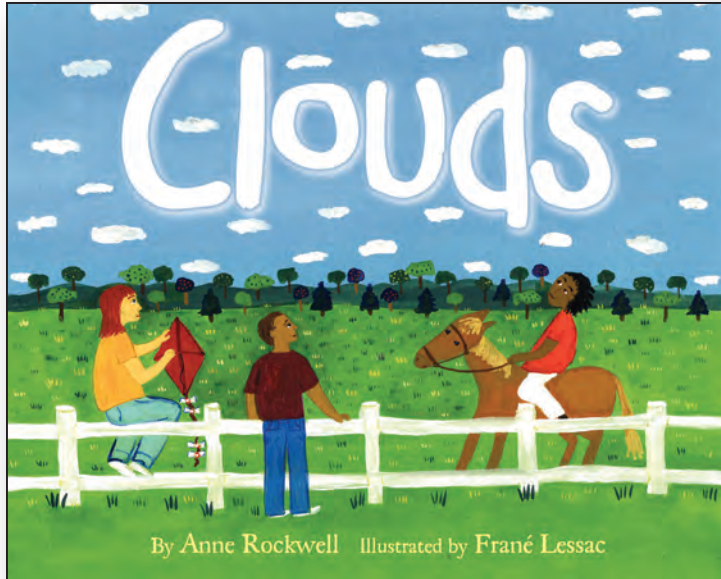


Curriculum Guide

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Clouds Anne Rockwell

Illustrated by
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CLOUDS ARE MOTHER NATURE'S WEATHERMAN. They tell us what's in store for the day or night ahead. Cumulonimbus? Rain or storms approaching! Cumulus? Plan for a bright, sunny day! At any given time, more than half the Earth is covered with different types of clouds. They protect us from the sun's harmful rays and act like a blanket at night to keep the Earth warm. And most importantly, they bring the rain all plants and animals need to survive.


Young children will learn all there is to know about clouds, including the nine basic cloud types, in Anne Rockwell's charming picture book on this fascinating subject. Part of the Let's-Read-and-Find-Out Science series, *Clouds* introduces the science of weather to students in a fun and engaging way.


BEFORE READING


 Have a general discussion about the weather. Has it been sunny over the past few days? Rainy? Snowy? How does the weather affect our daily lives?

AFTER READING

 Look through magazines for photos that include clouds. Clip the magazine pictures of clouds and post them on the classroom wall in a "Cloud Gallery." As a class, identify the type of clouds in each photo in the Cloud Gallery and label each photo with the correct cloud name.


 Keep track of the temperature outside of the classroom three times over the course of the school day for one week. Have each child record the temperature and draw a sketch of the type of clouds they observe in the sky each time on his/her own Cloud Data Record (guide page 3; two copies per student). Fill in the type of cloud (stratus, cumulus, etc.) as well. After one week of data collection, discuss any patterns your class might see between the temperature and the types of clouds.


 Become cloud pen pals with another classroom. Contact another classroom in another part of your state or even in another state. Ask them to collect cloud and temperature data, recording their information using the Cloud Data Record sheet (guide page 3). Compare the relationship between the clouds and temperatures you recorded with the data from your pen pal class. Share photographs of your local clouds as well.


 Be a cloud observer. On a day when the weather allows, take paper and pencil and head outside with your class. Look up in the sky and make notes about the clouds above you. What color are they? Does the shape remind you of anything else? What do you imagine the clouds would feel like? Use your notes to help write a cloud simile poem when you get back into the classroom. Compare the clouds you observed to other things using the words “like” and “as.” Example:

Cumulus clouds feel like fluffy cotton balls.
They are as white as freshly fallen snow.
One cloud looks like an oak tree.
Its trunk is as thick as an elephant’s leg.

Illustrate the cloud/s in your poem using chalk on construction paper, or by reworking cotton balls and gluing them on to paper.

 Clouds are clues to what the weather is and how it may change. Each type of cloud is connected to a specific kind of weather. Complete The Cloud-Weather Connection worksheet (guide page 4) to show which clouds are connected to which types of weather.

 You have probably heard the expression “not a cloud in the sky.” If there were no clouds, there would be no weather! We need clouds to bring the water we require through rain and snow. Fill your classroom with handmade clouds full of weather. First, have each student choose if he/she would like to make a “snow cloud” (cirrostratus) or a “rain cloud” (stratus, altostratus, or cirrostratus). Fold a large sheet of white construction paper in half and draw the outline of your selected cloud. Cut through both thicknesses of paper following the outline to create two matching clouds. Stuff one sheet of crumpled newspaper between the two clouds to make a full cloud. Staple the cloud together on the sides. Use a light shade of grey paint to add color to parts of your cloud. Use white paper to cut out small snowflakes or grey paper to cut out raindrops. Connect the snowflakes/ raindrops to the bottom of your cloud with string. (A good website for step-by-step instructions on making paper snowflakes is www.craftideas.info/html/making_snowflakes.html.) Use a hole punch to create a hole at the top of the cloud and use string to hang the weather-filled clouds from the classroom ceiling.

 Clouds are a vital part of the water cycle. Explore the water cycle and the role clouds play with the Clouds and the Water Cycle worksheet (guide page 5).

Anne Rockwell is the author of hundreds of books for children, including additional titles in the Let’s-Read-and-Find-Out Science series: *What’s So Bad About Gasoline?: Fossil Fuels and What They Do*; *Why Are the Ice Caps Melting?: The Dangers of Global Warming*; and *Bugs Are Insects*. She lives in Greenwich, Connecticut. Visit her website at www.annerockwell.com.

Frané Lessac has illustrated numerous children’s books, including *New York, New York!; Capital!;* and *On the Same Day in March*. She has traveled all over the world and now lives in Fremantle, Australia. Visit her website at www.franelessac.com.

This curriculum guide was created by Leigh Courtney, Ph.D. She teaches first and second grade in the Global Education program at a public elementary school in San Diego, California. She holds both master’s and doctoral degrees in education, with an emphasis on curriculum and instruction.

Location _____

Name _____

CLOUD DATA RECORD

Date/Time	Temperature	Sketch of Clouds	Type of Cloud

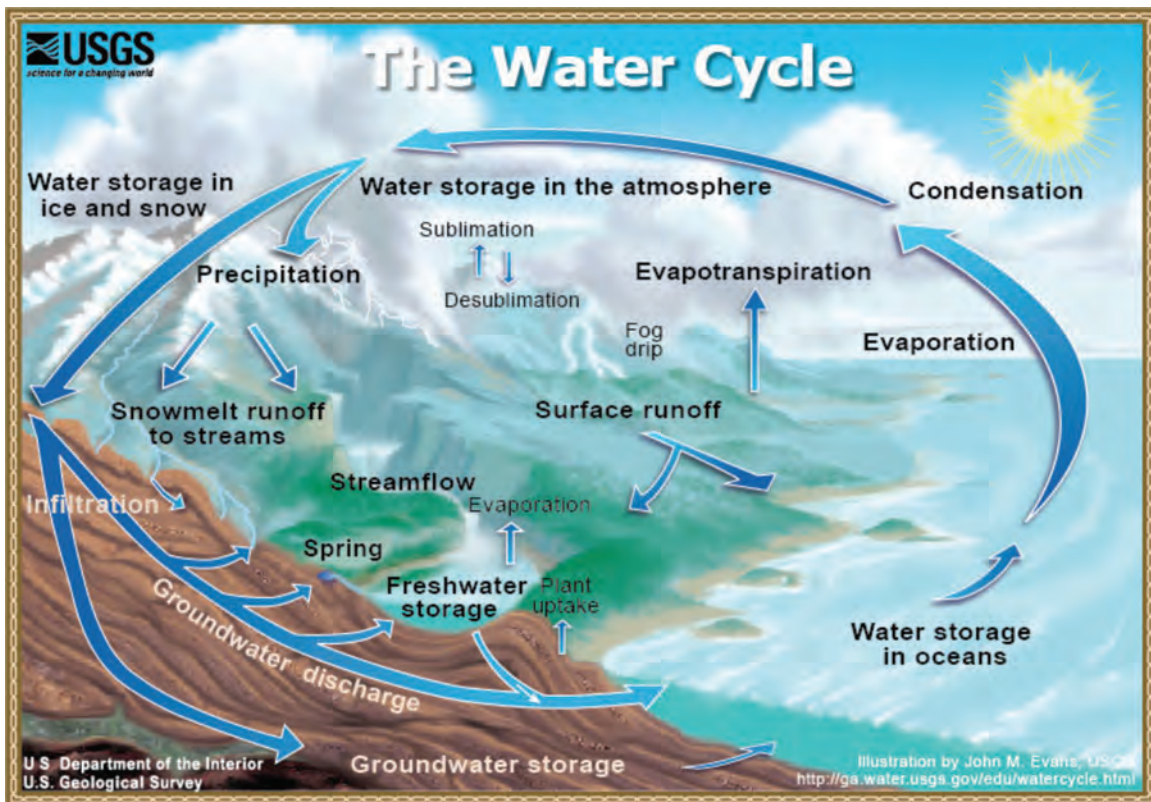
THE CLOUD-WEATHER CONNECTION

Each type of cloud tells what type of weather it will bring. Draw lines to connect the different kinds of clouds to the weather each brings.

- | | |
|------------------|----------------------------------|
| a. CIRRUS | 1. May mean it is getting colder |
| b. CIRROCUMULUS | 2. Sunny day |
| c. STRATUS | 3. Bright, sunny weather |
| d. ALTOCUMULUS | 4. It could rain that night |
| e. CUMULUS | 5. May rain or snow |
| f. STRATOCUMULUS | 6. Rain, but not much |
| g. CIRROSTRATUS | 7. Hail, thunderstorms |
| h. CUMULONIMBUS | 8. Gray, but no rain |
| i. ALTOSTRATUS | 9. Probable thunderstorm |

Answer Key: a. 2; b. 1; c. 6; d. 9; e. 3; f. 8; g. 5; h. 7; i. 4

CLOUDS AND THE WATER CYCLE



WORDS TO KNOW

- **EVAPORATION:** the process of liquid turning into water vapor (a gas)
- **CONDENSATION:** the process of water vapor turning into liquid water
- **PRECIPITATION:** rain, snow, or sleet that falls from the sky to the ground

Study the diagram of the water cycle. What is the role of clouds in the water cycle? Why are clouds important?
