**LESSON 3**

SOLAR TECHNOLOGY AND ITS GLOBAL APPLICATION

GOALS

1. Provide a global perspective on solar technology application
2. Inspire students to take action

MATERIALS

a. Solar kits (Solar panels, multi-meters, alligator clips and wires and LED lights)

b. Projector for slide show

c. Poster papers and markers

BENEFITS

a. Student engage in a discussion about solar energy and its application in both developed and developing communities

b. Students learn about renewable energy and how it is being used to address the need of light especially in the marginalized communities

c. Allow students to engage in teamwork and public speaking activity

ADVANCE PREPARATION

Review the presentation and lesson materials ahead of time.

HANDOUT REFERENCE LIST

1. Solar Stories
2. Presentation: Solar Energy Explained

PROCEDURE

Duration: 45 minutes

Targeted Students: 3-6 Grade

 **Lesson Agenda:**

1. Introduction (5 minutes)
2. Presentation: Solar Energy Explained (10 minutes)
3. Activity: Solar technology around the world stories (20 minutes)
4. Review Questions (5 minutes)
5. Student Questions (5 minutes)

**1. Introduction:**

 If you are a guest speaker please introduce yourself, `One Million Lights’ and

 `One Million Students’ Program.

**2. Presentation: Solar Energy Explained**

1. Begin a discussion about where solar energy comes from
2. Ask students questions to access their knowledge about solar energy and technology and as you move along share additional details to help supplement their knowledge.
3. Once you get to solar panels, ask students to raise their hands if they have seen:
	* Solar calculators
	* Solar powered emergency call-boxes on the freeway
	* Solar panels on a home
	* Anything else?

d. Why should we use Solar?

 Answers:

* + The sun will not run out, it is renewable and will last a long time
	+ Sun is eco-friendly and does not harm the earth
	+ There are no carbon emissions that are leading to global warming
	+ Sun is easily available and accessible
	+ Sun is clean and healthy, it does not harm human beings with toxic fumes

**3. Activity: Solar Technology Around The World Stories**

(If students have already done Lesson 2, teacher can lead a discussion with them on what they remember about the different uses of solar that they read about during the previous lesson)

The purpose of the activity is to transition students from how solar technology works to its global application. Divide the classroom into 4 stations. Dim the classroom lights and keep a solar lantern at each station. Each station will have a story about solar technology and how it is being applied around the world. Each group will have 5 minutes to read the story and have a discussion about the story at the station. Once done they need to move on to the other station and repeat the activity.

**4. Review Questions**:

* 1. Where does solar energy come from?

 Answer: Sun, Electrons

* 1. How is solar technology being used around the world?

 Answers: Space, farms, to light and to power homes

 3. What are the benefits of solar lighting?

 Answers:

 a. Education: additional study hours for students

 b. Health:

 - Decrease smoke inhalation, respiratory illness

 - Allows for improved service at primary health clinics

 - Midwives use solar lights to deliver babies

 c. Safety: transportation at night

 d. Bio-Conservation: deter wild animals from approaching

 crops/fields

 e. Livelihood: communities that produce handicrafts are able to produce more goods and generate a higher income

 f. Savings

**5. Student Questions:**

Time allocated for students to ask questions regarding the lesson.