

# Sixth Grade Pre/Post

## Overview

Pre-test and post-test questions are the same. Pre-testing elicits discussion involving predicting outcomes and educated guesses as to cause and effect. This is designed to make the class curious to find the answers. Post-testing ask the same questions as on a pre-test but the students should now be telling and reviewing the knowledge acquired through the activities.

## Pre/Post Questions

1. What type of home or building would a solar architect design?
2. Photovoltaic is a fancy word for \_\_\_\_\_?
3. How does a solar cell turn direct sunlight into direct current?
4. How long have we know about solar energy?
5. Name some items that are powered by solar energy. Explain how they work.
6. What does the location of electrical outlets, light switches and appliances in a home have to do with taking an energy inventory of the home?
7. Do you think drawing a floor plan of your home to show the location of the outlets, switches, and appliance would be a good way to estimate the different amounts of energy used in each room? Why is this important to know?
8. A scale diagram is the same as \_\_\_\_\_.
9. Does a toaster use the same amount of energy as a refrigerator? Explain.
10. Does a bedroom require as much electricity as a kitchen? Explain.
11. How do you calculate the total amount of electricity required to run you home?
12. What is Total Daily Load?
13. What is wattage? How is it determined?
14. What are two factors that a solar system depends on?
15. What needs more wattage to run a blender or a dish washer? Explain.
16. What is the formula for the average daily load of any given appliance? Why is this important to know when designing the size of the solar electric system needed to power your home?
17. Why should you always unplug an appliance before looking for the amps?
18. What are the two typical currents that are used in homes in the United States?
19. How do we use the Total Daily Load to determine the cost of a solar electric system?
20. List and explain the components that make up a solar electric system.
21. What is an inverter and why would you need it with a solar electric system? What is its purpose?
22. What is the difference between potential and kinetic energy?
23. What is a generator and how does it work?
24. What is a transformer?

25. List three sources of electricity generation and explain their advantages and disadvantages.
26. What is energy transformation?
27. Can energy be created or destroyed? Explain your answer.
28. Where are the hydroelectric dams located in Arizona?