



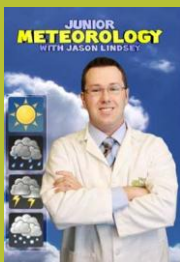
HOW DOES A TORNADO BLOW OFF A ROOF?

Ingredients

- Leaf Blower
- Toilet Paper
- Dowel Rod

Science Term

- **Bernoulli's Principle** – Bernoulli's Principle is the scientific principle that states that the faster a gas or liquid moves, the lower its pressure will be.



Instructions

STEP 1: Place the toilet paper on the dowel rod and unroll a few pieces of tissue.

STEP 2: Hold the dowel rod horizontally so the roll will unroll away from you. The toilet paper represents the roof of a house and the wind from the leaf blower represents the powerful wind from a tornado.

STEP 3: Turn on the leaf blower and aim the stream of air just over the top surface of the roll.



Explanation

Bernoulli's Principle states that the pressure exerted by a fluid decreases as its velocity increases. Increasing the velocity over the top surface of the toilet paper lowers the pressure of the air pushing down on the paper. The paper is lifted because there is now an unbalanced force of air pressure acting upward. The same thing happens as the powerful wind of a twister pushes across the roofs of houses. The pressure of the air inside the house is higher than the air pressure of the air blowing across the roof. The result, the roof is lifted off the house.

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