

I WONDER Wednesday! Winter Weather

Standards/ Cross Cutting Concept:

Practices:

- Asking questions (for science) and defining problems (for engineering)
- Developing and using models.
- Planning and carrying out investigations

Crosscutting concepts:

- Systems and System Models: A system is an organized group of related objects or components; models can be used for understanding and predicting the behavior of systems.
- Structure and Function The shape and stability of structures of natural and designed objects are related to their function(s)

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.

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.

Activity Ideas

Track the weather on [Weather Bug](#). You can find your location and/or other locations by typing in the search menu. Compare and contrast weather from around the area!

Where do you see winter weather happening?

Track winter storms on [The Weather Storm Tracker](#)

Learn more about weather by [clicking here](#)

Create and design a way to help reduce the impacts of weather-related hazards. This could be a model, diorama, sketch, video...

Did you know that every snowflake has six sides and each is uniquely different?

Create a model of a snowflake by creating your own!

[Click here for paper model ideas](#)

[Click here to learn about making your own borax crystal snowflake:](#)

Learn more about the different types of snow by [clicking here for more information.](#)

IF IT IS COLD OUTSIDE!

Next time it is below freezing outside:

Bubble experiments are always fun, but frozen bubbles add a whole new dimension of beauty. Take your class outside to blow bubbles when the temps are below freezing and watch the magic happen! (No freezing temperatures where you live? The link below offers tips for trying this with dry ice.)

If it is snowing:

If you want to capture snowflakes of your own to observe, you need the following:

- a cold, winter day
- a black piece of foam board or paper
- a magnifying glass

Place the black paper or foam board outside, but out of the snow, for 15 – 20 minutes, or until snowflakes can land on it and not melt immediately. When the paper is cold enough place the paper on a level surface or hold it carefully where snowflakes can fall on it. Observe the collected snowflakes with the magnifying glass quickly before they disappear.

Connected text:

[PebbleGo: Cold Weather](#)

[PebbleGo: Forecasting Weather](#)

Check out these books at the local library or see if your school has them:

- **Snowflake Bentley** – Great kids book about Wilson “Snowflake” Bentley, a pioneer in the study of snowflakes. We read this every winter.
- **Snow Crystals** – An amazing collection of actual snowflake photographs by Wilson Bentley.
- **The Secret Life of a Snowflake: An Up-Close Look at the Art and Science of Snowflakes** – Dr. Kenneth Libbrecht is a professor of physics at Cal Tech studies snowflakes. He wrote this book to share fascinating snowflake facts, photos and projects with elementary age students.

Resources from: <https://thehomeschoolscientist.com>