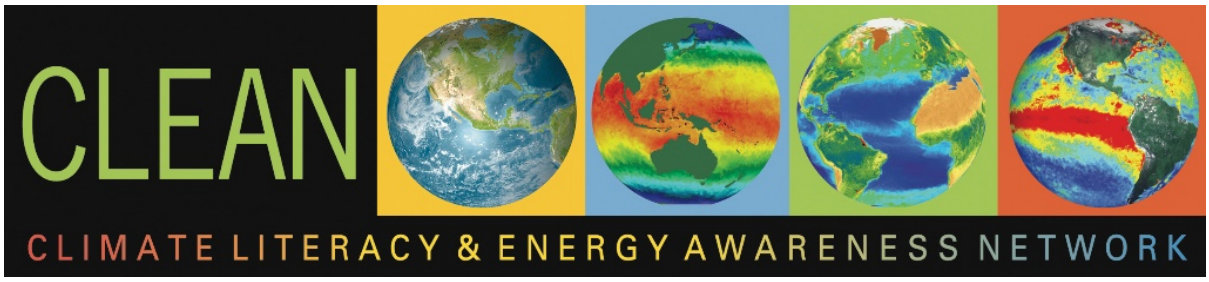


Energy 101: Solar PV | Making a Solar Oven | Microbes and solar power

CLEAN STEM Flash

A Timely Climate and Energy E-Learning Series to Use and Share

June 24th, 2021

Topic: Monitoring Climate

Summer time and sunshine is upon the northern hemisphere inspiring thoughts about solar energy. Solar energy is one of the many types of renewable resources. Solar energy can be converted to power but you can also use it to cook outside. In this newsletter, you will find two resources on the topic of solar energy: 1) a short video on how photovoltaic cells convert sunlight into power, and 2) a activity where students build a solar oven to cook food. We have also included a recent article that discusses recent research into sustainable food production using solar panels to create microbial protein.

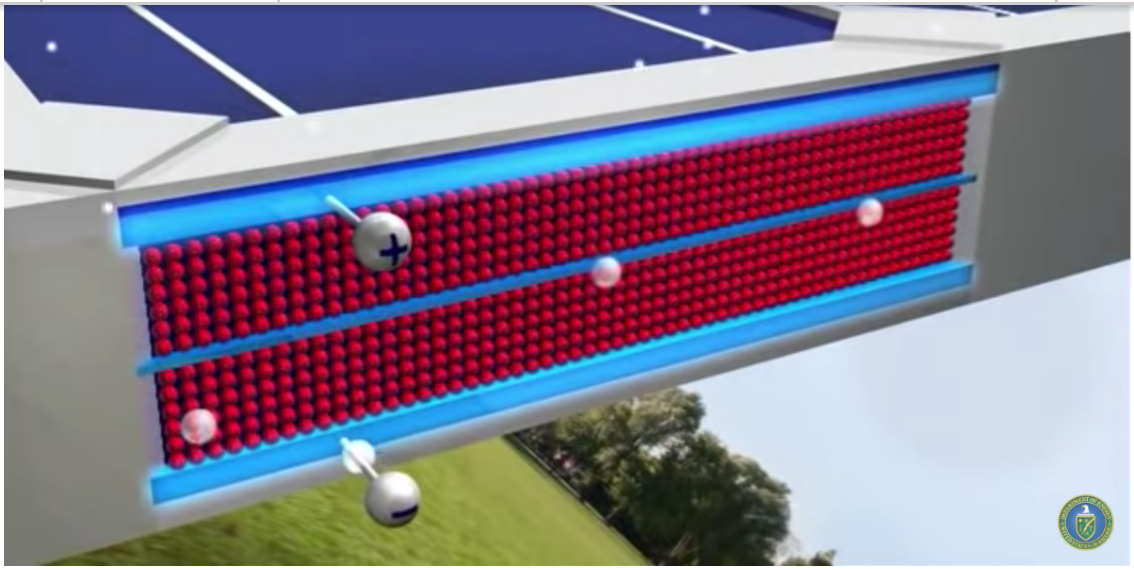
CLEAN Resource Feature

Video: Energy 101: Solar PV

This video, from the US Department of Energy, shows the basics of how a PV panel converts light radiated from the sun into usable power, whether on the electric grid or off, and without emissions or the use of fossil fuels.

Audience: Middle School, High School

Browse CLEAN for more videos on Solar Energy.



This video discusses the basics of how photovoltaic cells work. It explains how light is converted into power in an engaging cartoon. This video would work well as an introduction to renewable energy or solar power.

CLEAN Resource Feature

Activity: Making a Solar Oven

This activity includes background information on how a solar oven works and how to build one. This activity includes detailed instructions the materials and steps required to build the cooker and has several suggestions on different ways to experiment with it.

Audience: Middle School, High School

Take a look at some more CLEAN activities focused on Solar Energy.

This activity would work well as an introduction to solar energy and power. Students would be able to have a hands-on experience on how the sun produces energy that warms the earth (or in this case food!). This activity could easily lead into a broader discussion on renewable energy and other uses of solar.

In the News: Microbes and solar power 'could produce 10 times more food than plants'

Animal and dairy food production contribute significantly to global carbon emissions. A group of researchers have investigated using solar power to cultivate microbial protein for food. These researchers are exploring alternative food sources so that our current food production can be modified to reduce greenhouse gases. The use of microbes was successful in this study but there are still a lot of questions a regarding its feasibility at scale and assessing the lifecycle of the solar panels that would be used. If it succeeds, cropland could be turned back into wild land.

Explore the CLEAN collection of climate & energy learning resources

CLEAN supports teaching and learning about climate and energy with 700+ free peer-reviewed, scientifically accurate, and classroom-ready resources.

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