



Jet With Vapor Trail  
Photo by Loretta Kuse

### **Sky, Air, Weather, Sunshine and Shadows**

- What kinds of clouds are in the sky in winter? What can you predict will happen by looking at the clouds?
- Check the temperature before taking a winter walk. When is it safe to be outdoors for longer periods of time? Learn about wind chill. How will it affect how you feel as you walk? Are there places along a trail that feel colder than others? What might make a difference?
- Watch for birds and mammals on your walk. How do they respond to weather and temperature? (Fluffed out feathers, feeding during certain times of day or kinds of weather, seeking shelter, partial hibernation, etc.)
- Take a walk on Ground Hog Day. If a ground hog did live along the trail, would you have expected it to be out? Would it have seen its shadow? Read about the origin of the tale and listen to current news reports about the event.
- Learn about water vapor. Under what circumstances “could you see your breath”? Watch for vapor trails in the sky. Why can they be seen? Do you see any smoke or steam rising from buildings in the distance? Why might it be seen coming from some structures and not others?

- Watch for shadows. Why are they longer at some times than others? Observe the shape of shadows and the shape of the objects that form them. Why are they more visible on some days than others?
- People walking a trail during school hours may not have an opportunity to observe sunrises or sunsets or different hours of darkness and daylight, but they can compare what they observe about sunlight and shadow during a walk with what they see in the morning or evening at home.
- Use a camera as a tool to help you record weather changes or events.

### **Ice and Snow**

- Snowflakes – How many points does a snowflake have? How are snowflakes alike and different? How do snowflakes and ice crystals differ?
- Learn to cut from tissue paper snowflakes that have six points. (Cut a circle from tissue paper. Fold it in half and then in thirds. Then fold it once more and cut holes in it to make a six-pointed snowflake.)
- Learn about different forms of snow. List the words we use for different kinds of snow. Find examples of snow and ice that match the words on the list.
- Why is it important to have a good blanket of snow on the ground in winter?
- What effects do freezing and melting have on plants, rocks, and buildings?
- Measure the depth of snow in different places. Why is it deeper in some places than in other places? What are average depths of snow for this area?
- Find examples of snowdrifts. Observe where and how they were formed.
- What is the effect of pressure on snow? When you have stepped on snow what happens to it?
- Why does ice form on top of a pond or a bucket of water?
- Examine icicles and note growth rings in them.
- Look at pictures of hoar frost. Learn about how it forms and in what kind of weather it is likely that it will form.