

KidWind MINI Turbine Blade Design and Wind Farm

Objectives: As a result of this lesson, students will understand how a wind turbine will convert mechanical energy into electricity, how the blades aid in the electrical generation, and how a wind farm can optimize wind energy in a given location. Students will be able to make and test blades on the MINI turbine as well as experiment with different types of electrical circuits between the turbines on a wind farm.



The KidWind MINI is a smaller turbine that students can build and experiment with to produce enough electricity to power LED bulbs, a power output board and other load devices. The blade design kit allows for students to make and test the effect of pitch and shape of the wind turbine blades. This kit includes three MINI turbines that can be combined in a series or parallel circuit to produce even more electricity and demonstrate the effectiveness of a wind farm while testing the placement of turbines on a farm.

This kit includes:

- Assembled red blades
- PVC bases for turbines
- Power output boards
- Multimeters
- Chloroplast sheets
- Dowels
- 50 ohm resistors
- 100 ohm resistors
- Hub
- Alligator clips



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.