

Teacher's Guide

December

Snowstorms and Winter Weather



Oh, the Weather Outside Is Frightful!

New York City winters often bring extreme cold temperatures, heavy snow, ice, sleet, and freezing rain. Plus coastal storms, called nor'easters, can bring high winds, flooding, power outages, and structural damage.

Of course schools close during the worst weather. But at other times, weather changes can occur quickly while students are in school. Even when winter weather isn't severe enough to close schools, it still needs to be taken seriously.

Let's get ready and stay safe when winter weather hits!

Did you know?

The biggest snowfall ever recorded in New York City happened February 11–12, 2006, when 26.9 inches of snow fell in Central Park. The city deployed 2,500 workers to work around the clock to handle the cleanup. Hundreds of flights were canceled, train and bus service was interrupted, and roads were closed. The previous record of 26.4 inches had been set in 1947.



Department of Education
Office of Emergency Management

Weather words: watches and warnings issued by the National Weather Service

- **Winter Storm Watch:** Alerts the public to the possibility of severe weather conditions, such as heavy snow or ice. The watches are issued 24 to 36 hours in advance.
- **Winter Storm Warning:** Hazardous winter weather—such as heavy snow, heavy freezing rain, or heavy sleet—is occurring or definitely on its way. Issued 12 to 24 hours before the event is expected to begin. Can also be issued when heavy snow combined with strong winds of 25–34 mph will cause blowing or drifting snow.
- **Blizzard Watch:** Sustained winds of at least 35 mph and falling or blowing snow results in visibility at or below $\frac{1}{4}$ mile expected within 24 to 36 hours.
- **Blizzard Warning:** Sustained winds of at least 35 mph and falling or blowing snow resulting in visibility at or below $\frac{1}{4}$ mile expected within 16 hours.
- **Snow Advisory:** A low pressure system that will produce snow that may cause significant inconveniences but does not meet warning criteria. Amounts can range from 2 to 5 inches.
- **Heavy Snow Watch:** An average snowfall of 6 inches in 12 hours or 8 inches in 24 hours is expected.
- **Heavy Snow Warning:** Snowfall totaling 6 inches or more in 12 hours is strongly expected. The warning also can be issued when snowfall totaling 8 inches or more in 24 hours is strongly expected.

Reinforce the message of winter-weather safety and build skills across the curriculum with these simple activities:



Language Arts

Review the National Weather Service winter weather alerts with your students. Challenge them to create a weather-words dictionary, adding other terms that they encounter.

Math

Research different predictions for winter weather, from precipitation outlooks by the National Weather Service to predictions in almanacs and other sources. Compare the predictions and then track precipitation, temperature, wind speeds, and other data. Which sources were most accurate?

To Learn More:

Office of Emergency Management Winter Weather information page,
<http://www.nyc.gov/html/oem/html/hazards/winter.shtml>

NYC Office of Emergency Management, www.NYC.gov/oem

OEM on Facebook, www.facebook.com/NYCemergencymanagement

OEM on Twitter, [@nycoem](https://twitter.com/nycoem)

Notify NYC: Register for emergency notifications by visiting NYC.gov/notifnyc, calling 311, or following [@NotifyNYC](https://twitter.com/NotifyNYC) on Twitter



Social Studies

On December 26, 2010, a nor'easter dropped more than 20 inches of snow on New York City. The winds were so strong that it pushed snow into drifts that measured up to four feet tall! What is the biggest snowstorm that your students remember? Have them write their recollections and research facts—such as total snowfall, wind speed, and so forth—for that particular storm. Compile the recollections and data into a class book.



Science

How does frost form? Frost is created when the air temperature drops below freezing and the water vapor in the air freezes into ice crystals. Walk your students through the process of making their own frost with this activity.

Materials: soup can with no label, rock salt, crushed ice, science notebook

1. Fill half of the can with crushed ice and 4 tablespoons of rock salt.
2. Mix for about 30 seconds and then let it sit.
3. Observe the frost forming on the outside of the can. Record why this happens in your science notebook.