

Snow and Ice - 2hrs

How much water is in snow? How does snow act as an insulator? How thick is river ice? Are there common patterns in snowflakes? Students hypothesize the answers to these and other questions related to snow and ice, then divide into field groups to discover the answers through experiments and direct observation of the Center's winter environment.

Before you go

Inform students that they will be visiting Carpenter Nature Center to learn about the different properties of snow and why it is important to study. Remind students that a majority of time will be spent outside and that they should dress appropriately.

While you are here

After the introduction the group will split up into smaller groups to do a series of experiments.

- 0:00-0:30 Introduction—What is snow and what are some unique properties of it as well as talking about the experiments we will be doing and creating hypotheses
- 0:30-1:45 Small group time—Insulation experiment, critter experiment, ice and water, snowflake investigation, and snow depths and winter temps
- 1:45-2:00 Conclusion—How did our results compare to our hypotheses?

After you leave

Have students create their own snowflakes to decorate the room.

Minnesota Standards

Carpenter Nature Center supplements standards by participating in benchmark activities. Listed below are benchmarks that students will participate in but not necessarily master.

Second Grade:

Code	Benchmark
2.1.1.2.1	Raise questions about the natural world and seek answers by making careful observations, noting what happens when you interact with an object and sharing the answers with others
2.1.2.2.2	Describe why some materials are better than others for making a particular object and how materials that are better in some ways may be worse in other ways
2.2.1.2.1	Observe, record, and recognize that water can be a solid or a liquid and can change from one state to another
2.3.2.2.1	Measure, record, and describe weather conditions using common tools

Third Grade:

Code	Benchmark
3.1.1.1.1	Provide evidence to support claims other than saying “everyone knows that” or “I just know”, and questions such reasons when given by others
3.1.1.2.2	Recognize that when a science investigation is done the way it was done before, even in a different place, a similar result is expected
3.1.1.2.3	Maintain a record of observations, procedures, and explanations, being careful to distinguish between actual observations and ideas about what was observed
3.1.1.2.4	Construct reasonable explanations based on evidence collected from observation or experiments
3.1.3.4.1	Use tools, including rulers, thermometers, magnifiers , and simple balances to improve observations and keep a record



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