

## Wind and Weather

# Catching the Wind: Designing Windmills

### TEACHER RESOURCES

#### Wind Power

This webpage created by *National Geographic®* gives an overview of wind energy, wind turbines, and the state of wind energy today. Requires free registration with [nationalgeographic.com](http://nationalgeographic.com).

<http://on.natgeo.com/1gulVWL>

#### The Kid Wind Project

The Kid Wind Project is a team of teachers, engineers, and scientists committed to energy education. This site offers background information about wind and wind turbines, including a history of wind power and how wind is used to generate electricity. This site also features design competitions, free activities and powerpoints, and kits for purchase about wind energy.

<http://bit.ly/PdXEMN>

### INTERACTIVE FOR TEACHERS

#### Harness the Power of the Wind

This interactive created by *National Geographic®* allows users to explore the variables affecting the performance of wind turbines, including height, blade length, wind speed, and altitude. Requires free registration with [nationalgeographic.com](http://nationalgeographic.com).

<http://on.natgeo.com/1jvQPkY>

### WEBSITE FOR STUDENTS

#### Windmill Gallery

A selection of windmills in different settings is featured in this image collection hosted by PBS LearningMedia™. Requires free registration with PBS Learning Media™.

<http://bit.ly/1dNwPdz>

### VIDEOS FOR STUDENTS

#### Exploring Windmill Design

This clip from PBS LearningMedia™ follows a group of three students as they engineer a windmill that will lift a cup of weights as it turns. Requires free registration with PBS LearningMedia™. (3:38)

<http://bit.ly/1lkVYfN>

#### Sailing

In this video, two students conduct experiments to determine how to position a boat's sail to reach maximum speeds. Students use their knowledge of Bernoulli's Principle and anemometers to explore how they can use sails to "catch the wind." Requires free registration with PBS LearningMedia™. (7:14)

<http://bit.ly/1pEuROq>

#### Moving Windmills

This short film, "Moving Windmills, the William Kamkamba Story," documents the true story of a teenage boy in Mali who built an electricity-producing windmill based only on a photograph of a windmill he found in a library book. (6:08)

<http://williamkamkwamba.typepad.com>