

Energy from the Wind: Intermediate Level

Objectives: As a result of this lesson, students will understand how electricity is generated from the wind. Students will be able to build their own anemometers, and experiment with blade design and pitch on a wind turbine.

Intermediate students learn 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
Small binder clips
Pencils
Paperclips
Duct Tape
Masking Tape
Sand paper
¼" Dowels
18" Long balsa sheets
16" Long chloroplast sheets

Protractors
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
Alligator Clips
Visual Voltmeter
Extra Generators
Teacher guide
Student Guides

Not in this kit:

Foam cups
Hole punch

Rulers
Scissors
Glue
Permanent Markers
Tape
Pennies
Poster board
String
Meter Stick
Watch with second hand
Extra blade materials
Dry Cell battery (1.5 volt, AAA, AA, or D)
1 Bulb (3.8V, 0.3A) in socket with leads

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