

# Home Energy Audit

Energy Revealed

Activity

Grade Level: 3-12



## Main Objective

Learners carry out a home energy inspection to find out opportunities of energy savings in their homes and develop a plan to take action to save energy in their homes and report the result.

## Learning Outcomes

By the end of this activity, learners will:

- Understand energy conservation and how we consume energy in our households
- Carry out a home energy inspection to find out opportunities of energy savings in their homes
- Develop a plan to take action to save energy in their homes and report the results

## Length of Activity: 2 hours

**Step 1+2:** Introduction to energy and its environmental impact through home electricity use

**Step 3+4:** Review and complete home energy audit report

**Step 5+6:** Create action plan and share with the class

## Materials Required

- Educator Resource
- Home Energy Audit Guide
- Home Energy Action Plan and Tracker
- Home Energy Audit Report
- GreenLearning Energy Calculator

## Activity

### Step 1: Introduce Concepts

- Explain the basics about how fossil fuel emissions contribute to climate change by explaining the Greenhouse Effect.
- For junior learners (K-6), you can open with this video:



- For senior learners (7-12) that are likely more familiar with how the greenhouse effect works, you can open with this video:



### Step 2: Before Getting Started

- Ask learners to check out this video to kick start their ideas on how they can save energy:
- How to Save Energy at School:



- What you can do about Climate Change:



- This is an opportunity to empower youth to take action by investigating their families home energy use. Ask learners to think about their own homes:
  - What in your home uses electricity?
  - How much do you use electrical devices?
  - What can you think of that is not in the video?

### Step 3: Complete Your Home Energy Audit Report

- Ask learners to download the Home Energy Audit Guide and complete the Home Energy Audit Report as per the instructions in the guide.

### Step 4: Review the Home Energy Audit Report

- Ask learners to review their Home Energy Audit Report, explain that it is just a starting point and that there are likely many other electronics in their homes that we do not have listed. We encourage them to add to the list!

- Educator Resource “Find the Phantom Load”:

<https://programs.greenlearning.ca/course/find-the-phantom-load>

- Educator Resource “Personal Energy Use Backgrounder”:

<https://greenlearning.ca/assets/uploads/pdf/Energy-Revealed-Taking-Action-Backgrounder.pdf>

- As you complete your Home Energy Audit Report, make sure to visit GreenLearning’s Energy Calculator that will calculate greenhouse gas emissions for the actions you have taken towards energy savings and record the impact of your actions in the Home Energy Action Plan and Tracker. Check it out in the link:

<https://programs.greenlearning.ca/electrical-energy-calculators>

### Step 5: The Final Quest

- Before they start their investigation to complete their Home Energy Audit Report, have learners document their investigations and proposed actions with a slideshow and share with the class or their parents. Learners may use Prezi, YouTube video or any other medium that they’d like to use!
- Ask them to capture an action plan on how they have made their homes more energy efficient. This could be done by some minor home improvement projects, purchasing of more energy efficient appliances, or how they are influencing behavioral changes of themselves and/or their family members. Make sure they explore and connect how their modifications will save their family money and help the environment.

### Step 6: Share and Inspire

- Be sure to share your photos, presentations, videos etc about your learners’ audit work by tagging us @GreenLearning

## Extension Activities

Have learners check out their family's last few months of electricity bills. Has their energy use gone up or down in the last few months since school has been closed? Explore reasons for what they discover and brainstorm ways they may be able to lower it!