

FIVE RIVERS ENVIRONMENTAL EDUCATION CENTER



Department of
Environmental
Conservation



Guided School Program

HERE COMES WINTER – before your visit

Hello!

We're glad your class will be visiting Five Rivers for a **Here Comes Winter** program. This 90-minute lesson has both an indoor and an outdoor portion. To prepare for a successful visit, please read this letter thoroughly. Keep in mind that we can accommodate a wide range of physical challenges or learning disabilities (i.e. physical, cognitive, ENL, etc.). Let us know if any of your students have special needs so that we may prepare for an enjoyable visit.

Should you have any questions regarding your upcoming visit, please email Friends of Five Rivers at gsp5rivers@outlook.com. We look forward to your visit, and to sharing a unique environmental experience with your students. See you at Five Rivers!

Program Overview:

The Here Comes Winter program will introduce your students to animal life in winter. During the lesson, your students will discover that:

- Animals have special adaptations for meeting their need, some of which are specifically for survival in cold weather.
- We can learn about the activities of animals by recognizing and interpreting the tracks and traces they leave behind.

Share and Prepare to Ensure Success - to be shared with all staff attending:

- ✓ **Dress for the outdoors!** A “Dressing for the Weather” guide is included in this packet. Review proper dress with your students before sending a copy of this guide home.
- ✓ **Prepare parents/guardians** by sending home the “Dear Parent/Guardian” letter included in this packet. Copy this letter on the back of “Dressing for the Weather” to save paper!
- ✓ **Complete the pre-visit classroom activities** prior to your visit. These activities provide background information for your students, presetting them for a successful lesson.
- ✓ **Assign at least two adult chaperones to each group of 15 students.** All chaperones must be prepared to assist the instructor, participate in the class, and administer any medications needed by students. Chaperones are also responsible for discipline, though this is not usually needed. Chaperone guidelines are listed in the “Dear Parent/Guardian” letter.
- ✓ **Plan to bring a snack for each child** to eat immediately before or during the class. This is especially important if the students’ normal snack or lunchtime occurs during the lesson time.

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Pre-Visit Activities for Here Comes Winter

Classroom Preparation Activities

Your forthcoming visit to Five Rivers Environmental Education Center will be much more enjoyable if you prepare your students with these insightful pre-visit activities.

Let's be scientists!

Students get the most out of an outdoor lesson when they understand what is expected of them. Please remind your class that when we are in the field we behave as the scientists we are, collecting data, making observations, and doing so in a manner that is serious and focused on the task. Of course, we have lots of fun along the way, too. Please talk with your students and encourage them to come up with a list of expected behaviors while at Five Rivers. Remind them that if we are loud and rambunctious, we are unlikely to see many animals.

Since we will be learning about wildlife in winter, we suggest you take part in one or more of the following:

Warm up to Winter – Discuss the different ways animals stay warm in winter and relate this to how to dress for your visit to Five Rivers.

What is a Habitat? – Talk with your students about what an animal finds in its habitat by comparing it to their own homes. If you have a dollhouse, point out where a family might find food, water and shelter. Where might a wild animal find food, water and shelter within its habitat?

The Thicket Game – The Thicket Game, from *Project WILD*, demonstrates the value of camouflage in a modified game of hide-and-seek. In a setting with plenty of places to hide, select one student to be "it." Blindfold this player and have them count to 20. While they count, have the remaining students hide. All hidiers must be able to see "it" from their hiding place. At the end of the count, "it" removes the blindfold. "It" may only turn around and move up or down; they may not step to the side, forward or backward. "It" looks for hidiers. When they see someone, "it" calls that person's name or describes what they are wearing. Once caught, the hider comes to join "it" and waits quietly for the next round. When "it" can no longer see any hidiers, they c overs their eyes again and counts to 10. Any remaining hidiers who have not been caught must move to a new hiding place, closer to and from which they can see "it." "It" repeats the search for hidiers. The rounds continue in this format until only one student remains in hiding. That student is declared the winner.

Words to Discuss:

Adaptation – a change in an animal or plant that helps it live in a particular environment

Camouflage – protective coloration or shape that helps hide an animal from its predators or prey

Hibernate – to pass the winter in a state of inactivity that is similar to sleep

Migrate – seasonal movement from one region to another typically to find food

Melting Snowman Snow Science Activity

Supplies for Melting Snowman Science

- 32 Oz. Mason Jar or any clear container
- Black Paint, Sharpies or Markers, Buttons, or Foam Paper
- Orange Foam Paper, Felt or Paper
- Ribbon for Scarf
- Glue (or any adhesive as needed)
- 12" Plastic Rulers (plastic works best because the snow is wet)

Kids can enjoy decorating a snowman jar or container. It would be best if it was clear so kids can really watch the process along the way. You can even consider using a zip top gallon bag! Don't want to decorate a jar, no worries!

NOTE: Depending on your needs, it may be easier to decorate the container after you fill it with snow.

How to Set Up Your Snow Science Experiment

Grab your jars, jacket, hat and mittens and head outside. Note whether the snow is wet and heavy, or light and powdery.

FULL STEPS

1. Wrap a piece of ribbon around the jar towards the bottom, crisscross each piece, glue and glue the ends at an angle to look like a scarf.
2. Cut a small triangle from a piece of orange paper and glue it towards the top front center of the jar.
3. Use the puffy paint to draw eyes and a mouth by the nose and let dry overnight.
4. Fill up the jar with snow, wipe the outside dry and bring inside the house.
5. Place a ruler into the jar and press it down to the bottom (leave ruler in jar).
6. Measure the snow with a ruler and write it down, noting the jar/container size.
7. Set your "snowman" aside (maybe not right next to a heating vent) and watch what happens over time.
8. Check on it periodically (can make a specific time check in like every 5 mins or 10 mins) and have the kids jot down the time elapsed and the new measurement.
9. Record the final measurement (should be water) with the ruler.
10. Continue onto next page to see how to expand this study to include snow science STEM experiments.

Source:

Littlebins. (2018, December 6). *Little Bins for Little Hands: Winter snow science activity with melting snowman theme* [Webpage]. <https://littlebinsforlittlehands.com/snow-science-activity/>

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Snow Science STEM

Let's add the math part into this snow science activity to create great winter STEM! Plastic rulers are the best option since you want to leave the rulers in the jar and observe the melting taking place. We will discuss volume below!

Make It a Snow Experiment

Turn this snow science activity into a snow science experiment by changing one variable, the location.

Experiment 1: Fill several jars and measure the same amount of snow into each one. Leave a jar outside, put a jar in the fridge and freezer, leave one on the counter, put one by the heater... Let your kids decide locations and have them make predictions as to which will melt the fastest! Record measurements for each along the way.

Experiment 2: You can also set up another type of experiment with different types of snow. As I mentioned above, note the type of snow you collected. Is it wet and heavy snow (better for snowballs), or is it dry and powdery snow (not so great for snowballs)? If possible, try this snow science activity on another day with the different type of snow and note the difference in measurements!

Experiment 3: Set up 2 smaller containers with equal snow amounts, sprinkle table salt on one. Which one melts faster?

Snow Science and STEM

States of Matter

First you can explore states of matter! Water exists in all three states of matter which are solids, liquids, and gasses. Snow is a solid, rain is a liquid, and water vapor is a gas.

Density and Volume

Snow is matter and density is the weight something has compared to the volume or space the matter takes up! Snow is less dense than water (same with ice). Snow also floats!

The molecules in the water move closer together as the temperature drops below freezing (32 degrees) and ice crystals form. The ice crystals or snowflakes take up more space than the molecules of flowing water. That's why kids will see much less water in the container after melting.

Melting

Once the snow is brought inside or the temperature rises, the snow begins to melt and those tightly packed molecules become loosely packed molecules in water. Placing the containers in different location will speed up or slow down the process.

Melting ice or snow is a physical change but a reversible one since water will become snow or ice again one day!

Source:

Littlebins. (2018, December 6). *Little Bins for Little Hands: Winter snow science activity with melting snowman theme* [Webpage]. <https://littlebinsforlittlehands.com/snow-science-activity/>

Take Home Page Guided Lesson



Dear Parent / Guardian,

Your child will soon be visiting Five Rivers Environmental Education Center to learn about the natural environment and the wildlife within it. We're delighted to welcome your child and share these ideas to make the visit more enjoyable.

Dress for Success:

- Hats, mittens, coats and warm boots are a must. Trails may be wet or muddy, so students should wear appropriate footwear.
- Long pants are recommended throughout the year.
- Bring rain gear if there maybe rain. The lesson is geared for the out-of-doors!
- Bring a water bottle.

Chaperones: You are an important part of this program!

- Encourage students to participate in class activities and be part of them yourself by helping them along the way.
- You are responsible for discipline and safety which are vital for a successful visit.
- Dress appropriately for the weather. Follow the guidelines provided for the students.
- Remain attentive to the lesson. Save conversations for outside the class.
- Be prepared to administer student medications as communicated by the school.
- Do not use cell phones except in emergency.
- Encourage students to watch animals quietly and at a respectful distance, for the safety of all.
- Above all, enjoy this experience along with the students!

Reminder: After all outdoor activities—whether at home, school or Five Rivers—a thorough tick check should be performed on children and adults.

We look forward to seeing you and your child at Five Rivers and hope it will be a fun-filled and exciting experience. Please call Five Rivers Environmental Education Center at 518-475-0291 if you have any questions or if you or your child have special needs; we will be happy to talk with you.

Sincerely,

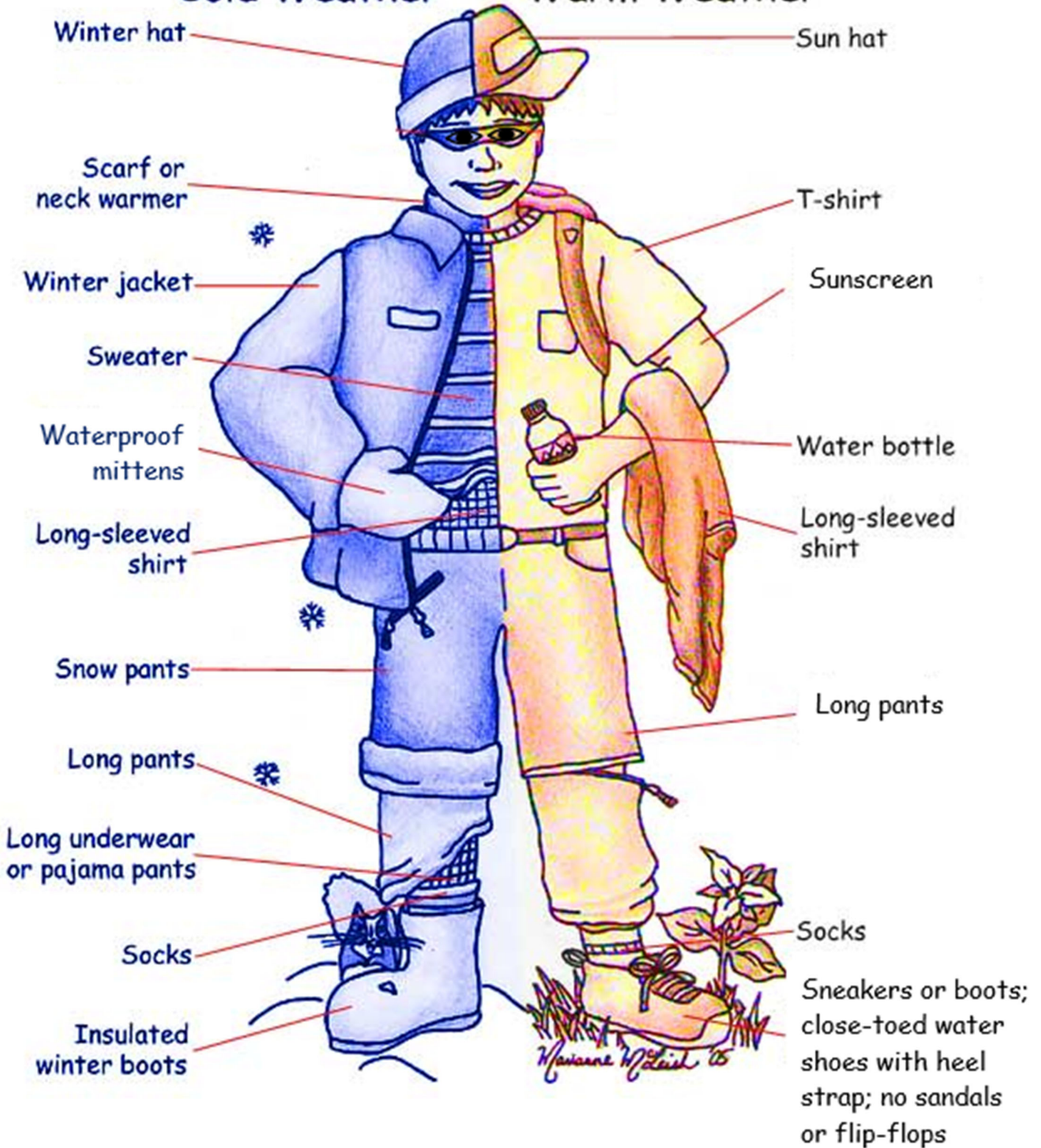
Friends of Five Rivers: Guided School Program
56 Game Farm Road, Delmar, NY 12054
Phone: 518-475-0291
E-mail: gsp5rivers@outlook.com

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DRESSING FOR THE WEATHER

Cold Weather

Warm Weather



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