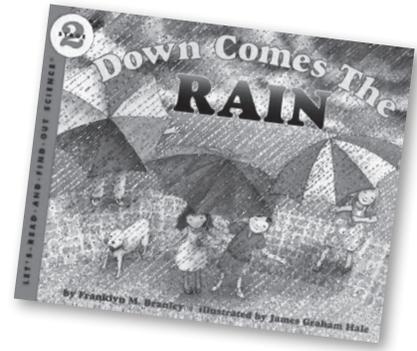


Down Comes the Rain

Written by: Franklyn M. Branley
Illustrated by: James Graham Hale
Published by: HarperCollins, 1997
Pages: 32
Lexile Score: 560L
ISBN: 0-06-445166-6



Major Topics:

Weather, Water Cycle, Rain, Snow, Hail

Generalization

Students will learn that all living things depend on rain and water.

Summary

This book explains how the water cycle works. It shows how water evaporates into droplets smaller than a speck to form clouds. Water vapor comes from water all across the earth and even comes from living things such as plants, animals, and people. The water in the clouds condenses to form water drops that can fall to earth as rain, snow, or hail. This cycle continues as water evaporates, forms clouds, condenses, and falls back to earth.

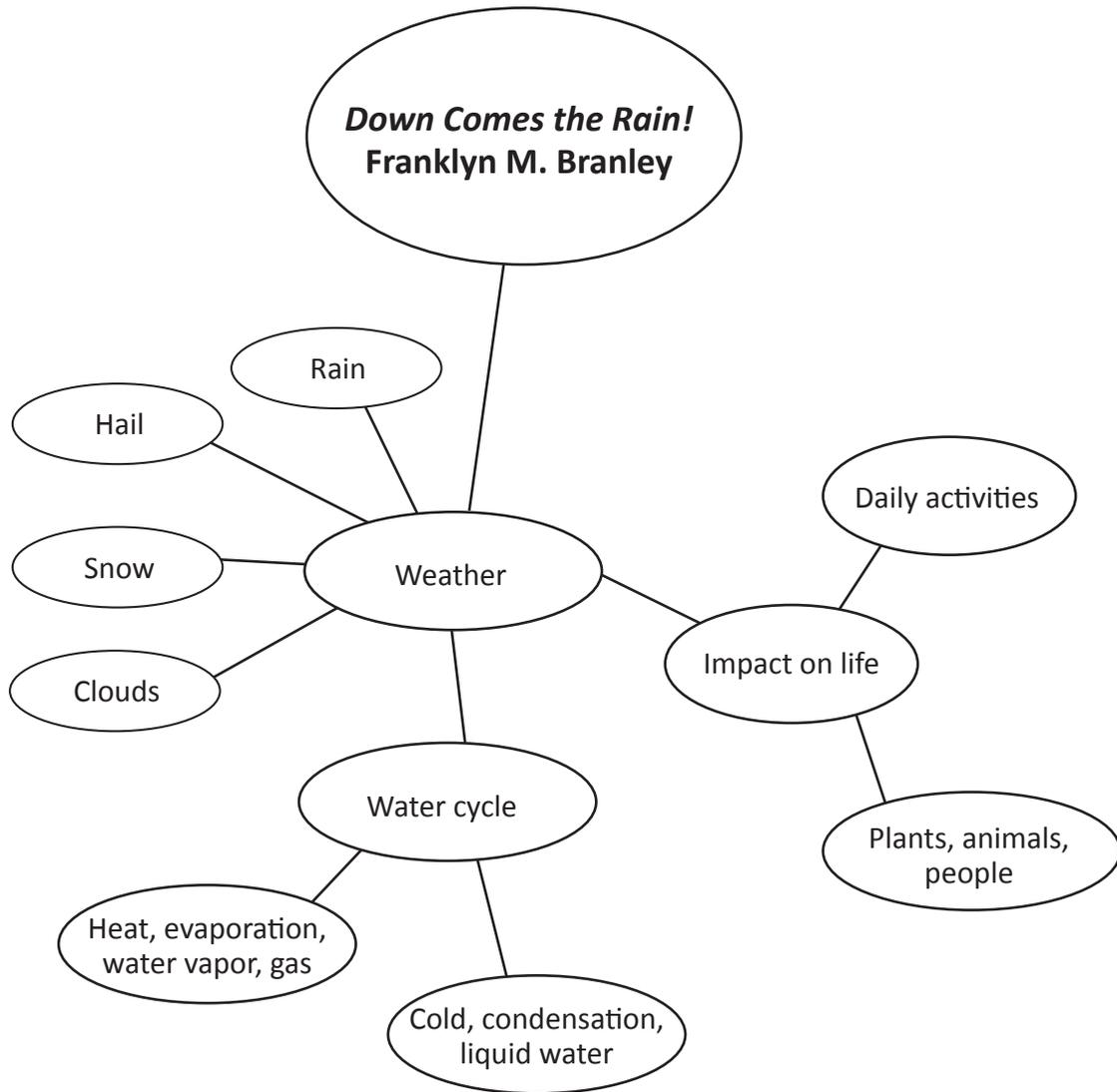
Science & Literature Connections Book Correlation

Come on, Rain!

Written by: Karen Hesse



Concept Map



Thinking Questions Based on Bloom’s Taxonomy

1. Knowledge/Remember:

How big is a water droplet? Where do the water droplets that form clouds come from? What is evaporation? What is condensation? What colors can rain clouds be? Which cloud has more water vapor—the white cloud or the dark gray or black cloud? What is precipitation?

2. Comprehension/Understand:

Describe what happens to the water to form a cloud (heat, then evaporation). Explain what happens to make the raindrops form (cold, then condensation). Sometimes the water droplets freeze before they fall to earth as precipitation. What happens to make hail?

3. Application/Apply:

If you look out the window and see dark gray clouds, what should you wear to school? What might you plan to do that day? What are the pros and cons of a rainy day?

4. Analysis/Analyze:

How can we know water evaporates? What experiment shows us how water vapor becomes liquid again? How do hot and cold air interact with the water to make water vapor and liquid water? Each part of the water cycle is important. Describe how each helps to make the rain form and fall. (Water is heated and then evaporates to form water droplets that become clouds. Water cools and condenses to form water droplets that are too heavy for the clouds to hold. These drops fall to the earth as precipitation. Then the process begins again.)

5. Synthesis/Create:

What would you do on the perfect rainy day? How would you spend your time? How are rainy days a part of the earth’s systems for supporting life?

6. Evaluation/Evaluate:

Some people do not like rainy days. How would you explain to them that rainy days are really important? What would you tell people about why we need rainy days?



Follow-Up Activities:

- Draw a diagram or picture showing the water cycle (evaporation, cloud formation, condensation, precipitation). Label the parts of your picture.
- Using a rain gauge, collect and chart the amounts of rainfall over a three-week period. Identify the pattern of rainfall in your area (e.g., time of day, amount per



storm, amount per day or week). Summarize your findings and discuss the things you think influence or explain these patterns (e.g., the season of the year, your location, the overall climate).

- Read another book about the weather, the water cycle, or rain and compare the two books. What did you learn from each? What things were the same in both books? Were there different ideas in the books? Which book did you like the most, and why did you like it best?
- Survey people in your school, family, or neighborhood to see what kind of weather they like best. Collect and analyze your data to answer questions like: Do most people like sunny or rainy days? Do people like hot or cold days best? Write a summary of your findings.
- Design an experiment to test the role of temperature (hot and cold) in the evaporation and condensation process. How does heat affect evaporation rates? How cold does it have to be for water vapor to condense? What things besides temperature might affect the rate of evaporation and condensation (e.g., humidity, which is the amount of water already in the air)? Can you control for any of these variables? That is, can you make sure that the main component you are testing—the impact of humidity on evaporation rates—is the only variable that changes? The glass holding the water, the amount of water, its temperature, and the air’s temperature all stay the same; only the daily humidity changes. This is how scientists look at the specific impact of only one variable while they “control” the other variables that might influence the outcome of the experiment!
- Research the impact of climate change on rainfall. What will happen to rainfall if the planet becomes warmer? How will this affect life on earth? What recommendations can you make based on what you learned to keep the planet and its life forms safe.

Next Generation Science Standards

- K-PS3-1: Make observations to determine the effect of sunlight on an area.
- K-ESS2-1: Use and share observations of local weather conditions to describe patterns over time.
- K-ESS2-2: Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
- 3-ESS2-1: Represent data in table and graphical displays to describe typical weather conditions expected during a particular season.
- 3-ESS2-2: Obtain and combine information to describe climates in different regions of the world.

- 3-ESS3-1: Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

Common Core State Standards

English Language Arts:

- RI.K.1: With prompting and support, ask and answer questions about key details in a text.
- W.K.1: Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., My favorite book is...).
- W.K.2: Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.
- SL.K.3: Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- SL.K.5: Add drawings or other visual displays to descriptions as desired to provide additional detail.
- RI.3.1: Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as a basis for the answers.
- RI.3.9: Compare and contrast the most important points and key details presented in two texts on the same topic.
- W.3.1: Write opinion pieces on topics or texts, supporting a point of view with reasons.
- W.3.7: Conduct short research projects that build knowledge about a topic.
- W.3.8: Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

Mathematics:

- MP.2: Reason abstractly and quantitatively.
- MP.4: Model with mathematics.
- MP.5: Use appropriate tools strategically.