

Naming the Clouds

4th Grade

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1. References:

- “Water Affects the Weather” lesson plan from 4th grade curriculum guide
- “The Wow’s and Why’s of Weather” Scholastic Professional Books

2. Benchmarks:

ES-7 (Benchmark D): Describe the weather which accompanies cumulus, cumulonimbus, cirrus, and stratus clouds.

3. Objectives:

Understand that water condenses into clouds, which can then give a good indication of the current weather and help meteorologists predict future weather. Learn how to properly identify the different types of clouds using the same system devised over 200 years ago.

4. Materials:

- Large teacher’s book of clouds
- Cloud Key handout (3 pages)
- Brass paper fastener
- Scissors

5. Initial Demonstration:

First, tell the students that meteorologists say that a cloud the size of a school bus weighs about 2 tons. Follow up with this by explaining the size of a bus and how much a ton is in comparison to a large number of the students. Then using the large picture book about clouds, read the book to the class and make sure to point out the different types of clouds and what they can predict. Once the reading is complete, ask several students to explain what each cloud looks like and what type of weather usually occurs with them. This should be done with the large book closed so that the students have to pay attention.

6. Procedure:

Begin by asking all students to have their weather journals out on their desks on **Page 15**. Say the cloud types aloud and have the students respond several times in order to understand the correct pronunciation. Review the meaning of the cloud types to ensure their understanding.

Place students into small groups and give each student a copy of the handout entitled “Cloud Key”, taken from the Scholastic Book Club. Each student should also receive a pair of scissors and one brass paper fastener. Show students how to make the Cloud Key by cutting out both circles on pages 45 and 46, cutting out and discarding the two shaded areas on page 45, and fastening the wheels together. Page 45 goes on top. Show students how to use the key. Move the wheel until the cloud you want appears, then read the name and weather information in the box. Have students make a chart with these five headings in their science journals so they can log the cloud types over the next couple of days: “Date/Time,” “Cloud Type,” “P.M. Weather,” and “Predicted Evening Weather.” Make an overhead prior to class that demonstrates what their table should look like and how it should be filled in. Invite students to fill in the chart every science class for a week. The students should only need to look out the window to determine the cloud types. Again, emphasize that the students are making observations and recording those observations. They are also being scientists by making predictions about the weather based on the cloud types in the afternoon.

7. Target Model:

- Clouds can be used to predict the weather because each cloud type represents a certain weather patterns seen across the United States.

8. Summary:

Students have seen that water on Earth is recycled through a cycle that begins with the energy from the sun. Students conducted a scientific experiment, made observations, and recorded their observations about the formation of hail. They also identified the other forms of precipitation that continue the water cycle. Lastly, students were engaging as scientists to predict an area’s weather based on the size and shape of clouds.