

Teacher's Guide

May

Tornadoes



The Eye of the Storm

While tornadoes occur in many parts of the world, they are most frequently found in the United States, occasionally including New York City. Typically a tornado is spawned by powerful thunderstorms, but it can also accompany a tropical storm or hurricane as the storm moves onto land. Most tornado-related damage results from high wind speeds, wind-blown debris, and large hail. Tornadoes are not limited to one season; they can occur at any time of year.

Let's get ready and stay safe if tornadoes occur in our area!

Know Your Weather Words!

- **Tornado:** A rotating column of air extending from the ground to the base of a thunderstorm that is intense enough at the surface to cause damage. Wind speeds vary from 40 mph to 318 mph.
- **Tornado Watch:** Issued when conditions are favorable for the development of tornadoes in and close to the watch area. A tornado watch can be in effect for several hours.
- **Tornado Warning:** Issued when a tornado is indicated by radar or sighted by storm spotters.
- **Fujita Scale:** Used to measure a tornado's strength.

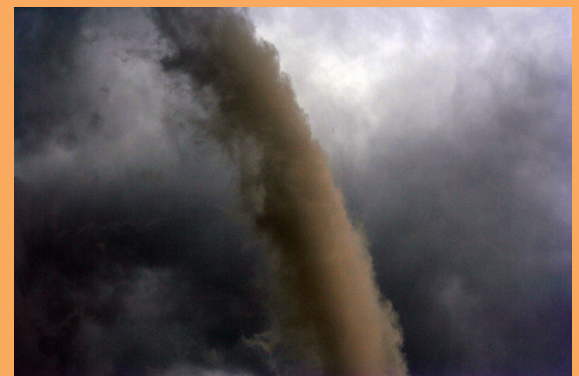
Scale	Wind Speed	Typical Damage
EF0	65-85 mph	Light. Broken branches, trees with shallow roots knocked down
EF1	86-110 mph	Moderate. Surface of roofs peeled off; mobile homes pushed off foundations
EF2	111-135 mph	Considerable. Mobile homes destroyed; large trees snapped or uprooted; objects become projectiles; cars lifted
EF3	136-165 mph	Severe. Some roofs and walls torn off well-constructed houses; most trees uprooted; heavy cars lifted and thrown
EF4	166-200 mph	Devastating. Well-constructed houses leveled; structures off foundations; cars thrown and large projectiles generated
EF5	>200 mph	Incredible. Strong frame houses leveled off foundations; automobiles fly in excess of 100 meters; trees debarked



Department of Education
Office of Emergency Management

What to do if a tornado is likely

- If you are indoors, go to your basement or the lowest point in your residence. If you are at school, move to a small interior room or hallway and get under a sturdy piece of furniture. Stay away from windows.
- If you are in a car, do not try to outrun a tornado. Get out of your car and seek shelter.
- If you are outdoors, head for shelter. If you can't find shelter, take cover in a ditch or similar area. Cover your head with your hands. Do not take cover under an overpass or bridge.
- Avoid buildings with wide roofs, such as auditoriums, cafeterias, large hallways, or shopping malls.



Reinforce the tornado-safety message and build skills across the curriculum with these simple activities:



Language Arts

Research recent tornadoes in New York City or in other parts of the country. Select one and create a timeline of the day's events.



Social Studies

Where is the area of our country that's often called Tornado Alley? Is New York City part of it? Why is the area called Tornado Alley? Locate it on a map.



Math

Investigate estimates of damage caused by recent tornadoes in New York City or another part of the country. Rank storms from least to mostly costly. Where do these costs come from? Who pays for these costs?



Science

To make a class model of a tornado, fill a plastic jar about $\frac{1}{4}$ full of water. Place 1 teaspoon of clear liquid soap, 1 teaspoon of vinegar, and a pinch of glitter into the jar. Make sure the lid is tight and shake the jar to mix the ingredients. Swirl the jar in a circular motion and watch as the liquid forms a small tornado. The swirling motion forms a vortex in the jar, and the glitter represents the debris it leaves behind.

To Learn More:

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/notifynyc, calling 311, or following [@NotifyNYC](https://twitter.com/NotifyNYC) on Twitter

American Red Cross, <http://www.redcross.org/prepare/disaster/tornado>