

Cloud & Weather Patterns

4th Grade

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References:

- Ohio Curriculum guide
- NOAA weather website

Benchmarks:

SLC/GLI #: ES6 and ES7

Objectives:

The object of this lesson is to teach the students how weather patterns generally move from west to east across the United States. In addition, we'll be discussing clouds. Students will learn how clouds are formed, which they should be able to relate to the water cycle. They will also learn that clouds move because of the wind, which we've also talked about. Finally, they will learn the different types of clouds (cumulus, cumulonimbus, cirrus, and stratus) and how to recognize them.

Materials:

- Blue and Green construction paper
- scissors
- glue
- cotton balls
- white or gray rope, cut in 11 inch strips
- white feathers

Initial Demonstration:

Ask students for their own observations and descriptions of what types of clouds they've noticed. Make a list on the board or paper. Then show them PowerPoint slide show of the different cloud types using lots of example pictures that can be found by using Google Image search. Then go back to the observations the students make and see if they can identify relate their observations to the actual cloud type names that you taught them.

Then bring up the national radar on the NOAA weather site <http://www.goes.noaa.gov/GSSLOOPS/ecwv.html> (I used the water vapor maps), to show the students actual movements of clouds. Then use inquiry to determine why clouds move at all, and which direction they generally move across the U.S.

Target Observations:

- There are many different types of clouds and they all have different names. Most students should have observed all the different types before
- Weather patterns move from west to east across the United States. We can track this movement by following clouds
- Clouds move because the wind pushes them.

Procedure:

Students will be making their own cloud pictures using materials that will remind them what type of clouds they are making: cotton balls for cumulus, feathers for cirrus, and lengths of rope for stratus. They should take blue construction paper as their background. Then cut out some type of ground with the green construction paper for the bottom of their picture. Next have them choose whatever type of clouds they want in their picture, and pick out materials for that type of cloud. They will then form their clouds by gluing the materials onto their paper. Finally, on the bottom part of their picture, they should write a sentence about why they chose that certain type of cloud. For example, "I made cumulus clouds because I like staring at them on a nice summer day, looking for cloud animals."

Target Observations:

- Students should have a better understanding of the different cloud types from this exercise, hopefully being able to relate them to what they made them out of.

Target Revised Model:

- There are different types of clouds and we classify them with different names based on what they look like.

Summary:

After this lesson, students should be aware that weather patterns move from west to east across the United States. They should also know that clouds move because they're being pushed by wind. Finally, they should be familiar with the 4 main cloud types (Cirrus, Cumulus, Cumulonimbus, and Stratus) and fog, and tell what kind of weather is loosely associated with each cloud type. In order to better engrain these cloud types, they made their own cloud pictures, using materials that relate to what each cloud type looks like. On these pictures, they wrote a sentence about why they chose that cloud type.