Windmills Help Power the World

Wind is moving air. We can use the energy in the wind to do useful things. For example, we have been using wind power to sail ships for thousands of years. We can also use tools called **windmills** that use the energy in the wind to do helpful things. Windmills have used for centuries to grind grain into flour for baking and pump water from one place to another.

When wind pushes against the blades of the windmill this turns a shaft in the center. The shaft connects to a pump to move the water or a millstone to grind the grain depending on the job you need done. Recently, a teenage boy named William Kamkwamba learned how to build a windmill that helped save his village in Malawi Africa from a famine. His inspiring story has been captured in both a book and now a movie called, "The Boy Who Harnessed the Wind."

Today, giant modern windmills, often called wind turbines, are used to generate electricity. **Wind turbines** convert the kinetic energy of the wind into electrical energy that can be used for a variety of things. In windy areas, large wind turbines can be grouped together to form a wind farm. **Wind farms** are becoming an increasingly important source of power for many areas. The best thing about wind turbines is that the electricity is produced naturally without the burning of fossil fuels. As a result, wind power is considered a **green energy** source because it generates power without harming the environment.

In this How to Harness the Wind STEM Challenge, your task is to to build a simple windmill that can be used to lift an object in a useful manner.