

COPIER PAPER BOX TORNADO!

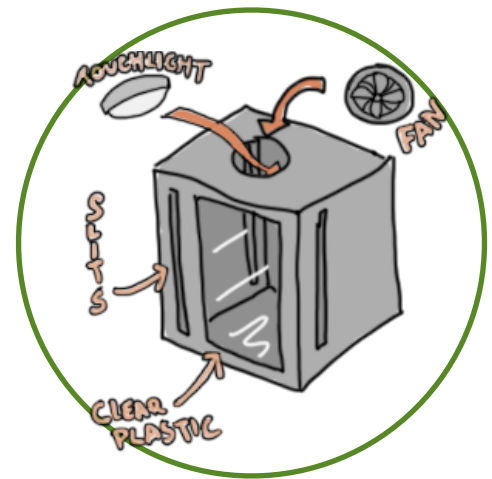
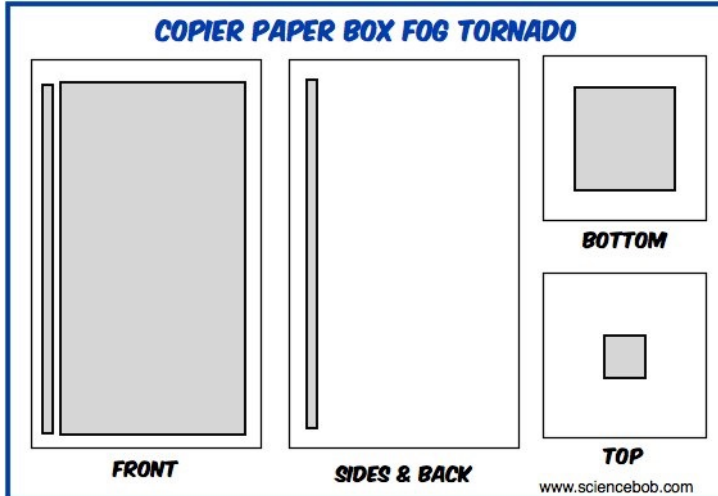
YOU WILL NEED:

- A copier paper box
- A small 12 volt computer fan from a computer or electronics store. It should be at least 3x3 inches (8cm X 8cm).
- A piece of clear plastic 10 X 17 inches (25cm X43cm) If your really in a hurry, you can test your fog tornado with clear plastic food wrap.
- A small plastic food container
- Dry ice (or other source of fog – see below)
- Black paint
- 9-volt battery (if your fan doesn't plug in)
- Optional (but cool) battery-powered tap light
- Adult help

WHAT TO DO

Parts of the cardboard will need to be cut out using an exact-o blade. This part is definitely for an adult – kids hurt themselves every year trying to cut foam core and cardboard – don't let that be you – know when to ask for help.

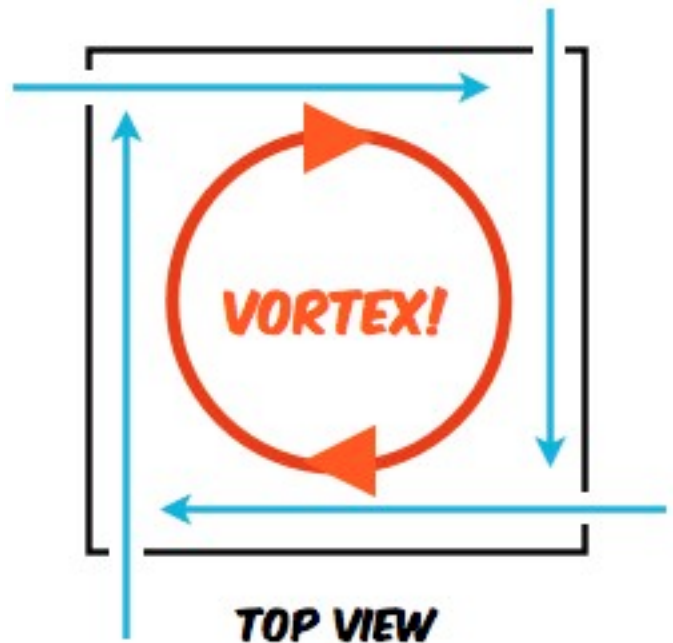
Follow the diagrams below, cutting away the areas marked in gray. IMPORTANT: Pay special attention to the placement of the slots. In order for the tornado to work, the slots will need to be in the correct place.



The opening at the top should be just a bit smaller than your fan. The opening at the bottom should be bigger than the plastic food container.

Paint the inside of the box with flat black poster paint and allow it to dry. Tape (or hot glue) the clear piece of plastic into the large window on the front. Be sure to keep the nearby slot open so air can flow through it. Attach the tap-light to the inside of the top of the tornado box near the fan opening.

That's it! Your Tornado Chamber is ready.



A note about the fog. I have found 3 decent sources of fog:

DRY ICE – Dry ice makes the best looking tornado, in my opinion, which is why I give the directions for it here. Dry ice should only be handled by adults. It can cause instant frostbite. Never handle dry ice without thick gloves and always wear safety goggles. Only someone familiar with dry ice and its dangers should handle it.

HUMIDIFIER – Many small humidifiers create a continuous source of mist that works well for the tornado chamber. You will need to find a way to mount the tornado chamber above your humidifier.

FOUNTAIN MISTERS – A fountain mister uses ultrasonic vibrations to create a light mist. They can often be found in stores that sell small fountains and in some pet shops. FOG TORNADO TIME!

Turn on the battery powered light if you have one, and power up the fan. (red wire goes on the skinnier lead of the 9 volt battery) and place it on the top of the chamber with the breeze blowing up. Place some small chunks of dry ice into your food container and add some warm water to create fog. Put your tornado chamber over the container and watch the wonders of vortex currents at work!