

How Smart is Your Smart Board?



Energy Revealed
Grab & Go Activity
Grade Level 7-12

Main Objective

Learners will investigate and understand the energy use of their interactive whiteboard.

Learning Outcomes

By the end of this activity, learners will:

- Calculate the amount of energy and GHGs produced that smart boards and their associated devices use.
- Think of ways to save energy with the devices associated with smart boards.

Length of Activity: 1.5-2 hours

Step 1+2: Introduction and investigate energy use

Step 3: Calculate GHG and total energy cost

Step 4: Research ways to save energy

Materials Required

- Installed energy metering technology or plug in energy meter
- Interactive whiteboard devices (board, projector, computer etc)
- Copies of How Smart is Your Smart Board Worksheet

Activity

Step 1: Class Discussion About the Classroom Smart Board

- As a class talk about the different devices that need to be available to be able to use the interactive whiteboard (the laptop, the projector, the board itself, etc.)
- Have learners write down the different devices in the How Smart is Your Smart Board Worksheet.

Step 2: Investigate the Energy Usage to Use a Smart Board

- Plug each device in, one at a time. If you are using the energy metering technology, make sure you are using an electrical outlet that is being monitored by the software.
- As you plug in each device, have the learners note the amount of energy each one uses by filling in the handout.
- Discuss which device uses the most energy and which uses the least.
- Discuss how much you use the interactive whiteboard in one day.

Step 3: Calculate the Total Energy Cost and GHG Produced

- Calculate the total amount of energy, cost, and GHGs produced for one year using GreenLearning's Electrical Energy Calculator on the interactive whiteboard by selecting your province. Write your findings down in the worksheet.

 [GreenLearning's Electrical Energy Calculator](#)

- Calculate the total energy cost and GHGs produced by all the devices by adding the respective total together. Have the learners fill in the blanks with their answers in the worksheet.

Step 4: Research Ways to Save Energy

- Have learners think of ways to save energy with the devices associated with these boards (for example, are there sleep modes, are there time it should be turned off, etc.)
- Share your learners' ideas for saving energy with these devices (or the action they took to save energy) on social media.

Extension Activities

- Think about other things that learners can monitor in their classroom that are on all the time, such as fish tanks. Calculate the energy it takes to keep that device on.