consumption at home (e.g., using EnerGuide information when purchasing appliances), and outline the roles and responsibilities of various groups (e.g., government, business, family members) in this endeavour

E2.1 Use appropriate terminology related to electricity, including, but not limited to: *ammeter, amperes, battery, current, fuse, kilowatt hours, load, ohms, potential difference, resistance, switch, voltmeter, and volts*

E2.9 Determine the energy consumption of various appliances, and calculate their operating costs (e.g., using the kilowatt hour rate from a utility bill)

Program Overview: All lessons are designed to be completed in a 50-minute block

Lesson 1: Kilowhat?

- An introduction to W, kW, kWh and a look at time-of-use pricing

Lesson 2: Comparing Appliances

- Using energy meters to compare electrical energy consumption

Lesson 3: Energy Audit

- Complete an audit of energy consumption in home or school

Lesson 4: EnerGuide Webquest

- **Note: This lesson requires access to a computer lab**

Lesson 5: Class Action!

- Your choice of relevant class action activities

