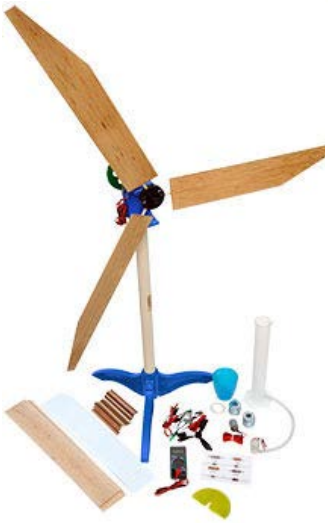
KidWind Adaptable Learning Turbine (ALTurbine)

Objectives: As a result of this lesson, students will understand the potential of wind energy by experimenting with the variables of a wind turbine. Students will be able to carry out experiments to test how different parts of a wind turbine improve efficiency.

Many factors determine the efficiency of a turbine, such as blade design, gears, the generator, and more. Students can use the ALTurbine for maximum experimentation and increase the power output through the use of gears. Students will discover many capabilities of a wind turbine.

This kit includes:

ALTurbine
2 x 4 Interlocking wood boards with drilled hole
2' wooden monopole tower
Hub with attached driveshaft
Standard hub
Plastic Nacelle with attached generator and small gear
Standard blades



Gears
Different sized gears
Gear keys
Rubber bands
Binder clips

Wires and Accessories
Multimeter
Alligator clips
High torque generator
Generator with wires attached
Motor with yellow mini propeller
Sandpaper
LED bulbs and incandescent bulbs
Small screws
Capacitor
Electrical tape

Included Add-Ons:

Weightlifting Kit
Plastic cup
Spool
String
Washers

GenPack
Assembled GenPack
Tubing
Spacer
Wing nuts
Rubber bands
Nylon threaded rods
Nuts
Steel Shaft

Additional Equipment Needed:
Fan

*Any materials that are lost or broken during classroom use must be replenished before being returned. Wind turbine parts can be purchased from Vernier.