

Middle School - Capturing Solar Energy

Time: 20 minutes

Overview:

- The Capturing Solar Energy activity is a subset of the full eesmarts Solar Energy from The Sun lesson.
- Students explore what happens when heat-producing light shines on objects.
- Students view demonstrations of absorption and reflection, the Greenhouse Phenomenon, thermal mass, and insulation.

Lesson:

The Capturing Solar Energy activity is presented via a YouTube video. The link below should be provided to students, so they can view and follow along with the activities.

- [Capturing Solar Energy Presentation Video](#) (9:32 minutes on YouTube)
 - Optional Assignment:
 - [Capturing Solar Energy Conclusions Handout](#)

Extension:

These are provided to students for more information.

- [What is the Greenhouse Effect?](#) (2:03 minutes on YouTube)
 - Optional Assignment: Draw an explanatory model of the greenhouse effect.

Science Standards: Next Generation Science Standards (NGSS):

- The full eesmarts lesson Solar Power Direct from the Sun meets these NGSS Performance Expectations:
 - [MS-PS3-3](#): Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.
 - [MS-PS4-2](#): Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.

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