Unit 5: Energy

Lesson 3: Solar Power- Teacher’s Guide
Estimated Time for Completion – approximately 45 minutes

Student Learning Objectives:
- As a result of this lesson the student will…
  - Formulate a working definition of solar energy.
  - Develop a deeper understanding of solar energy production.
  - Explore solar energy marketing trends.

Purpose:
It is the energy source that burns your skin in the summer, allows photosynthesis to take place, that lets you see the road in the daytime without the use of headlights, and the energy that makes the sand at the beach too hot to walk on. You have probably figured out that the energy source we are talking about is energy from the Sun, or solar energy. Solar energy is capable of much more than just lighting up the daytime, it can actually be converted into electricity to be used to light up the night as well as many other great applications. How does solar energy work and how can we use it?

Directions: Access the commodities and products tab on the AgMRC website (http://www.agmrc.org) and find the link to Biomass. Utilize information located here to answer the questions below:

1. How is solar power defined by the AgMRC website and what are three of its uses?
   - First, select the Commodities and Products link.
   - Second, select the Energy link.
   - Third, select the Solar Power link.
   - Fourth, select the Solar Power link at the end of the Overview section.
   - Fifth, utilize information to answer question.

2. Solar thermal collectors are divided up into three different categories. What are the three categories? Provide a brief description for each as outlined by the AgMRC website.
   - First, select the Commodities and Products link.
   - Second, select the Energy link.
   - Third, select the Solar Power link.
   - Fourth, select the Solar Power link at the end of the Overview section.
   - Fifth, utilize information to answer question.

3. After examining the United States 2011 electricity usage and demand, what do you think the future trend for solar power will be and why?
   - First, select the Commodities and Products link.
   - Second, select the Energy link.
   - Third, select the Solar Power link.
   - Fourth, select the Solar Power link at the end of the Overview section.
   - Fifth, utilize information to answer question.
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Reinforcement Activity: Power your home

Use the link http://www.rockygrove.com/solar-101/planning-your-own-system/where-should-the-solar-panels-be-placed/ to determine where you would place solar panels at your home. Use the information to draw a picture/map of where you would place them and write a short justification stating why you chose to place the panels in those locations.