SCIENCE, TECHNOLOGY, ENGINEERING & MATH



ENERGY: WIND POWER (6-8)

KEY CONCEPTS:

- Wind is air in motion. It is caused by the sun unevenly heating the earth's surface.
- > Wind energy can be used to generate electricity.
- Wind turbines use moving air to power an electric generator. This supplies an electric current.
- Wind power is the fastest growing renewable energy source in the U.S.



LITERACY CONNECTION:

The Boy Who Harnessed the Wind is a true story by <u>William Kamkwamba</u> and Bryan Mealer. As a young teenager, William finds an inventive way to bring electricity to his tiny African village. His story is so amazing, they made a <u>movie</u>!



ACTIVITY: POWER of the PINWHEEL

Materials: paper, string, large straw, pencil or wooden skewer, 1 large and 1 small disposable cup, scissors, tape, paper clips or pennies, (optional) fan/dryer

- 1. Take a square piece of paper and cut each corner (pinwheel template below)
- 2. Push the pencil or wooden skewer through the center of the square.
- 3. Bend (not fold) half of each corner to the center and secure the front and back of the pinwheel with tape.
- TIP: Leave ~1 inch of space between the front and back of the pinwheel.
- 4. Tape the straw sideways to the bottom of the large cup. Cut the straw to match the length of the cup.
- 5. Slide the pencil/skewer through the straw until it sticks out 1-2 inches past the base.
- 6. Punch two holes on opposite sides of the small cup, and tie a small piece of string between the two holes to create a bucket handle.
- 7. Tie one end of a string to the end of the skewer and the other end to the "bucket" handle.
- 8. Blow air toward the pinwheel and observe the power of the wind!

EXPLORE: Florida Power & Light is one of the leaders in developing wind farms. Check out their resources for <u>more activities using wind energy</u>.

For step-by-step instructions, watch the video at: Pinwheel STEM Activity

This at-home educational activity is from the Literacy Coalition of Palm Beach County's literacy-based Stories & STEM program. Stories & STEM is made possible with support from Prime Time Palm Beach County, Inc., which receives significant funding from the Children's Services Council of Palm Beach County, Inc.

Having fun? Send pictures or video links of you and your Stores & STEM projects to csharkey@literacypbc.org



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