Tornado!

Although most of the destruction done by tornadoes is caused by the terrible speed of the whirling winds, lowered air pressure may also cause a great deal of damage.

**What to do:** Remove the air from inside the bottle by sucking on it.

**What happens:** The bottle collapses.

**Why:** The air around the outside of the bottle pushes inward because you’ve removed some of the inside air. Normally, the air inside the bottle would balance the outer force. The pressure inside the bottle drops, just as it does in the center of a tornado.

A tornado starts when cold dry air coming from the west catches up with unusually warm moist air from the south. The result is a whirling wind with thick, black clouds and thunderstorms. Water vapor is swept upward as gusts of warm air rise in a spiraling motion. When the air cools, it forms the tornado's twisting, funnel-shaped cloud. The funnel-shaped wind cloud whirls at enormous speeds and picks up dust, trees, animals, water, automobiles, houses—anything in its path—and whirls them upward. The rapidly rising column of air within the funnel lowers the pressure in the funnel's center as the tornado advances.

A house can be crushed in the midst of a tornado just as the bottle was crushed—because the air pressure in the center of the tornado is lower than the normal pressure inside the house. The tornado spins, smashing and destroying, until all the heated air that was near land has been squeezed up by the cooler, heavier, inflowing air. Then the air stops flowing and the tornado dies.

**YOU NEED**

- clean, empty plastic bottle or jar

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More about Tornadoes

A tornado seldom lasts more than an hour and usually covers about two city blocks—less than one-tenth of a mile (158 m). Only 2 per of tornadoes are classified as “violent.” Tornadoes may last longer, however, with wins of up to 300 miles (480 kilometers) an hour, and may cover a path of up to 26 miles (42 km) long and a mile wide (1.6 km). They can be the most destructive storms on earth. Most tornado injuries and deaths result from flying objects whirled about by the wind. Tornadoes are sometimes called cyclones and twisters.