

Title: Calling all Clouds

Subject: Science

Skills: Observing, recording, drawing conclusions

Grade Level: 3-6

Length of Lesson: Initial observations over the course of a week, follow-up lesson 30-60 minutes depending on the number of clouds included in the final project.

Overview: Students will learn about different cloud types and the weather they indicate. Students will then make their own clouds with cotton balls and paper, and observe cloud activity in their area.

Background information: There are three major categories of clouds: cirrus, cumulus and stratus. Those names are then combined with other words to tell you the shape and height of the clouds.

Cirrus-curl-Cirrus clouds are high-altitude, thin wispy clouds. They usually mean fair weather, and no precipitation falls from them.

Cumulus-Cumulus clouds are the big, white puffy clouds you see on fair weather days with lots of blue sky in between them.

Stratus-layer-Stratus clouds are low-altitude and look like horizontal layers.

Alto-high

Nimbus-rain

You can tell what kind of weather is coming by looking at the clouds. Here are some common combinations of clouds, and the weather they bring:



cirrus-thin and wispy-fair weather



altocumulus-rows of puffy white bubbles-cold weather (storm in the summer)



Nimbostratus-dark and low hanging that cover the whole sky-moderate precipitation



Cumulus-large cottony clouds-fair weather



Cumulonimbus-tall and wide-thunderstorms

Materials: per student

Light blue construction paper (large)

Glue

Gray markers

Cotton balls (synthetic)

Pencil

Teaching the Lesson:

1. If possible, take students outside with their science journals, and have them sketch what they see in the sky. They can bring crayons outside as well, to make their pictures more accurate.
2. Discuss the current weather and what the clouds look like.
3. Make a three column class chart-leaving the first column blank. Record the words the students use to describe the clouds they saw, in the second column, and the corresponding weather in the third. If possible, do this on each day that the clouds have changed. Some observations may need to be made from the classroom through a window.
4. Ultimately, students should have a description of all the clouds listed in the background information section. If this doesn't naturally occur in a timely manner, you can show them pictures of any clouds that they have not been able to observe, and allow them to come up with adjectives to describe what they see. You will need to provide the description of the corresponding weather.
5. As a class, complete the cloud chart by filling in the first column with the correct names of all the clouds. This information is also in the background information section.
6. Provide students with light blue construction paper, cotton and glue. They should fold the paper in half, lengthwise, to make it look like a hot dog roll, and place it in front of them horizontally. Next fold the paper into thirds. Once the entire paper is unfolded, there should be six equal sections.
7. In the first section, students will write their names, and "Cloud Characteristics"
8. In the remaining sections, students should use the cotton to create three dimensional models of each of the five cloud types. Encourage students to pull apart the cotton pieces to create the correct look for each cloud. Gray clouds can be made by lightly brushing the marker back and forth over the cotton once it has been glued down.
9. Students should correctly label each cloud, and write the weather that it produces.
10. This lesson can be adjusted for lower grades by not doing as many clouds, by completing the project as a group, or by making the cloud pictures available for students to copy.

Evaluation:

Students' understanding of concepts can be evaluated by examining the cloud models, or by having them complete a blank cloud chart.