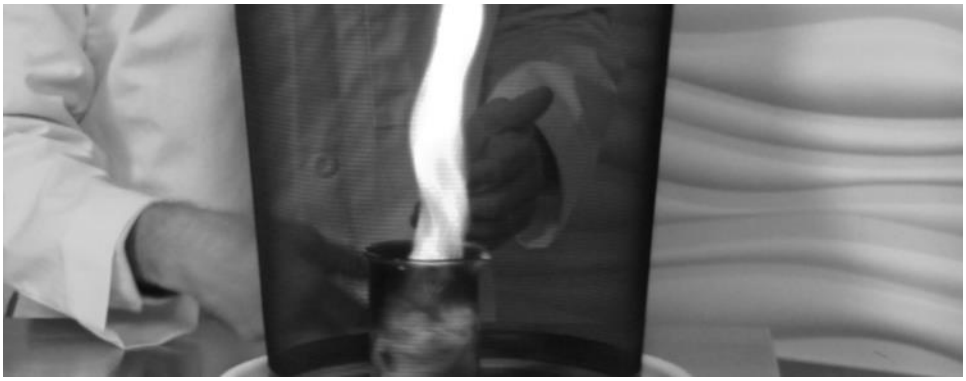

FIRE TORNADO

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a CHOKING HAZARD. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- 2 Mesh Wire Wastebasket
- Isopropyl Alcohol
- Cotton Balls
- Baking Soda
- Glass Dish
- Lazy Susan
- Small Zip Ties
- Electrical Tape
- Ruler

INSTRUCTIONS

STEP 1: Place one of the wastebaskets on the Lazy Susan.
STEP 2: Fill the glass dish with cotton balls. Saturate the cotton balls with isopropyl alcohol.
STEP 3: Place the glass dish in the center of the wastebasket.
STEP 4: Turn the other wastebasket upside down. Place the wastebasket on top of the other wastebasket. Using the zip ties connect the wastebaskets on one side.
STEP 5: Open the wastebaskets, ignite the isopropyl alcohol, and close the wastebaskets.
STEP 6: Using the electrical tape, secure the other side of the wastebaskets, so they do not open when spinning.
STEP 7: Gently spin the Lazy Susan. Using the ruler, measure the height of the fire tornado.
STEP 8: Without flipping the fire tornado, quickly spin the Lazy Susan. Using the ruler, measure the height of the fire tornado. Using the baking soda, extinguish the fire.
STEP 9: Provide evidence for how the motions and the complex interactions of air masses result in changes in the height of the fire tornado.

EXPLANATION

The fire inside the wastebaskets heats the air, the hot air rises, cold air from outside, the wastebaskets, replaces the warm air. Spinning the wastebaskets creates a vortex and the fire tornado forms.

Hooked on SCIENCE
WWW.HOOKEDONSCIENCE.ORG

SCIENCE BACKGROUND

Sunlight warms Earth's surface. Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns. Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns. Because these patterns are so complex, weather can only be predicted probabilistically.

I CAN STATEMENTS

- ✓ I can collect data to provide evidence for how the motions and complex interactions of air masses result in changes in weather conditions.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

MS - Weather and Climate
I Cause and Effect I Stability and Change