

FIRST GRADE OCTOBER WEATHER STATION

TOTAL TIME: 60 Minutes (20 minutes per station)

STATION 1: MAKING A WIND VANE

STATION 2: MEASURING THE WEATHER

STATION 3: TORNADO IN A BOTTLE

MATERIALS

Station 1: Making a Wind Vane

- One weather chart per child (to be used in station 1 & 2).
- 1 straw per child.
- 1 pushpin per child.
- 1 index card per child.
- 1 pencil with eraser per child
- Tape (provided by teacher).
- Compass.

Station 2: Measuring the Weather

- A rain gauge (this is outside in the children's garden).
- Barometer.
- Thermometers.
- Weather Station.
- A wind vane.
- Compass.

Station 3: Weather Experiments

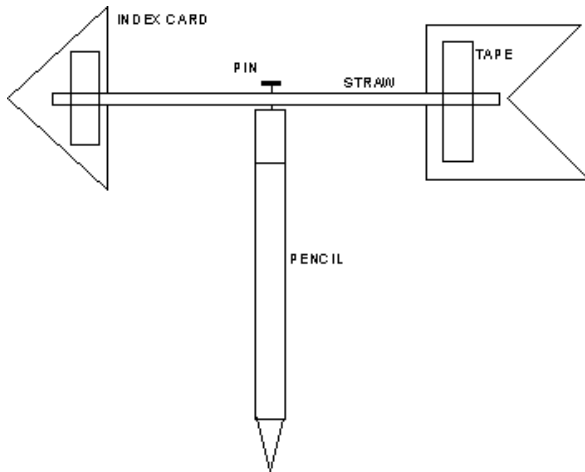
- Glass of water.
- Salt.
- Vinegar.
- A stirring stick.
- Four empty 2-liter bottles.
- 2 Tornado Tubes.
- Food coloring.
- Glitter.
- Liquid soap (provided by teacher).
- The Thunder Tube.

- A pencil (provided by teacher).

Station 1: Making a wind vane

Materials

- One weather chart per child (to be used in station 1 & 2).
- 1 straw per child.
- 1 pushpin per child.
- 1 index card per child.
- 1 new pencil with eraser per child
- Tape (provided by teacher).
- Pencils to record data (provided by teacher).
- Compass.



Introduction

Today we are going to learn about the weather. Can somebody tell me what the weather is today? Does anyone know what we call a person who studies the weather? That person is called a meteorologist. A meteorologist tells us what the weather is like and how it's going to change. Have you ever seen a meteorologist on television?

Today we are going to be meteorologist too. First you are going to make a wind vane so that you can tell people the direction of the wind.

Activity

1. Cut the point and tail of an arrow out of an index card. (You can save time having this pre-cut for the children)
2. Tape the point and the tail of the arrow to the ends of the straw.
3. Push the pin through the middle of the straw.
4. Stick the pin into the eraser of the pencil. Make sure the straw can turn freely.
5. If it is not raining take the children and their wind vanes outside. (If it is raining then the children can record the data on another day with their teachers).
6. When working properly, the wind vane will not spin like a windmill. Instead, the arrow on the wind vane should point in the direction that the wind is coming from. So, ask the children to hold their wind vanes and see where the arrows are pointing.
7. Then use the compass to determine the wind direction. For example, if the arrow is pointing towards the south, then the wind is coming from the south and it is called a "South Wind."
8. Ask the children to record the results on their charts.

Station 2: Measuring Weather and Reading Data

Materials:

- One weather chart for each child (to be used in Station 1 & 2).
- A Rain gauge. (This is outside in the children's garden)
- A Barometer.
- Thermometers.
- Manufactured Weather Station.
- Pencils to record results.

If it is not raining take the children outside. If it is raining, then you can do this activity inside. Place all materials on a table for the children to see.

1. **"Today we are going to learn about the weather. A person who studies the weather is called a meteorologist. A meteorologist tells us what the weather is like and how it's going to change."**
2. **"A meteorologist also tells people how warm or cold it is. Why do you think people like to know this?"**
3. **"How hot or cold it is, is called the temperature. You can measure the temperature with a thermometer."**
4. Give each child a thermometer to measure the outside temperature. Then ask the children to hold the end of the thermometer in the palm of their hands for a couple of minutes and see what happens. **"Did the liquid go up?"**
5. **"The liquid in the thermometer goes up because your hand is making the thermometer warmer. If you look closely at the thermometer you will see two sets of numbers. This is because there are two different ways that you can measure temperature. One is in degrees Celsius which is the metric system used in many different countries around the world. The other is in degrees Fahrenheit which is the system we use in the United States."**
6. Ask the children to record the temperature in both Celsius and in Fahrenheit on their tables
7. **"When predicting the weather, a meteorologist also often talks about the change in pressure. What does this mean? This is how hard the air pushes on us. When the air pressure is high, the air pushes hard and the sky is usually clear. When the air pressure is low, the air does not press so hard and the sky is usually cloudy."**

Station 3: Weather Experiments.

"Today we are learning about the weather. A person who studies the weather is called a meteorologist. A meteorologist tells us what the weather is like and how it's going to change. Today we are going to be meteorologist too."

"We are going to do some experiments to find out more about weather."

Experiment 1: TORNADO IN A GLASS OF WATER



Materials for Experiment 1:

- A glass
- Water
- Salt
- Vinegar
- Salt
- A stirring stick

Activity:

- Fill the glass almost to the top with water. Add about three spoons of white vinegar and a spoon of baking soda. (This makes soda water).
- Begin spinning the water with the stirring stick.
- As it spins, add a teaspoon of salt to the water. Keep spinning, take the spoon out, and observe the movements of a tornado.

Experiment 2: TORNADO IN A BOTTLE

Materials for experiment 2:

- Four Empty 2 Little Bottle
- 2 Tornado Tubes
- Food coloring
- Glitter
- Liquid soap (provided by teacher)

Experiment:

You will create two sets of tornadoes in a bottle and let the kids turn it.

Fill one bottle 2/3 full with water and screw the tornado Tube on this bottle. Then attach the second plastic bottle to the other end of the tornado tube. Now place the connected bottles on a flat surface with the empty bottle down.



Starting Tornado Action:

Grab the end of the full bottle and shake it in a circular motion until a vortex forms. This can be repeated again and again. The directions of the rotation can be either clockwise or counterclockwise.

Create your own special effects: Add food coloring to the water for wild colors. Give some sparkle to your tornado by adding glitter to the water. For real clean fun, add a drop of liquid soap.

Experiment 3: THE THUNDER TUBE

Materials for Thunder Tube:

- The Thunder Tube
- A pencil

Experiment: You will make thunder sounds with the thunder tube. Then you can make wacky sounds for fun.

1. Hold the Thunder Tube around the middle with one hand, spring hanging down.
2. Make the spring dance by shaking the Thunder Tube; shake it using your wrist only, not your entire arm.
3. Do not whip the spring around. It will not improve the sound.
4. Move the palm of your other hand on and off the opening of the Thunder Tube. Try it slow and fast. Listen to the sound quality change.
5. Another effect is to scrape a fingernail along the spring while holding the Thunder Tube still. This will make a scary creaking sound is like a door on an old closet full of family secrets. Try tapping the spring



with a pencil.

