



*Revised 4/16/20
Neal Smith National Wildlife Refuge*

Curious About Clouds

1st Grade

60 Minutes

Fall

Summary

Students will make observations about the weather and sky, listen to a story about weather and discuss it. Students will go outside and create models of clouds with cotton. Then the students will use a rhythmic beat to turn their cotton balls into “rain clouds” and learn the Rain Cloud song that feeds the prairie plants.

Next Generation Science and Iowa Core Standards

Next Generation Science

- **1-ESS1-1**
 - Use observations of the sun, moon, and stars to describe patterns that can be predicted.

Literacy

Reading and Literature

- **RL.1.1**
 - Ask and answer questions about key details in a text.
- **RL.1.2**
 - Retell stories, including key details, and demonstrate understanding of their central message or lesson.

Writing

- **W.1.8**
 - With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.



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Speaking and Listening

- **SL.1.1**
 - Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.
- **SL.1.4**
 - Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.
- **SL.1.6**
 - Produce complete sentences when appropriate to task and situation.

Materials and Resources

- *The Dust Under Mrs. Merriweather's Bed* by Susan Grohmann
- White board
- Dry erase markers
- Cotton balls or a 1x1 ft cotton sheet cut into small pieces
- Glue
- Blank paper or nature journals
- Pencils
- Blue crayons

Presentation

Have all the students sit in a close group on the ground cross-legged. Sit directly in front of the group on the ground, if comfortable. Reintroduce yourself to the students. Ask them if they noticed the weather and clouds when they were riding to the refuge today.

- How many clouds were there?
- How would they describe the shape of the clouds they saw?
- How large were the clouds?
- How much of the sky did they take up?
- What color were they?
- What did the clouds remind you of?

Tell the students that even though they have not yet studied weather in school, they are probably already weather experts.



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Directions

1. Write “Weather words” on the white board and ask students to share what weather words they know. Guide students toward words regarding temperature, precipitation, wind, seasons, weather events...
2. Tell the students you’ll be reading them a story called *The Dust Under Mrs. Merriweather’s Bed*. This book is about a young naturalist named Kenny who loves to watch the weather. Tell the students to pay attention to what Kenny observes while you read. Read each page slowly, taking care to show all students the pictures. Encourage comments after each page (e.g. “Are clouds really giant dust bunnies?” “What do you think Mrs. Merriweather’s lamp looks like to Kenny?”) When you arrive at the pages about the seasons, you could stop reading verbatim and merely ask the students,
 - a. What’s the weather like in the picture?
 - b. What season do you think it might be?
 - c. What did you experience during that season?
 - d. What season comes next?
3. When you are finished reading, ask students what Kenny spent most of his time observing. (The sky!) Tell them that in fact, if we keep our eyes on the sky, we can usually tell a lot about what the weather is going to do.
4. Tell the students that in just a few minutes we will be going outside to observe the weather. But good naturalists always record their observations so they can share them with other people, so first we must get our nature journals ready to make observations.
5. Have students draw a line horizontally across their paper and leave the top half to make a picture of a cloud. Split the bottom half in two with a vertical line. Label the left side “Weather words” and the right side “Cloud words.” Tell students they need to write at least 3 words in each box to describe the weather and the clouds that they see. Show the students a finished journal entry as a model.
6. Divide students into small groups, with an adult chaperone to work with



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- each group. Tell the students that when they go outside, they need to stay with their group and their adult will help them write weather and cloud words.
7. Give each chaperone enough blue crayons, cotton balls and glue for each student and tell the students that once they finish writing the words, they will be able to create a cloud picture with a crayon and a cotton ball. Reiterate the rules and expectations for behavior outdoors. Remind them how naturalists behave (quiet, respectful, full of wonder).
 8. Have the children sit cross-legged in their groups. Ask them to look around at the sky. Are there any clouds out today? They may even lie down for a minute so they can focus on the weather and the clouds above. When they are done observing they should work with their groups to write 3 weather words and 3 cloud words.
 9. Depending on the weather, have the students carefully search for their favorite cloud. Once they have selected a cloud, ask them to shape their cotton ball into that cloud's shape. (If there is total cloud cover, have everyone shape their cotton into the cloud cover's shape – i.e. flat. If there are no clouds, ask the students why that may be and have them form the cotton into their favorite cloud shape). Chaperones should help the students glue the cotton ball clouds into their journals.
 10. Ask students how prairie plants and animals might be affected by clouds and the weather. For example, what might happen to prairie plants and animals if it rains a lot? What might happen to plants and animals if it doesn't rain for a long time? What would happen to prairie plants if clouds always blocked the sun? How do different seasons affect prairie plants and animals? This should be an open discussion and a basic introduction of what organisms need to survive.
 11. Sing the rain song, "I'm a Little Rain Cloud"¹ to bring rain to the prairie plants. Then dance in a snaking line through the prairie, using our little rain clouds to feed the prairie plants while singing to them. Sing the song twice; lead the winding, singing, rain-bearing procession through the prairie. Sing in rounds if kids are into it.



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Resources

Journal Prompt

Call the students back into a large group (either inside or outside, depending on the weather). Have students share their weather words, cloud words, and cloud pictures. Discuss what the current weather, sky, cloud patterns, etc. might tell us about the weather later today. Are there any dark clouds on the horizon? Is there any wind? Is there complete cloud cover, suggesting rain or snow might be imminent? Is it a sunny, cloudless, windless day? What do these clues tell us about future weather?

Date Location Time	
<u>Watching Weather</u> Cloud Picture 	
Weather Words -windy -warm -sunny	Cloud Words -puffy -white - round

I'm a little Raincloud song (sung to tune of "I'm a little teapot")

- **I'm a little raincloud, blue not red**
 - Place your hands near your side, like the billowy nature of a cloud
- **All the rain is stored in my head**
 - Point to your head



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- **When I get too full I start to shed**
 - Move your fingers around quickly; slowly move your hands from your head to the ground
- **All the prairie plants, they will get fed!**
 - One hand at a time, make a grabbing motion and pretend to eat

Cloud Examples

