Snow

Written by: Ann Herriges
Published by: Scholastic, 2011
Pages: 24
Lexile Score: 470L

Major Topics:
Snow

Generalization
Students learn what makes snow happen and what different types of snow look like.

Summary
Snow is made of ice crystals that form in clouds before falling to the earth. Snow crystals have six sides and come in many different forms. The temperature has to be freezing (32 degrees Fahrenheit or below) for snow to stick to the ground. Different weather factors determine whether or not snow will be wet or powdery, or whether there will be a blizzard or flurries. Snow will stay on the ground until the weather warms enough to melt it away.

Science & Literature Connections Book Correlation
Snowballs
Written by: Lois Ehlert

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Concept Map

- Flurries versus blizzards
- Snow drifts
- Snow flakes
- Snow crystals
- Branches

Snow
Ann Herriges
Thinking Questions Based on Bloom’s Taxonomy

1. Knowledge/Remember:
   What is snow made out of? What is a snowdrift? How many sides does a snow crystal have?

2. Comprehension/Understand:
   How does snow become wet and heavy? How do snow crystals become snowflakes? How does a snowdrift form?

3. Application/Apply:
   What kind of snow would you want to use to make a snowman—powdery or wet? Which kind of snow would you rather shovel from the sidewalk?

4. Analysis/Analyze:
   Why do we consider blizzards dangerous? What problems might arise from a huge snowfall? What about melting snow?

5. Synthesis/Create:
   What would be a good outfit to wear in the snow? What qualities would you want the fabric to have? What activities would you want to do in the snow?

6. Evaluation/Evaluate:
   Do you enjoy snowstorms? Why or why not? What would you tell someone whose feelings about snow differed from yours?

Follow-Up Activities

• Research the snowfall averages in your area for the past 20 years. (Research a different state if it doesn’t snow where you live.) Make a chart that shows how the snowfall averages have changed over time. Make a guess about why you think the change has occurred, and write out your explanation.

• Does the shape of a snowflake’s branches affect how the flakes stick to one another? Design an experiment to answer that question. Think of materials you could use to make snowflakes. Carry out your experiment and write up your results.

• Write a poem describing your perfect snowy day. Be sure to describe what the snow looks like and how it feels.

• How much water is in snow? Use ice shavings to figure out a way to measure how much water snow produces. Would 1 inch of snow melt into 1 inch of water? Chart your measurements.
• Read about the environmental hazards of blizzards. How is transportation affected? How is electricity affected? Write a plan for your school outlining how to prepare for a blizzard.

• How does the snow cycle differ from the rain cycle? Read more about both; then draw a diagram comparing them with one another.

**Next Generation Science Standards**

K-ESS2-1: Use and share observations of local weather conditions to describe patterns over time.

K-ESS3-2: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

3-ESS2-1: Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

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.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.

**Mathematics:**

MP.2: Reason abstractly and quantitatively.

MP.4: Model with mathematics.

K.CC: Counting and cardinality.