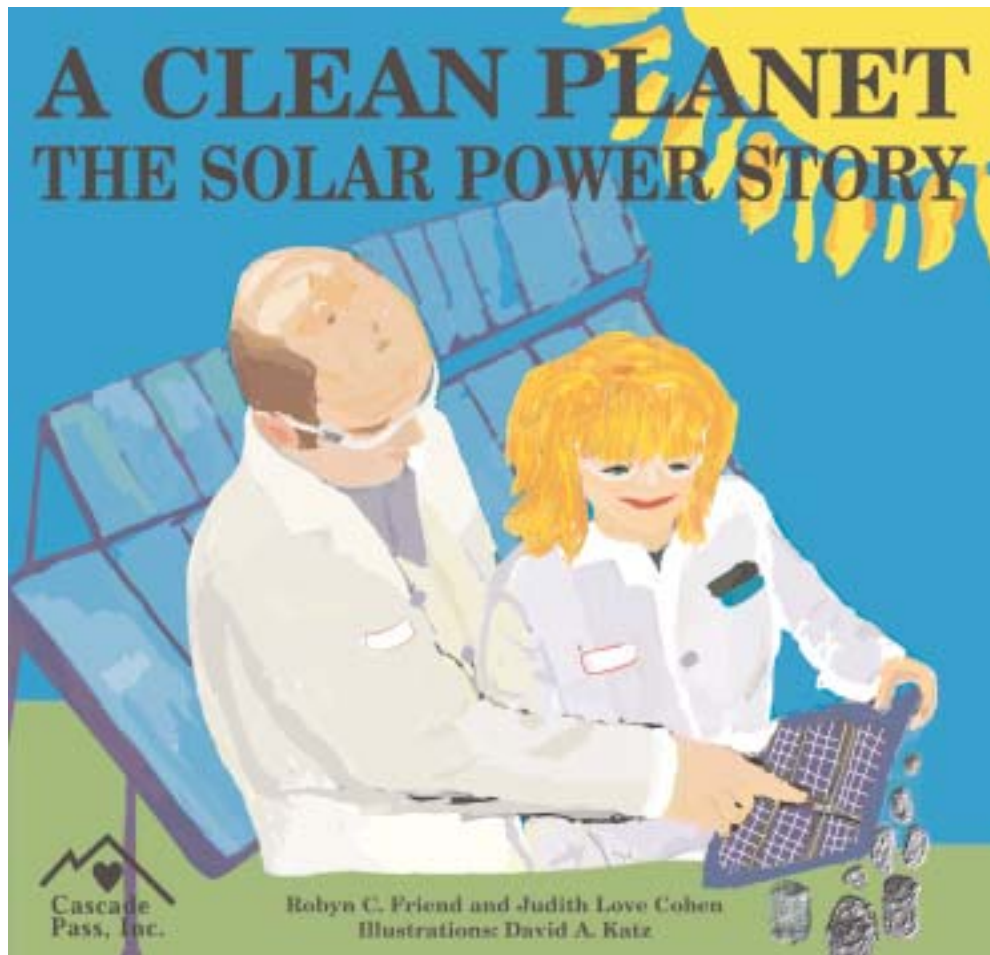


A CLEAN PLANET

THE SOLAR POWER STORY



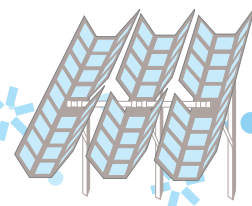
A CLEAN PLANET: THE SOLAR POWER STORY

LESSON PLAN 1

- PURPOSE:** To begin to understand how the separate elements are combined into compounds.
- MATERIALS:** List of elements, list of common compounds, package of various colored gumdrops, box of toothpicks.
- PROCEDURES:** Have the children separate the gumdrops by color. Have them pick a few compounds from the list provided. (e. g. Sodium Chloride (table salt); Di-Hydrogen oxide (water); Carbon Monoxide).
Have the children select a color for each element in the compounds chosen (Hydrogen, Carbon, Oxygen, Sodium, Chlorine).
Have the children use toothpicks to connect the gumdrops representing individual elements. One Oxygen element and two Hydrogen elements can be connected with two toothpicks; one Carbon element and one Oxygen element can be connected with one toothpick; One Sodium element and one Chlorine element are connected with one toothpick. Each model represents a molecule of the compound.
- CONCLUSIONS:** What does the chemical formula H_2O represent?
What do the numbers in formulas mean?
What do the letters mean?
(H_2O represents water, the H is the symbol for Hydrogen, the O is the symbol for Oxygen and the “2” means that there are two atoms of Hydrogen and one atom of Oxygen in a water molecule.)
- RESOURCES:** Periodic Table or Library books such as *The Usborne Book of Science*.

LESSON PLAN 2

- PURPOSE:** To understand where solar cell farms are placed and what they look like.
- MATERIALS:** Scissors, glue, shoe boxes, art supplies (paper, crayons, paints, colored pencils and glitter).
- PROCEDURE:** Have children take the shoe box and create an area that will contain a solar farm: open fields, deserts, large open spaces etc. but surrounded by mountains, forests, or other remote areas. They should create large scale solar arrays. Solar arrays should be shown in their proper environments. And remember there is lots of sun!



CONCLUSIONS: Why are solar array farms located in remote areas?
Why do they all face the same way?

RESOURCES: Pictures of various solar farms from the internet.

LESSON PLAN 3

PURPOSE: To learn about growing plants and the importance of plants.

MATERIALS: Styrofoam cups, potting material, seeds, little shovel, growing instructions.

PROCEDURE: Discuss how different plants like different kinds of environments, some plants like lots of water, others like less, some plants like lots of sun, others prefer shade, some plants like it warm, others like less warmth. Always read the seed directions for what your plant needs. Have each child fill their styrofoam cup half full with potting compound or soil, use ruler or transplanter to dig a hole of right depth, put seed in cup and cover. Discuss how and when to transplant plant and how to care for it. Show how plants protect themselves: (roses grow thorns, garlic stinks). What other examples can you think of?

CONCLUSIONS: Does your plant need to be in the shade?
How often should you water it?
When will you know it is time to transplant it?

