

Tornadoes and Waterspouts

A tornado acts like a gigantic vacuum cleaner. It roars along at a speed of about 50 kilometers (30 miles) per hour. It smashes everything in its path. It can even lift cars into the air, dropping them far away.

Tornadoes can happen anywhere. The central states in the United States have more tornadoes than anywhere else on Earth. Each year about 1,000 tornadoes occur. Luckily, most are weak. Others are strong. They can do a great deal of damage.

Tornadoes can begin as thunderstorms. Thunderstorms can form **supercells**. A supercell is a large thunderstorm that rotates. A supercell can be very dangerous. Supercells can cause hail, damaging winds, and tornadoes.

A supercell forms when strong winds blow in opposite directions. This starts the air within a thunderhead to spin. If it touches the ground, it becomes a tornado.

Fujita Tornado Scale

Tetsuya Theodore Fujita made a scale in 1971. This scale is used to rate the power of a tornado. Here is part of the Fujita Scale:

Rank	Strength	Speed
F0–F1	Weak	winds 64–180 km/h (40–112 mph)
F2–F3	Strong	winds 181–332 km/h (113–206 mph)
F4–F5	Violent	winds over 333 km/h (207+ mph)



↑ A thunderstorm can develop a supercell inside it. Winds go up, over, down, and back in a circle.



↑ The supercell can get tilted up and down by a strong updraft.



↑ If the vertical supercell keeps going, it starts sucking wind and everything else up the cell. A tornado is born.



Terrible Twister

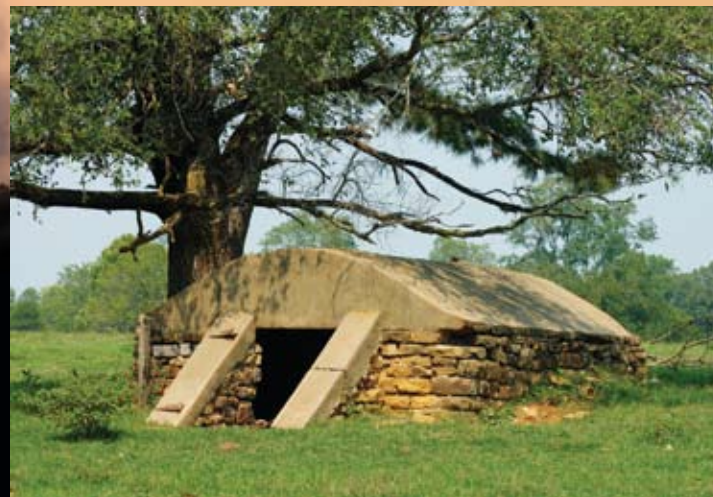
The deadliest tornado ever struck on March 18, 1925. It started in Missouri and traveled for more than 350 kilometers (219 miles). It lasted over three and a half hours. It hit Illinois and Indiana, too. It left 689 dead, 2,000 hurt, and 11,000 homeless.



← Doppler radar station

People used to be at the mercy of these storms. Now there is some advance warning. **Doppler (DAWP-ler) radar** can detect when such a storm is forming. Then the government issues a tornado watch. If a tornado touches down, the watch turns into a warning. If this happens, people should take cover in a basement or a storm shelter. The only safe place to be during a violent tornado is underground.

storm cellar →



Raining Fish and Frogs

Compared to tornadoes, waterspouts are smaller and have slower winds. Waterspouts suck up things from the water. Then they drop them on land. In this way, fish have fallen in Mexico, frogs in France, and tadpoles in Canada! Most of the time, waterspouts drop things close by the source. In 1988, hundreds of small pink frogs from Africa rained down on a British village. Strong updrafts kept the frogs in the air long enough to cross the sea.