

Earth Solar Power Generation Drawing Lesson Plan

What should students learn after a solar energy lesson?

After this lesson, students should be able to: Describe solar energy and why it changes with time and location. Calculate the amount of solar energy on Earth at a given time and location. Explain how solar energy is used in sustainable engineering applications.

How can we get electricity from solar energy?

Slide 8 [Solar energy close to home]- We can get our electricity from solar energy using photovoltaic panels. The National Renewable Energy Lab (NREL) in Colorado researches methods for efficient electricity production from solar energy. Many U.S. homes use solar water heaters.

What do engineers need to know about solar energy?

Engineers must understand the basics of solar energy and the Earthin order to incorporate solar energy into their designs. After this lesson, students should be able to: Describe solar energy and why it changes with time and location. Calculate the amount of solar energy on Earth at a given time and location.

How do we use solar energy?

The steam turns a turbine and produces electricity that is sent to our houses via power lines, and used in our electrical items like a refrigerator. Or how solar energy is used by plants to create foodso they can grow and then we, in turn, use the plants as food to provide energy for our bodies.)

How much solar energy reaches Earth's surface?

Only about one-halfof all incoming solar energy reaches the Earth's surface. The other half of the Sun's energy is reflected back into space by the planet's atmosphere or clouds, or it is absorbed by atmospheric gases, clouds and the Earth's surface. Solar energy is measured as solar power per unit area. Common units are Watts per meter squared.

What is a solar angle lesson?

This lesson is a modified version of the more complicated method of determining solar radiation at a given location and time to introduce students to the concept of solar energy experienced on Earth. For a more detailed explanation of solar angles, refer to the Solar Angles and Tracking Systems lesson for photovoltaic modules.

Background Information for Teachers This section contains a quick review for teachers of the science and concepts covered in this lesson. Building solar cars for the Junior Solar Sprint ...

List of all Earth as a System Lesson Plans. ... 3-5 This lesson introduces the Earth system science spheres through model making and discussion. Our Earth: A Web of Systems . Grade Level: 3-5 ... and solar radiation



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data to construct ...

Students learn about the daily and annual cycles of solar angles used in power calculations to maximize photovoltaic power generation. They gain an overview of solar tracking systems that improve PV panel efficiency by ...

By exploring different renewable energy resources, students will gain a deeper appreciation for sustainable practices and different forms of energy. From hydropower to solar energy, students will learn how Earth's natural resources ...

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