PUD/ESD Energy Education Program

Fifth Grade Teacher Guide

We have provided your class with the Sources of Electricity booklet and an individual solar oven activity. These materials are provided to you on behalf of your county's Public Utility District (PUD) in an effort to instill energy conservation education and real world ties to students at an early age.

Materials:

The Sources of Electricity booklet is meant to be read in class or as homework. In-class discussion should take place concerning the difference between renewable and non- renewable sources. The Sources Used for Electricity’ pie charts are provided for assessment questions listed in the student booklet. The solar oven activity should be

done in-class and 'smores are the recommended item for cooking due to time constraints.

These materials support the following Performance Expectations:

* 5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.
* 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
* 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
* 3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Listed below are comments on integration possibilities:

* Personal solar ovens can be utilized for planning investigations, designing solutions to human problems, and examining systems of science. This also be an opportunity for an engineering design challenge. Challenge students to define a problem that can be solved by using their solar oven, come up with multiple solutions, and then plan and carry out tests.

We thank you for being a part of the PUD/ESD Energy Education Program. If there are any questions regarding these materials or teaching instruction, do not hesitate to call.

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