

## Exploring Wind Energy: Secondary Level

**Objectives:** As a result of this lesson, students will understand how electricity is generated from the wind. Students will be able to measure the wind, measure electricity, and assemble a model turbine.

Secondary students develop a comprehensive understanding about wind formation, wind energy, and electricity generation from wind through reading, critical thinking activities, and hands-on investigations. The kit comes with a Teacher Guide, a class set of Student Guides, and the materials necessary to conduct the activities, including two KidWind Basic Turbines and a geared nacelle to convert one turbine to a geared turbine.



**This kit includes:**

- Anemometer
- Wind gauge
- Wind vane
- Genecon and Book
- Box of snow cone cups
- Multimeters
- Compass
- Large straws
- Small straws
- Straight pins
- Pencils
- Small binder clips
- Alligator Clips
- Masking Tape
- ¼" Dowels
- 18" Long balsa sheets

- 16" Long chloroplast sheets
- Hub
- PVC 1' 90 degree Joints
- PVC 1' T-Joints (2 with drilled holes)
- PVC 6" pipe
- PVC 24" pipe
- PVC 2" pipe
- PVC couplers
- Generators
- Geared Head Assembly
- ¼" Dowels
- Visual Voltmeter
- Extra Generators
- Teacher guide
- Student Guides

**Not in this kit:**

- Foam cups
- Hole punch
- Rulers
- Scissors
- Permanent Markers
- Tape

**Additional Equipment Needed:**

- Fan

\*See video with assembly instructions and tips at <https://www.youtube.com/watch?v=mjsGrWioLlk>

\*To replenish any materials used, lost or broken during classroom use, check craft, hardware, or hobby stores. For more information or to purchase this kit, visit [NEED.org](http://NEED.org)