

Activity: Whirligig / Spinning Can

On SCOPE's Things That...Spin episode, you saw Julia make a whirly gig and use steam to spin a can. Here's how she did it:



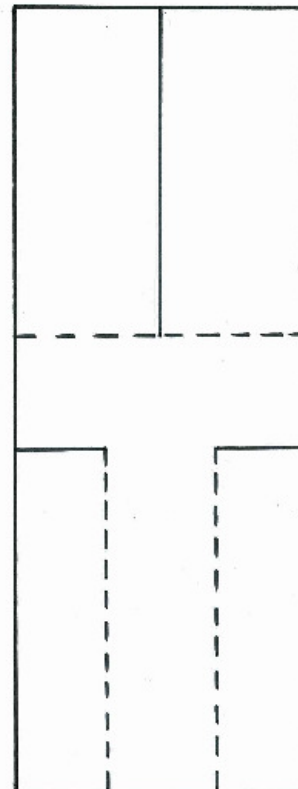
What you need

Paper
Scissors
Paper Clip
Pin
Unopened Soft-drink Can
Camping Stove or Candles
String

What to do

1. Copy the template onto a piece of paper.
 2. Cut along the solid lines and fold along the dotted lines. The two wings at the top are folded down on opposite sides, and the two sections at the bottom are folded inwards and overlap each other.
 3. Attach the paper clip to the bottom.
 4. Drop the whirly gig and watch it spin as it falls to the ground!
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1. Use the pin to poke two holes in the can about half way up and on opposite sides. The holes must be on an angle, so before you take the pin out, bend it to the left. *This can get very messy so it's best to do it outside!*
 2. Let all the soft drink drain out of the can.
 3. Add a little bit of water to the can by submerging it in a bowl of water.
 4. Hang the can over a camp stove or candles.
 5. Ask an adult to help light the camp stove and wait for the water in the can to boil.
 6. Sit back and watch the can start to spin!

TEMPLATE



What's happening?

First the whirly gig. It spins because as it falls through the air, the wings don't let air flow as easily as the non-wing side, so the whirlingig leans to one side slightly, which causes it to spin!

And the can? Well this experiment is actually based on an ancient spinning experiment called a heroes engine! Basically, the flame heats up the water in the can and it begins to boil, which produces steam. Since the can is unopened, the only place for the steam to escape is out the holes, at an angle. So, as the steam pours out in one direction, the can will spin in the opposite direction!