Online Seasonal Activities for Families

Starved Rock Saplings

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Winter Edition

Thank you for your interest in Starved Rock State Park. The following Starved Rock Sapling seasonal program is to help engage children and families in nature; at home, in their neighborhood, or at Starved Rock and Matthiessen State Parks.

Each packet will be posted to the Starved Rock and Matthiessen State Park Facebook page every October, January, April, and July. Packets can also be downloaded from the IDNR website at:

dnr.illinois.gov/parks/park.starvedrock.html

Packets will include the following:

DISCOVER:

fun facts and information about the natural world.

CONNECT:

nature activities, storybook suggestions, games, and crafts .

EXPLORE:

ideas for getting outdoors and exploring the natural world in your backyard, neighborhood, or community parks.

Starved Rock and Matthiessen State Parks

dnr.illinois.gov

StarvedRockandMatthiessenState Parks

By Will Clark, Conservation Education Representative

What is Snow and Where Does it Come From?

Snow is **PRECIPITATION,** which means it's a form of water that falls from the sky. Unlike rain, snow is in the form of ice crystals, formed when water vapor in the atmosphere freezes. To make snow, there needs to be moisture and temperatures at or below freezing (0°C or 32°F).

Snow is made out of individual **SNOWFLAKES**, each with 6 sides. Why? Because that's how water molecules organize themselves when they freeze. Ice has a hexagonal (6-sided shape) lattice structure. When water freezes, the molecules connect together to form a hexagon. As more molecules are added, they form branches on each of the six sides, creating the crystalline snowflake structure we recognize.

This structure is more apparent in a snowflake than, say, an ice cube, because snowflakes form gradually from freezing water vapor and are open all around, as opposed to the freezing of liquid water to make ice, which is confined to the shape of the container it's in.

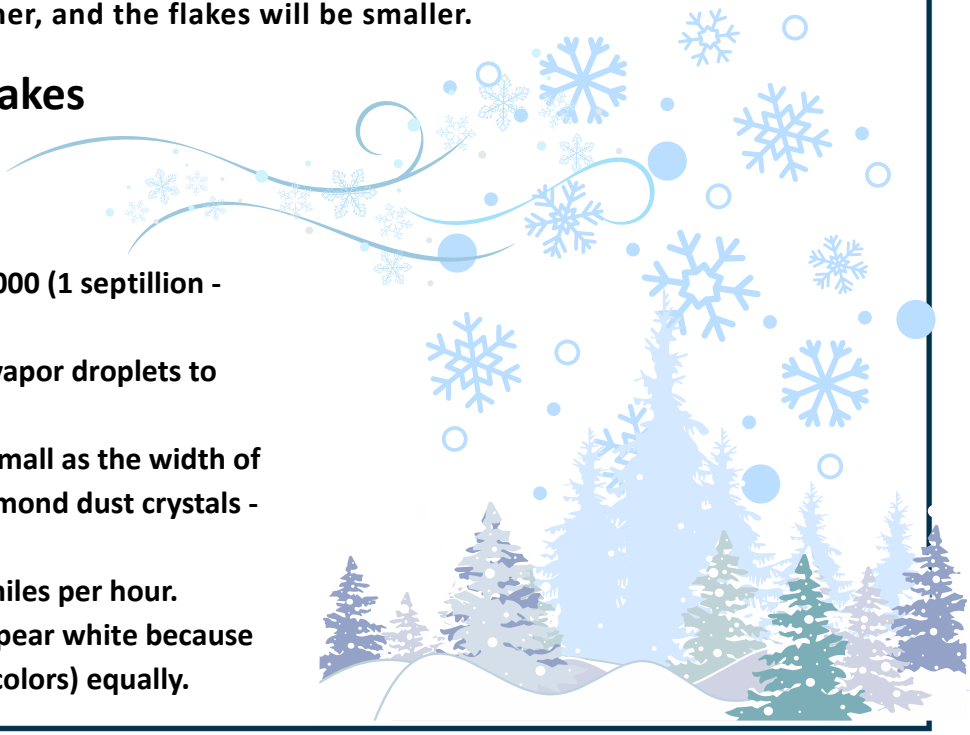
Types of Snow

There are two main types of snow. **WET SNOW** is a very moist and dense snow that forms when cloud temperatures are right around freezing. Flakes collide and stick together, so you'll have a main snowflake in the middle and other crystals attaching themselves to it, making the whole flake bigger. Wet snow gives you gorgeous, huge white flakes.

DRY SNOW, or also called powder, has less moisture for the crystal to grow. A powdery snow will be less likely to clump together, and the flakes will be smaller.

Cool Facts About Snowflakes

- No two snowflakes are alike!
- All snowflakes have 6 sides.
- Every winter in the U.S., 1,000,000,000,000,000,000,000,000 (1 septillion - that's 24 zeros!) snowflakes fall.
- It can take up to 100,000 water vapor droplets to make each snowflake.
- The smallest snowflakes are as small as the width of a human hair, and are called diamond dust crystals - they appear when it's very cold.
- Snowflakes can fall as fast as 9 miles per hour.
- Snowflakes are colorless, but appear white because it reflects all light wavelengths (colors) equally.



Make a Snowstorm in a Jar!

With this experiment, you'll use science to make a "Snowstorm in a Jar"!

All you need is:

- **A Jar (Like a mason or pickle jar)**
- **Water**
- **Spoon**
- **White Acrylic paint**
- **Alka-Seltzer Tablet**
- **Baby Oil**
- **Bowl**

Instructions

1. **<u>Prepare the "snow":</u> In a separate bowl, mix white acrylic paint with a small amount of water. The consistency should be like melted snow.**
2. **<u>Fill the jar with oil:</u> Pour baby oil into the jar until it is about three-quarters full.**
3. **<u>Add the "snow":</u> Gently spoon the white paint and water mixture into the baby oil. The mixture is denser than the oil and will sink to the bottom.**
4. **<u>Break the tablet:</u> Break an Alka-Seltzer tablet into several small pieces.**
5. **<u>Start the storm:</u> Drop one or two pieces of the Alka-Seltzer tablet into the jar.**
6. **<u>Observe the storm:</u> Seal the jar and watch as the tablet fizzes, sending bubbles of carbon dioxide to the top of the jar. As the bubbles rise, they carry the white paint and water with them, creating a swirling, snowstorm effect.**
7. **<u>Repeat:</u> When the swirling stops, add another piece of the tablet to restart the snowstorm. You can also try it with different colors of paint, though it might not look like snow anymore!**

Discuss with your family and friends:

- **Why does the "snow" rise and fall, similar to a real snowstorm?**
- **How is this experiment similar to real snow? How is it different?**
- **How does real snow fall down from the sky? Does it go back up into the sky afterward?**

Fun Nature Reads and Winter Books

Stay warm and cozy this Winter with some great books about nature, winter, and more!

- **When Winter Comes** by Aimée M. Bissonette
- **Winter Dance** by Marion Dane Bauer, Illustrated by Richard Jones
- **What is Snow?** by Katie Daynes
- **Explore Winter!: 25 Great Ways to Learn about Winter** by Maxine Anderson
- **Goodbye Autumn, Hello Winter** by Kendar Pak

Make Your Own Snowglobe!

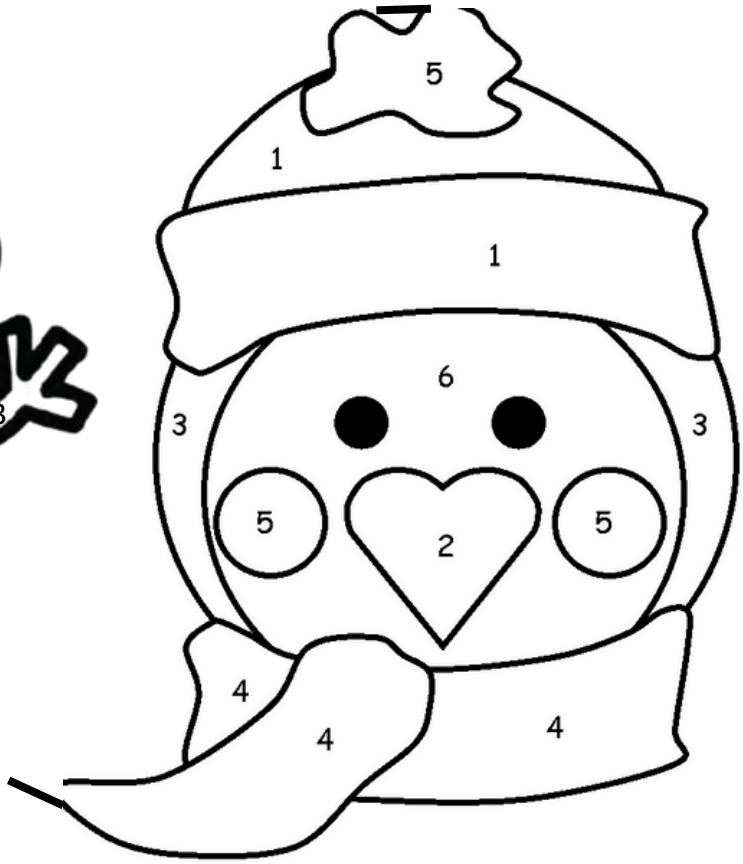
What you need:

- Mason Jar with Gasket Lid (You can Reuse the One from the Activity on page 3)
- Snack Cup, Washed and Dried (Optional)
- Glue Gun & Glue Sticks
- Clear Elmer's Glue
- Scissors
- Glitter
- Miniature Ornaments, Bottlebrush Trees, or Other Small Decorations

Instructions:

1. Gluing the two parts of your mason jar lid (the ring and the insert) together. You want to make sure your insert has a gasket (rubber seal) on it.
2. (Optional) Cut ½ inch off a snack cup opening (from pudding or fruit cups) and use a glue gun to attach it to the inside of the lid. This creates a higher base for the decoration to sit on.
3. Use a glue gun to affix your bottlebrush tree or other decoration to the snack cup, or to the inside of the lid if you skipped step 2.
4. Pour Elmer's Clear Glue into your jar. A whole bottle works, but you can use less if you want your glitter to settle faster.
5. Add around 1/5th of a small Glitter container to the inside of the jar (on the glue).
6. Fill the jar the rest of the way with warm water.
7. Flip your tree lid over, slide the decoration into the jar, and seal. You can use the glue gun to seal it more if you want to, but it's not always necessary.
8. Shake gently to mix and you're done!

Color by Number!



1-blue 2-orange 3-black 4-green
5-red 6- white

Make a Paper Snowflake with Only Scissors and Printer Paper!

1. **Create a square from a rectangular sheet:** Fold one corner over to meet the opposite long edge, forming a large triangle. Cut off the excess rectangular strip at the bottom. You will be left with a perfectly square, folded sheet of paper.

2. Fold the paper into a cone shape: First, fold the square diagonally to form a triangle. Then, fold the triangle in half again to make an even smaller triangle. Finally, fold this smaller triangle into thirds to create a cone or wedge shape. You can do this by folding the left point over, then flipping the paper over and folding the right point over, so the sides overlap evenly.

3. Cut your designs: With the paper still folded, begin cutting shapes out of the sides. You can use simple shapes like triangles, half-circles, or rectangles. Be careful not to cut all the way through the main folded sides, or your snowflake will fall apart. The designs you cut on the sides will be mirrored when you unfold the paper.

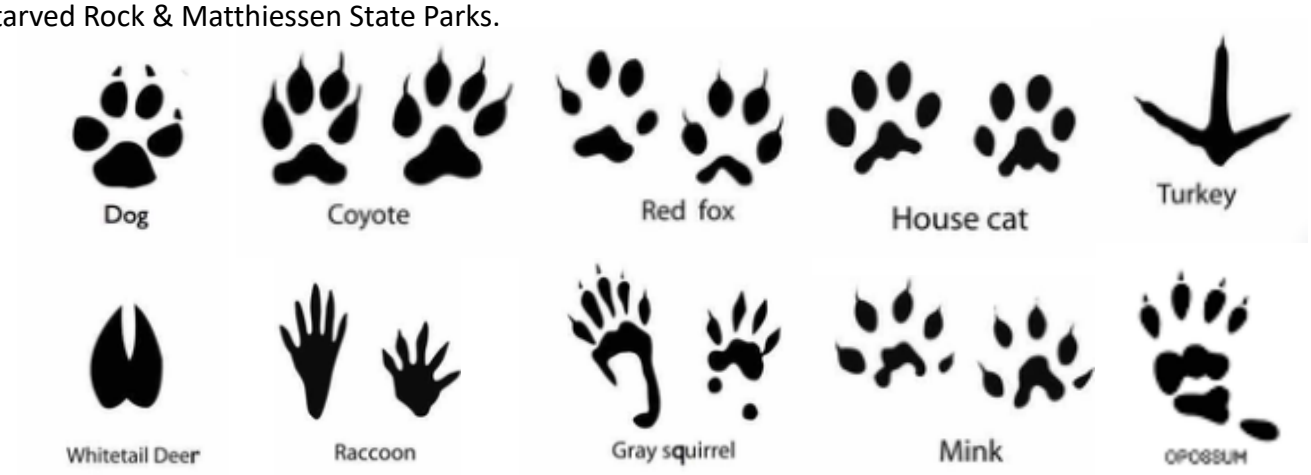
4. Unfold and flatten: Carefully unfold your paper to reveal your finished snowflake. If it doesn't lie completely flat, you can place it between the pages of a heavy book for a few hours to press it flat.

Photos From One Little Project

EXPLORE

Explore Winter's Beauty With a Wildlife Print Scavenger Hunt!

See how many animal prints you can find and identify in your neighborhood, at a local part, or at Starved Rock & Matthiessen State Parks.



Keep a Nature Journal

While out exploring, you can write & draw in a nature journal! That way, you can record your activities and experiences in a keepsake journal, while also building a meaningful connection to the outdoors this Winter. Plus, it's tons of fun.

Use these prompts and ideas to get started:

- Write down what you hear and how it makes you feel. This can be anything from falling leaves to cracking ice, singing birds, or even the peaceful sound of silence.
- Create a Nature Collage – Collect leaves, flowers, or small natural objects and glue them into your journal.
- Draw what you see and give it a name, whether it's a tree, animal, paw print, or snow falling on nature.
- Describe the colors of winter. What hues dominate the landscape, and how do they make you feel?
- What animals do you think have been where you are recently? What do you think they were doing?
- List three things you appreciate about winter. It could be a favorite activity, a warm beverage, or the beauty of snow-covered trees.
- Sit in a single spot that you love. Then, draw the scene as good as you can. Then, draw it again in the Spring, Summer, and Fall.

Create a Frozen Suncatcher

An icy suncatcher can reflect light and be a gorgeous outdoor ornament or decoration. Plus, they are easy to make!

1. First, explore nature, looking for natural items to use inside of your suncatcher. Try to find various colors like leaves, pine needles, nuts, berries, flowers, twigs, and anything else you can find that you think will look good.
2. Lay out a pie or cake pan as the mold for your suncatcher.
3. To make sure your suncatcher turns out crystal clear, boil the water before using it. This will remove impurities that can make your frozen suncatcher look cloudy. Then, add it to the mold.
4. Add your natural elements to the water in any design of your choosing. Be creative!
5. Leave outside for a few hours or overnight to freeze (or in the freezer if you need to!).
6. Gently remove the ice suncatcher from the mold and hang from a tree branch or window sill.

Go On a Coin Flipping Hike This Winter

Taking a hike is tons of fun, but what if you let luck guide your trek?

Start your hike normally, but anytime you reach a fork, junction, or intersection, flip a coin. IF it's tails, you go left...if it's heads, then go right. Who knows where you'll end up? This adds excitement, exploration, and adventure into your plans.

Be sure to keep an eye out for Winter birds, like Cardinals, Woodpeckers, Dark-eyed Juncos, Snow Buntings, and more!

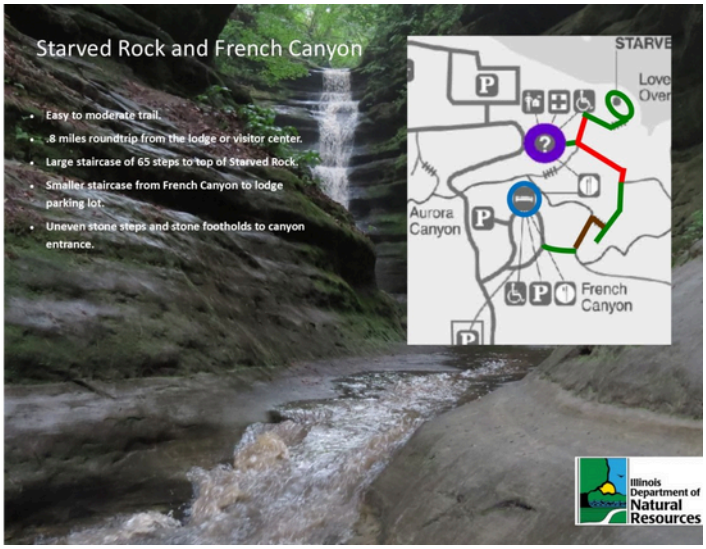
Explore Even More By Visiting These Excellent Websites!

- **https://dnr.illinois.gov/education.html**
- **https://illinois.pbslearningmedia.org/collection/changing-seasons/t/winter-season/**
- **https://www.sciencekids.co.nz/**
- **https://www.sciencebuddies.org/**

EXPLORE YOUR STATE PARKS!

Visit **dnr.illinois.gov** to view state parks by region under the Parks and Recreation tab. What state parks are close to your home? Help your family plan a visit by exploring the parks webpage. What does your local state park have to offer, hiking, biking, horseback riding, camping, fishing, skiing, or boating? Read over the trail maps, trail suggestions, rules and regulations (stay on marked trails), and head out to explore. Here are some recommended trails for families at Starved Rock State Park. Happy Hikers=Happy Trails!

Great trek for families with little ones if you park off of route 178 at the St. Louis parking lot just south of the park's west entrance and hike into St. Louis Canyon.



The most convenient hike at the park starting from the main parking lot by the river and visitor center leading to the park's namesake Starved Rock and French Canyon. French Canyon is not recommended for children under age 5 or anyone in winter when the ground is snow and ice covered.

The eastern canyons of Illinois, Ottawa, and Kaskaskia are great for families due to their length and proximity to parking lots. Just one mile roundtrip hikes into the canyons. Be aware the trails are not paved and you will have a few small creek crossings in spring and early summer.