

## Grade 5 - Phantom and Wasted Energy

**Time: 20 minutes**

### Overview:

- The Phantom and Wasted Energy mini lesson is a subset of the eesmarts Wasted Energy lesson.
- Students will compare different light bulbs.
- Students will look at energy usage of the bulbs and of small appliances and calculate the annual costs.
- Students will identify phantom power.

### Lesson:

The Phantom and Wasted Energy activities are provided via a YouTube video. The link should be provided to students so they can view and follow along with the activities.

- [Phantom and Wasted Energy Presentation Video](#) (13:40 minutes on YouTube)
- Optional Assignment:
  - [Light Bulb Comparison and Phantom Power](#)

### Extensions:

These are provided to students for more information.

- [How LEDs Work](#) by James Roland on epic! Books
  - Optional Assignment: What are three new things you learned about LED light bulbs?
- [Survey](#) - Home survey of energy usage

### Science Standards: Next Generation Science Standards (NGSS)

The full eesmarts lesson Wasted Energy meets the NGSS Performance Expectation:

[5-ESS3-1](#) Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

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