

Who Has Seen the Wind?

In this lesson, students are introduced to and encouraged to explore characteristics of the wind through poetry and van Gogh's paintings.

Summary

In this lesson students are introduced to and encouraged to explore characteristics of the wind through poetry and van Gogh's paintings. Students will utilize this information by learning how to classify and measure the wind by studying the Beaufort Scale and building an anemometer. Then, they will reinterpret characteristics of the wind by representing them through pantomime and painting.

Learning Objectives

Students will:

- Discuss how the wind is employed in selected poems and van Gogh's paintings
- Use the Beaufort Scale to classify the wind
- Study and build an anemometer
- Utilize pantomime to demonstrate Beaufort Scale ratings
- Create 'wind' paintings and relate them to the Beaufort Scale

Teaching Approach

- Arts Enhanced

Teaching Methods

- Hands-On Learning
- Reflection
- Discussion
- Experiential Learning
- Simulations and Games

Assessment Type

- Informal Assessment

Lesson Setup

Teacher Background

- You should be familiar with the principles of wind and wind measurement.
- You should be familiar with van Gogh and his landscape paintings.

Prior Student Knowledge

Students should be familiar with different weather types and patterns.

To help familiarize students with the principles of weather, you may wish to use the following resources:

- Games to help learn about the weather
- Students may look up the weather for their area
- Practice reporting and predicting the weather

Grouping

Individualized Instruction

Small Group Instruction

Staging

The video in step #2 of the Build Knowledge section may take a few moments to upload. It may help to pause the video to allow time for it to upload before playing it. Prior to teaching this lesson, follow the video instructions (from the Build Knowledge section) to build an anemometer to make sure it works. All the corrugated cardboard strips should be of the same size (suggested size: 1.5" x 12"). Teachers may wish to cut the tops off of the Styrofoam cups ahead of time. For the pantomime activity in the Apply section, print out another set of the Beaufort Scale to hand out to the groups. Assign a different rating (Force 0-12) to each group by highlighting one of the rows on the scale. If using tempera paint to make the wind paintings in the Apply section mix it with water so that the consistency is less thick and the paint will move when blown.

What You'll Need - Student Supplies:

Anemometer supplies:

- 1.5" x 12" strips of corrugated cardboard (2 per student)
- Plasticine or PlayDough
- Pushpins (1 per student)
- Colored marker (1 per student)
- Unsharpened pencils with eraser on one end (1 per student)
- Styrofoam cups (4 per student)
- Staplers (several)
- Scissors (1 pair per student)
- Fan (optional)

Wind painting supplies:

- White paper (1 sheet per student)
- Straws (1 per student)
- Water-based or tempera paint (in a variety of colors)
- Paintbrushes (optional)

Resources:

- Printable Assessment Rubric

Required Technology

- 1 Computer per Classroom
- Projector
- Speakers

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ENGAGE

1. Describe the wind. Ask students to think of words or phrases that describe the wind. Explain that there are 'degrees' of wind. For example, describe the difference between a gentle breeze and a gale force wind. Explain to students that it might be hard to describe the wind because we can't actually see it. Since we cannot see it, we must look at its effects in order to describe it.
2. Read poems about the wind. Distribute copies of and read *Who Has Seen the Wind?* by Christina Rossetti and read or play *The Wind* by Robert Louis Stevenson. Afterwards discuss them with the class using these questions as prompts:
 - How do the authors show that the wind is present? (possible answers: trembling leaves, bowed trees, flying kites, strong and cold feeling)
 - Do we need to feel the wind or observe its effects to know it is there? (answers will vary; ask students to explain their answer)
 - How does the author feel about the wind? (possible answers: the wind is mysterious, frightening, powerful)
3. View paintings by van Gogh. Display landscape paintings by van Gogh that include representations of the wind:
 - *Fishing Boats on the Beach near Saintes-Maries-de-la-Mer*
 - *Wheatfield with Crows*
 - *Wheat Field with Cypresses*

For each painting ask students the following questions:

- How can they 'see' the wind in the paintings? (possible answers: movement in the wheat fields, clouds, water, sails, etc.)
- How did the painter achieve the feeling of wind in the painting? (possible answers: swirling the paint, thick brushstrokes, strong colors, wavy lines)
- What would it feel like to be inside the painting? (answers will vary; ask students to explain their answer)

BUILD KNOWLEDGE

1. Learn about the Beaufort Scale. Explain to students that since you can't see the wind itself, scientists describe it by measuring wind speed and observing its effects. Hand out the Beaufort scale and discuss each of the ratings (Forces 0-12) and view sea images to illustrate them. (Teachers will need to click on each sea state photo found in the Beaufort Scale chart.)
2. Observe an anemometer. Tell students that scientists have developed many ways to measure the wind. One way is an anemometer, which can measure wind speed and direction. Play the video (pausing to clarify vocabulary and concepts) and ask the students how they think the anemometer would respond to different Beaufort Scale ratings. For example, the anemometer might turn very quickly and be whipped back and forth during a Force 10 wind.
3. Build an anemometer. Follow and/or show the video instructions to build an anemometer. Display the finished product beforehand and demonstrate and verbally explain each step during the process. If the day is windy test the anemometers outside or create wind in the classroom using a fan. (see directions on page 4)

APPLY

Students will participate in two activities to help them conceptualize the wind.

1. Pantomime the wind. Explain that pantomime is acting without talking and then tell students that they will pretend to be trees and act out what the trees would look like based on the Beaufort Scale rating they are assigned. Follow the steps below:
 - Divide students into pairs or small groups (13 groups total).
 - Provide each group with a Beaufort Scale (every group will have a different rating highlighted).
 - Allow groups time to discuss their pantomime. Answer questions and clarify information about assigned ratings.
 - Allow each group 30 seconds to perform their pantomime.Hand out paper and straws and place two blobs of paint in the center of the paper. (Teachers may wish to allow students

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- Ask the audience to identify the rating that is being represented.
 - After all the groups have completed their pantomime, discuss with the class how this helped them to understand what the Beaufort Scale ratings mean.
2. Create 'wind' paintings. Tell students they will create wind paintings using their own breath. Demonstrate and provide verbal instructions for the below steps:
- Hand out paper and straws and place two blobs of paint in the center of the paper. (Teachers may wish to allow students to choose their colors.)
 - Blow through a straw to move the paint around the paper. Vary the strength of the breath and the direction of movement to create different effects.
 - Optional: If time allows, students may use a paintbrush to add scenery, which reflects the effects of the wind, to their painting. For example, if a student adds a tall field of grass, the grass might be bent to show movement by the wind.
 - After the paintings are completed, post them around the classroom. Ask students to observe the paintings and see if they can assign a Beaufort Scale rating to wind in the painting.

Discuss with the class how changing the strength of the breath and their movements affected the paintings and how this relates to the Beaufort Scale. Ask them if their choice of color made their wind look more or less intense.

REFLECT

1. Journal about wind activities. Have students respond to the pantomime and painting activities by journaling about the following questions:
 - How did the activities help you understand the wind?
 - Which activity most helped you to understand the wind and its effects? Why?
2. Class discussion about journal entries. After students have finished journaling, reconvene the class and ask student to share their responses. Make sure that students understand how the strength and movement of the wind has different effects on objects and that the Beaufort Scale helps us to categorize this.

ASSESS

Assess your student's work using the 'Assessment Rubric' located within the Resource Carousel.

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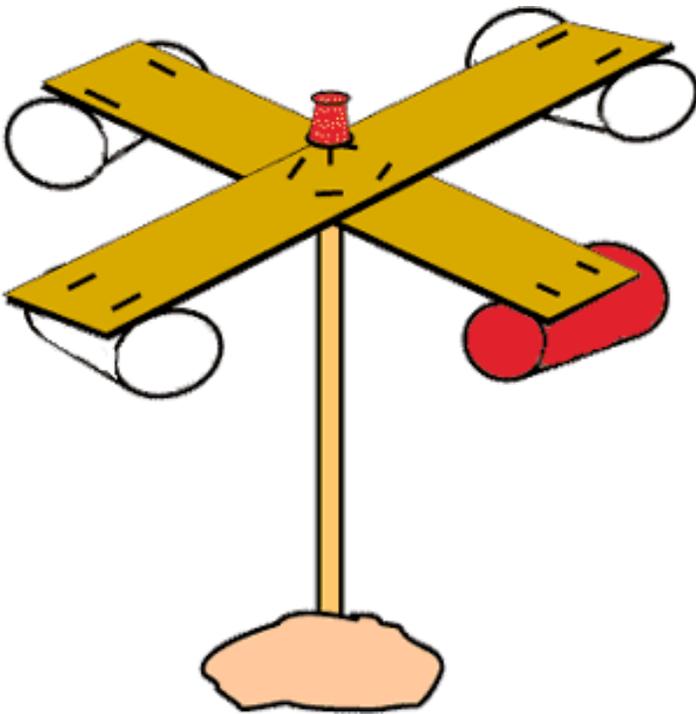
Make your own Anemometer

What You'll Need

- 1.5" x 12" strips of corrugated cardboard (2 per student)
- Plasticine or PlayDough
- Pushpins (1 per student)
- Colored marker (1 per student)
- Unsharpened pencils with eraser on one end (1 per student)
- Styrofoam cups (4 per student)
- Staplers (several)
- Scissors (1 pair per student)
- Fan (optional)

Directions

1. Cut off the rolled edges of the paper cups to make them lighter.
2. Color the outside of one cup with the marking pen.
3. Cross the cardboard strips so they make a plus (+) sign. Staple them together.
4. Take the ruler and pencil and draw lines from the outside corners of where the cardboard strips come together to the opposite corners. Where the pencil lines cross will be the exact middle of the cross.
5. Staple the cups to the ends of the cardboard strips; make sure the cups all face the same direction.
6. Push the pin through the center of the cardboard (where the pencil lines cross) and attach the cardboard cross with the cups on it to the eraser point of the pencil. Blow on the cups to make sure the cardboard spins around freely on the pin.
7. Place the modeling clay on a surface outside, such as a porch railing, wooden fence rail, a wall or a rock. Stick the sharpened end of the pencil into the clay so it stands up straight.



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Beaufort Scale

The Beaufort scale is an empirical measure for the intensity of the weather based mainly on wind power. The scale was created by the British naval commander Sir Francis Beaufort around 1806.

Number	Knots	MPH	Description	Effect on Land
0	0	0	Calm	Calm; smoke rises vertically
1	1-3	1-3	Light Air	Smoke drifts in the wind
2	4-6	4-7	Light Breeze	Leaves rustle; wind felt on face
3	7-10	8-12	Gentle Breeze	Small twigs in constant motion
4	11-16	13-18	Moderate Wind	Dust, leaves, and loose paper raised; small branches move.
5	17-21	19-24	Fresh Wind	Small trees sway
6	22-27	25-31	Strong Wind	Large branches move; difficult to use umbrellas
7	28-33	32-38	Very Strong Wind	Whole trees in motion
8	34-40	39-46	Gale	Twigs break off trees; difficult to walk
9	41-47	47-54	Severe Gale	Chimney pots and slates removed
10	48-55	55-63	Storm	Trees uprooted; structural damage
11	56-63	64-72	Severe Storm	Widespread damage
12	63	73	Hurricane	Widespread damage; rare

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WHO HAS SEEN THE WIND ?

By: Christina Rossetti

Who has seen the wind?

Neither I nor you:

But when the leaves hang trembling

The wind is passing thro'

Who has seen the wind?

Neither you nor I:

But when the trees bow down their heads

The wind is passing by.

Questions:

1. What is the poem about?
2. What is wind made of?
3. Where is wind? Where do you find the most wind? Is wind air?
4. What is air?
5. Does the wind move? How do you know wind moves?
6. Why do the trees bow their heads?

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The Wind

by Robert Louis Stevenson

I saw you toss the kites on high
And blow the birds about the sky;
And all around I heard you pass,
Like ladies' skirts across the grass—

○ wind, a-blowing all day long,
○ wind, that sings so loud a song!

I saw the different things you did,
But always you yourself you hid.
I felt you push, I heard you call,
I could not see yourself at all—

○ wind, a-blowing all day long,
○ wind, that sings so loud a song!

○ you that are so strong and cold,
○ blower, are you young or old?
Are you a beast of field and tree,
Or just a stronger child than me?

○ wind, a-blowing all day long,
○ wind, that sings so loud a song!

Rubric

Student: _____

Criteria	Rating 4 = Excellent 3 = Very Good 2 = Good 1 = Poor
Student participated in class discussions about the representation of the wind in poetry and van Gogh's paintings	
Demonstrated an understanding of the purpose of the Beaufort Scale	
Built an anemometer and demonstrated an understanding of its function	
Used pantomime to represent the wind	
Followed the steps to create a 'wind' paintings	
Was able to reflect in written and verbal form about the pantomime and painting activities and their relationship to the Beaufort Scale	
	Total= /24

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MISSISSIPPI ENGLISH/LANGUAGE ARTS FRAMEWORKS

1. The student will use word recognition and vocabulary (word meaning) skills to communicate.
- g. The student will use context to determine the simple figurative meanings (e.g., simile, metaphor, and personification) of words. (DOK 2)

- d. The student will analyze, interpret, compare, or respond to increasingly complex literary text, literary nonfiction, and informational text, citing text-based evidence. (DOK 3)
 - 1) Interpret text through moving, drawing, speaking, acting, or singing.
 - 2) Make connections between self and characters, events, and information in text or among texts.
 - 3) Compose visual images based upon text.

MISSISSIPPI SCIENCE FRAMEWORKS

Earth and Space Science

4. Develop an understanding of the properties of Earth materials, objects in the sky, and changes in Earth and sky.
 - c. Gather and display local weather information such as temperature, precipitation, clouds, etc., on graphs and use graphs of weather patterns to predict weather conditions. (DOK 3)
 - Instruments (wind vane, rain gauge, thermometers, anemometers, and barometers)
 - Cloud types (cirrus, stratus, cumulus)
 - Water cycle (evaporation, precipitation, condensation)

MISSISSIPPI VISUAL ARTS FRAMEWORKS

1. Apply with increasing skills a variety of media, processes, and images to produce works of art that communicate ideas. (CP)
 - b. Use art materials and tools in a safe and responsible manner.
4. Understand and use visual arts vocabulary to make judgments while creating and studying works of art. (CA)
 - a. Discuss artwork using art vocabulary, including names of artists, and styles of art.
 - b. Discuss artwork in relation to design principles: balance, repetition, unity, contrast, proportion, and emphasis.
5. Describe how different works of art can be interpreted. (CA)
 - a. Know how to use reading, writing, and speaking skills to communicate interpretation of art.
 - b. Know how to support an opinion about art with an example.
 - c. Demonstrate ability to identify similar ideas represented in works of art.
12. Begin to understand ways that major concepts and technologies of the visual arts relate to those in the arts and other disciplines. (C)
 - a. Know similarities among all of the arts (i.e., music, dance, drama, visual arts), including vocabulary, concepts, and use of common themes.
 - b. Know that math, language arts, social studies, and science share concepts with the visual arts (e.g., patterns in visual arts and math).

MISSISSIPPI THEATRE FRAMEWORKS

2. Act by assuming roles and interacting in improvisations and scripted scenes. (CP)
 - a. Demonstrate the ability to utilize the body and voice (e.g., breath control, diction, concentration, and isolation) for creative self-expression in thought, feeling, and character.
 - b. Dramatize stories from literature through dialogue, movement, and acting a variety of emotional states (e.g., happy, sad, frightened).
6. Support classroom dramatizations by finding information. (CA, HC, C)
 - a. Understand how theatre can be an interpretation of actual events in history and everyday life.

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COMMON CORE - ENGLISH AND LANGUAGE ARTS

Reading Standards for Literature

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.
7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

Reading Standards for Informational Text

3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

Speaking and Listening Standards

1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher- led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
 - a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.
 - b. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
 - c. Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
 - d. Explain their own ideas and understanding in light of the discussion.
2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.
5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.