Objectives: As a result of this lesson, students will learn about regenerative energy sources as well as basic concepts and principles in physical science. Students will learn about the heat and light energy from the sun, the energy from the wind, as well as with electrochemical and plant energy and how to transform and use these forms of energy.

With the Power House kit you can build a model house complete with solar panels, windmill, greenhouse, and desalination system. You can build and operate an electric train, windmill, solar cooker, solar hot water tank, hygrometer, electric motor, power hoist, sail car, and more! Plant watercress, prepare sauerkraut, and make chewing gum. Learn how plants convert sunlight into energy for your body and your engines.

The thoughtfully designed series of experiments was developed by physicist Uwe Wandrey. Professor Wandrey creatively integrates physical science and technology lessons with the adventure of building a home and living on a remote island. To survive, you must learn how to harness the power of the sun and the wind as well as tap the energy of other physical forces. The storyline follows the experiments in a stepwise fashion. Easy-to-follow activities make it fun to build models and use them for your experiments.

The Power House Experiment Manual is much more than just a set of instructions. The manual is organized around the story of a group of island dwellers who must learn to live sustainably using the resources available to them on their small island. As you read their journal entries and learn of their projects and experiments, you build models of the same projects and conduct the same experiments alongside them.

This demo kit includes all the materials to construct 1 house and do the associated experiments

*Any materials that are lost or broken during classroom use must be replenished before being returned.