

Weather Changes

Standard 2: Earth and Space Science. Students will gain an understanding of Earth and Space Science through the study of earth materials, celestial movement, and weather.

Objective 3: Compare changes in weather over time.

1. Observe and record that weather changes occur from day-to-day and weather patterns occur from season to season.
2. Communicate ways weather can affect individuals.
3. Describe, predict, and discuss daily weather conditions and how predicting the weather can improve our lives.

Weather Walks

Background Information

Weather develops in the air that surrounds Earth. The condition of the air determines the temperature and whether the day is cloudy or clear, windy or calm. The combination of these conditions determines whether we have rain or snow. Temperature is one of these conditions. Heat from the sun warms Earth's atmosphere and surface waters. Cloudy days may be cooler than sunny days because clouds block some of the sun's warmth. Wind is moving air. Some winds are gentle; others are very strong.

There are different tools to help us observe, measure and track weather. Meteorologists are people who report and forecast the weather.

Invitation to Learn

Teach students the weather song that goes to the tune of BINGO. The words are:

We have weather everyday
Today is sunny weather.
S-U-N-N-Y, S-U-N-N-Y, S-U-N-N-Y
Today it's sunny weather.

Change the words of the song to match the weather—possibilities include: snowy, windy, rainy, foggy, and cloudy.

Tell students that they are going to become weather watchers and weather walkers! Be flexible and ready to include the following activities on an appropriate day.

Materials

For the class:

- Thermometer
- Roll of paper towels
- Ziploc bag
- Two glass jars that are the same size
- Two elastic bands
- Chart paper
- Markers

For each student:

- Paintbrushes
- Bucket of water
- White construction paper
- Corn syrup
- Yellow food coloring
- Scissors

Hot Walk

Experiments with water evaporation

1. Take a thermometer outside with you and determine where the hottest area in the playground is. Experiment with the sidewalk, a shady spot, and the sandbox. Discuss your findings.
2. After studying about shapes, draw shapes on the sidewalk with paint brushes and water. Discuss why the water disappears.
3. Take two paper towels and wet each of them. Ask the class which one will dry first: the one you leave in the shade, or the one you leave in the sun. Take a class vote and chart your predictions and your findings. This is a good time to remind students that scientists are interested in learning, not in wanting to vote like their friends. All ideas are important.
4. Take two paper towels and wet each of them. Place one towel spread out inside. Squeeze the other towel into a small ball. Ask the class which will dry first. Chart predictions and findings. Relate this experiment to towels students might use when swimming. Ask, "Which way will your towel dry fastest; hanging up or in a pile on the floor?" Explain how air dries the towel and how we can use that knowledge to help us.

5. Take two paper towels and wet each of them. Place one in a sealed Ziploc bag and the other on a counter. Follow the procedure used in #4.
6. Fill two jars that are the same size and shape with the same amount of water. Place a rubber band around the jars to show the water level. Put a lid on one jar and leave the other without a lid.

Predictions and Conclusions

Ask the students what they think will happen. Chart their predictions. Check the jars each day for a week. Read the predictions and discuss what happened. The water without the lid evaporated because it is exposed to air. The water in the other jar stayed the same because the air stayed the same.