

# CASE

## General Education Lesson Plan

(<http://app.education.pitt.edu/teacherprep>)

Name: Brianna Amoscato      Date: October 3, 14      Subject: Science Anemometers.

**Things to do to prepare for the lesson:**

<input type="checkbox"/> Class anemometer	<input type="checkbox"/> Science journals	<input type="checkbox"/>
<input type="checkbox"/> Wind forecast	<input type="checkbox"/> Interactive Wind Speed	<input type="checkbox"/>
<input type="checkbox"/> Kite cutouts/prints	<input type="checkbox"/> Feel the Wind (book) (may save for later lesson)	<input type="checkbox"/>

**Learning goal(s):**

- ***Wind is moving air***
- ***An anemometer is a weather instrument that measures wind speed. This is what meteorologists use to measure wind speed as well.***
- ***Wind speed predicts weather patterns such as temperature and precipitation***

**State Standards for the lesson:**

- Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.

Lesson launch: 5 minutes

Today we are going to pretend that we are Meteorologists on the Pittsburgh Weather Channel. Can anyone tell me what a meteorologist is? Review that a meteorologist is really just someone who forecasts the weather. Let's say, it is the beginning of the day and the Pittsburgh weather channel has just released an important weather report. Now, when you are listening to this weather report, I want you to think about what this meteorologist is talking about. There is one word that is repeated over and over again.

<https://www.youtube.com/watch?v=P6af-8t0-T0>

Have the students discuss the short weather report or "Wind Report." Talk about what different words or phrases they remember listening to in the weather report.

Or

Read the book *Feel the Wind*

Explain to the students that every day, the meteorologists not only tell us the temperature or how hot or cold it is going to be outside, but they also give us a wind report.

What is wind? Have multiple students give answers to this question: *wind is moving air*

***Why is it important for us to know about the wind speed/wind direction? Why do we care?***

***MAKE A LIST HERE on chart paper:***

***-pilots need wind report to travel in safe conditions***

***-Predicts future weather patterns***

***-Important for those steering a boat to know wind speed and direct to make sure it is safe to go out on the waters (these are fisherman and those carrying cargo or goods overseas.)***

*If you choose to read the book, discuss the reasons the book gives as to why wind is so important! This may be a good supplement to add to your list.*

Show students the interactive wind map <http://hint.fm/wind/>

- Have student come up and locate where Pittsburgh is on the map
- Have a student come up and show you the map key
- Discuss: what area of the map has the least amount of wind (use the state map in the classroom to indicate which states have the least amount of wind.)
- Discuss: what area of the map has the most amount of wind (use state map in the classroom to indicate which states have the most amount of wind)

REVIEW THE BEUFORT SCALE: Have the students repeat the levels of the scale. Then, review an assortment of five pictures and have them use logical reasoning to think about whether or not that picture is gentle, no breeze, moderate, etc. BE SURE to discuss the connection between weather and the Beufort Scale.

Lesson Middle: Today, we are going to look at a weather instrument that measures wind speed. This is the instrument that meteorologists also use to measure wind speed. It is called an anemometer. Have the students say this/repeat this after you. Explain to the students that you have assembled an anemometer and you are going to demonstrate how it works. (Demonstrate how it works with the different wind speeds on your hair dryer, etc. as a full class. However, I am going to call two people over at a time to explore the anemometer. While these individuals are exploring, the rest of you are going to start coloring your pinwheels for tomorrow's science lesson.

Have the students quietly return back to their seats. Have students get out their crayons and colored pencils (no markers.) Call paper passers to help you pass out the materials.

*During the investigation with pairs of students over on the carpet:*

- Turn on the fan to a low setting. Have the students count how many times the anemometer turns.
- Turn on a fan to a higher setting. Have the students count how many times the anemometer turns.

***Conclusion: Discussion on the carpet (before this occurs have students put away their windmill and colored pencils. Have students take out green science notebooks.***

- What determines how fast the anemometer is going to turn?
- If there were a strong breeze, what would happen? If there were a light breeze what would happen?
- What did you notice about the number of turns when the fan was on a high setting? What about a low setting?

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**Cautions & Notes:**

**Some students will need help with the anemometer. Plan accordingly**

**Make sure that all students understand the basic concepts of the anemometer when exploring. Have them manipulate the speed of the fan, etc.**

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