

MODULE

Energy, Power & Mechanics

- Understand the concepts of gears and gear ratios.
- Demonstrate knowledge of the three classes of levers by completing a hands-on activity.
- Comprehend an alternative use of the Sun’s energy by operating a solar cooker.
- Explore the concept of energy and its development for the future.

SESSION FOCUS

- 1** Wind Energy
- 2** Wind Energy
- 3** Solar Cooking
- 4** Mechanical Systems
- 5** Levers
- 6** Fluid Mechanics
- 7** Fluid Systems

Dear Parent,

As parents and teachers, we realize it can be hard to get a child to discuss what he or she is learning in school. We hope the information provided on this page will assist you in communicating with your child about what he or she is learning.

Your participation in the learning process is extremely important, as you are your child’s best teacher.

For the next few days, your child will be learning about energy sources, the principles of power technology, the concept of mechanical advantage, and machines while completing the *Energy, Power & Mechanics* Module.

Words students will learn in this Module include:

- biomass energy
- force
- gear
- geothermal energy
- hydroelectricity
- lever
- mechanical advantage
- nuclear energy
- pneumatics
- solar energy

Questions for Discussion

During the course of this Module, your child will be assessed on key concepts and activities. You might want to discuss these concepts and activities with your child. He or she will be asked to:

- Explain how electricity is produced through a wind turbine. (*A wind turbine is a generator that produces electricity by moving a conductor through a magnetic field. When a conductor moves across the forces of a magnet, the electrons in the conductor move. When the electrons move, an electrical current is produced within the conductor.*)
- Explain the three classes of levers. (*First class: the fulcrum is located at some point between the effort and resistance forces. Second class: The resistance is located between the fulcrum and the effort force. Third class: The effort force is applied between the fulcrum and the resistance force.*)

Student: _____

Parent: _____