

What the Wind Does for Me



Objective

- Students will be able to identify ways that the wind contributes to their lives.


Procedure

1. Ask students to describe the wind and how they think wind is created; note their responses. See **Refreshing Refrigerator Experiment** to provide an introduction to wind formation. Have students share their ideas on the blackboard. Did they think of other ideas during the discussion? Add them to the list.

2. Hand out copies of **What the Wind Does for Me** activity sheet and have students generate ideas about ways the wind affects them. Students can keep the handouts in their **Energy Learning Logs**.

Example:

The  dries 

The  feels cold on my face.

NOTE: Pre-literate students can construct pictures using art supplies.

3. Take students outside and have them use all of their senses to describe wind. Can they see wind? Feel it? Smell it? Hear it? Taste it? How do we know it is there? What evidence can they provide to support their descriptions of wind? Have students record their findings in their **Energy Learning Logs** using the following descriptions:

Date of observation:

I can see:

I can feel:

I can smell:

I can hear:

I can taste:

4. After students have had time to describe wind individually, ask them to share their descriptions. Students should begin to look for patterns in these observations. Do their observations raise any additional questions? If so, record them in the **Energy Learning Logs** and discuss as a class.

5. Ask students to describe how hard the wind is blowing. Ask them how they can know if the wind is blowing softer or harder. What signs should they look for? Have students create a scale to categorize levels of windiness and signs they look for to identify each category. The **Wind Scale Chart** provides some suggested signs or references to gauge wind speed.

6. To celebrate the wind, have students create a wind chime. See **Wind Chime Rhapsody**.

Assessment

- Have students list or draw jobs that the wind does for them and insert the information into their **Energy Learning Logs**.
- Ask students how they discriminate between a gentle breeze and a strong wind.
- Challenge students to listen to the sounds of chimes in different levels of wind and to create their own wind scale.

Extensions

Students can create poems about the sensations they experience due to wind.

Students can physically interpret the various levels of wind and put on a short performance.

Take a tour to a wind generator and discuss how wind is used to generate electricity.

Have the students incorporate into the **Energy Flow Mural** the appropriate wind jobs they generated. Let students determine whether the wind jobs should be grouped or placed in various locations in the schoolyard or classroom on the mural.

Have students draw pictures in their **Energy Learning Logs** to illustrate what happens in their schoolyard during windy days and calm days.

Students can act out various wind speeds by imitating the wind instruments or tree branches and leaves blowing.

On days when students detect the wind is stronger, have them construct simple paper flying machines and hold a contest to see which one flies the farthest.

Summary:

Students illustrate ways the wind contributes to their lives.

Grade Levels:

K-4

Subject Areas:

Language Arts, Earth and Physical Science, Environmental Literacy & Sustainability, Art

Setting: Classroom or outdoor work area

Time:

Preparation: 20 minutes

Activity: 50-minute period

Vocabulary: Sun, Wind, Molecule, High-Pressure System

Standards Addressed:

CC ELA:L.K.5.D, L.K.6, L.1.5.B, L.1.6, L.2.3, L.2.5.A-B, L.2.6, L.3.3, L.3.5.B, L.4.3, RI.2-4.3, RI.3.4, RI.2-4.10, RL.4.1, SL.K.1.A, SL.K.3-4&6, SL.1.1.A-C, SL.1.4, SL.2.1.A-C, SL.2.2&5, SL.3.1.A-B&D, SL.3.5-6, SL.4.1.A-D, W.K.2&8, W.1-4.2, W.2.7, W.3-4.1.A

NGSS: K-ESS2-1

SEP: Analyzing and Interpreting Data

DCI: ESS2.D: Weather and Climate

CCC: Patterns

EL&S: Connect: C1.A.e, C1.A.i, C1.C.e, C1.D.e

Explore: EX2.A.e, EX3.B.e, EX4.A.e,

EX5.B.e

Materials:

- Copies of **What the Wind Does for Me** activity sheet
- **Energy Learning Log** and writing implements
- Copies of the **Wind Scale Chart** and **Wind Chime Rhapsody**

Related KEEP Activities:

In “Sun, Wind, Water” students use art skills to emphasize the role of energy in the water cycle. For more fun sun activities, check out the KEEP Energy Spark “Windy Wonders.” Available at keepprogram.org.

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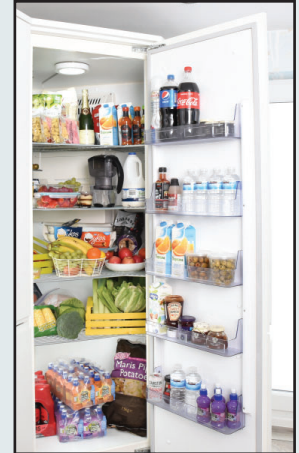
Refreshing Refrigerator Experiment

Does this sound familiar? It is unbearably hot outside so you go inside and open the refrigerator or freezer to get a cool drink, and you feel the cold, refreshing air rush out. An experiment for kids to try at home to learn more about wind is the **Refreshing Refrigerator Experiment**. On the next warm day, tell the students to note where they feel the cold air when they open the refrigerator. If they were wearing shorts, they should have felt the cold air move over their legs and feet. What the students felt is “wind!”

Have the class talk about why they think the cold air moves out of the refrigerator, and why the warm air doesn't seem to move in. Explain that like all material, air is made up of tiny particles called molecules. The cold air molecules are closer together and will sink because they are pulled by gravity. Warmer air is less dense, so it is more active and its molecules are more spread out. Ask students what heats the air and makes it warm (the sun).

Explain that depending on its location (e.g., over water, land, farms, and cities), air heats up at different rates so there is warmer and cooler air. Cooler air is denser and can displace warmer air, creating wind.

NOTE: Air moves from high pressure to low-pressure areas, meaning the cold, heavier air (high-pressure system or more dense air) “flows” in and displaces the warm air (low-pressure system or less dense air). The movement of air between pressure systems is one factor that causes wind. The greater the difference in air pressure, the harder the wind blows. In the Northern Hemisphere, wind flows clockwise around high-pressure systems and counterclockwise around low-pressure systems.





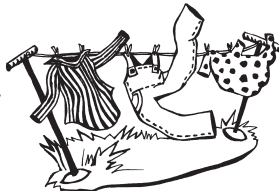
What the Wind Does for Me

Generate ideas about jobs the wind does for you.

Example: The



dries my



1. The



2. The



3. The



4. The



5. The





What the Wind Does for Me

Wind Scale Chart

Wind Level

Signs

Student-Suggested Signs

1. Calm



Smoke goes up

2. Gentle Breeze



Leaves rustle

3. Moderate Wind



Flags flap and paper flies

4. Strong Wind



Large branches move

Wind Chime Rhapsody

Materials

- Yarn, cord, or fish line
- Metal items to attach to wind chime, such as nails, old utensils, clean tin cans. (Be very careful that children do not cut or poke themselves with sharp edges.)
- Wire coat hanger or piece of wood

Instructions

1. Cut yarn or cord in various lengths between 8 and 14 inches.
2. Tie a different metal item to each length of yarn or cord. Tie yarn, cord, or fish line to hanger so the items touch when the wind blows.
3. Hang wind chimes in a breezy location and listen to the wind chime rhapsody!

