

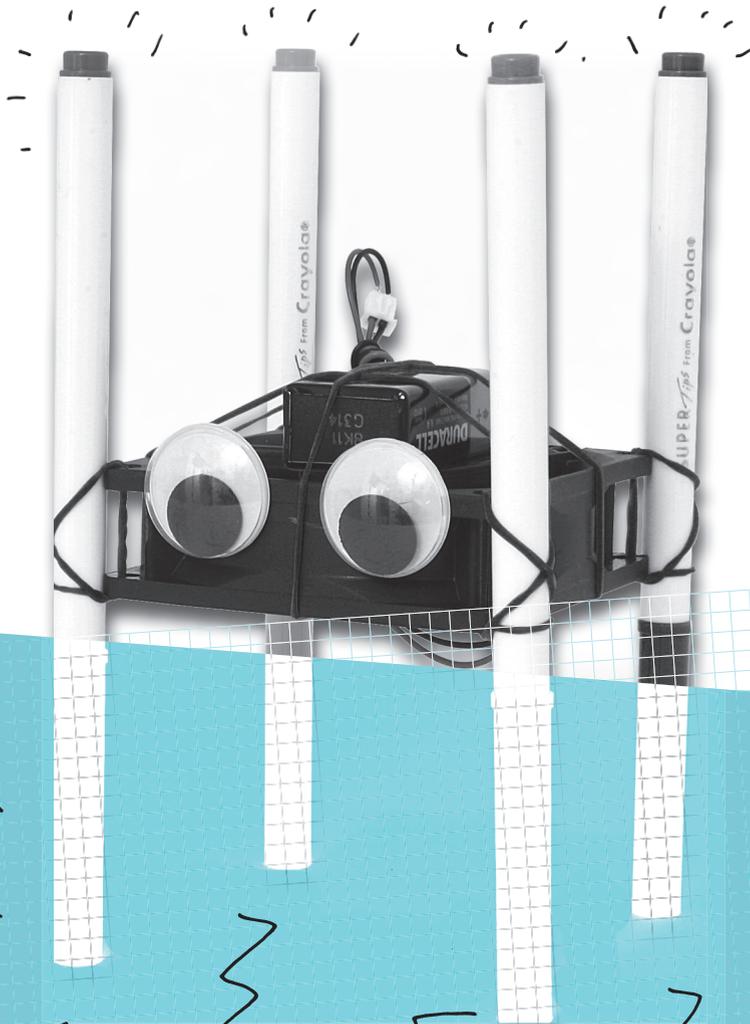
#30 MY First SQUIGGLE BOT

LEVEL 2: Intermediate | **TECH TRASH:** Computer Fan

Life is about baby steps. As much as you'd like to go out and create a robotic Rembrandt, you're going to have to take it slowly. Robots don't just mature into masters overnight. Like with people, it is important to let robots grow up at their own pace. All robots must learn to squiggle before they can draw. So, let your newborn robot explore the page freely. It may just surprise you!

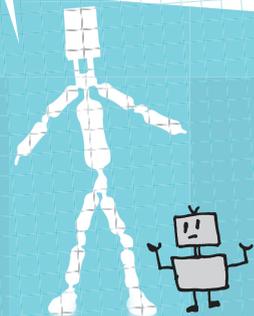
MATERIALS

- ▶ Computer fan (located in the back of a computer tower)
- ▶ Diagonal cutters
- ▶ 9V battery
- ▶ Ten rubber bands
- ▶ Four markers
- ▶ 9V battery clip
- ▶ Hot-glue gun
- ▶ Googly eyes
- ▶ Large sheet of paper



Mr. Resistor Man Says:

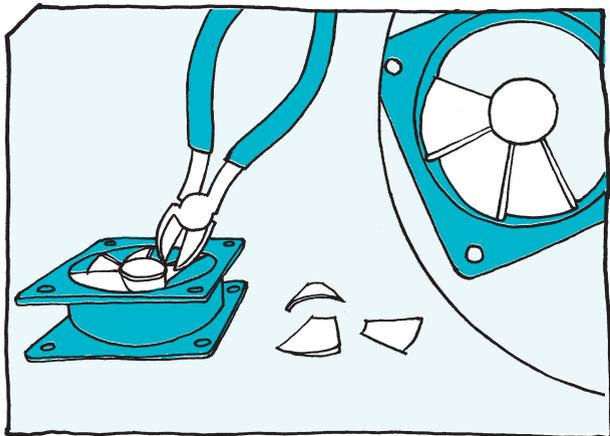
The word "robot" was invented by a Czech writer in 1921 for a stage play in which a factory manufactured artificial people.



MAKE IT

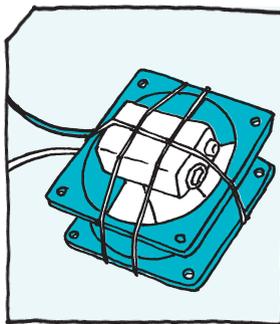
1. CHOP OFF THE BLADES

Use your diagonal cutters to clip off about two thirds of the fan blades in a way that the remaining blades are all next to each other. For instance, if there are nine blades, clip off six that are clustered together, leaving three blades that are side by side.



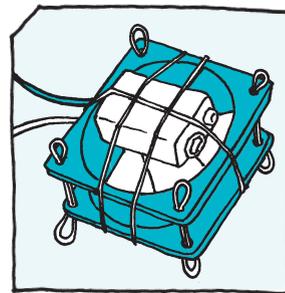
2. MOUNT THE BATTERY

Center the battery on the stationary part of the fan. Wrap two to four rubber bands in both directions around the whole contraption to hold it steadily in place.



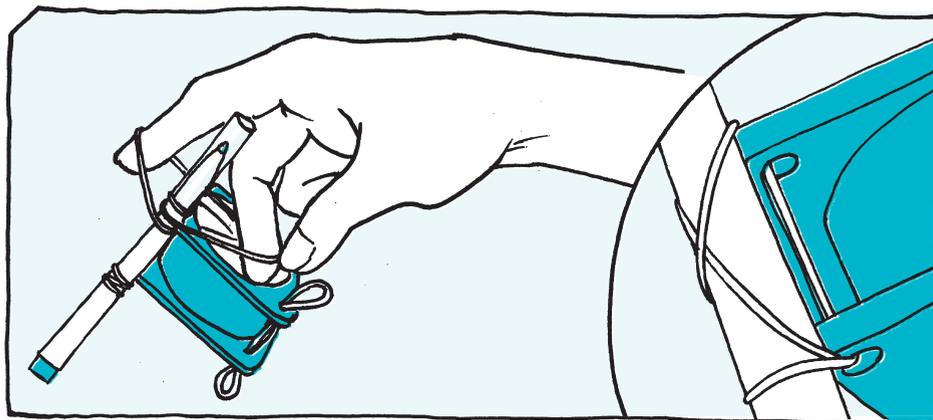
3. ADD RUBBER BANDS

Pinch one rubber band and thread it through the mounting holes at the corner of the fan, forming two loops (one on either side of the holes). Repeat with three rubber bands on the remaining corners.



4. ATTACH THE MARKERS

Wrap the two loops of each rubber band around a capped marker several times, securing a different-color marker in each corner. Make sure the marker tips (the capped ends) are facing down (on the opposite side of the fan from the battery). When you are done, the markers should look like four table legs.

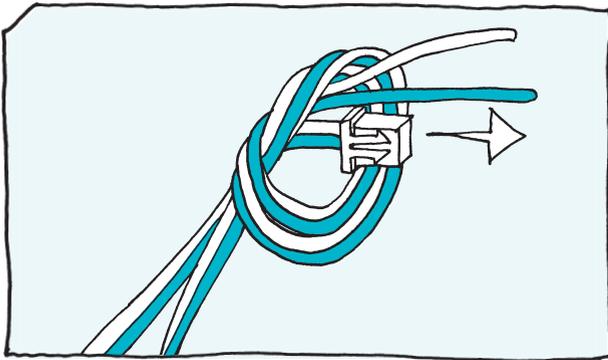


HELPFUL HINT

To better hold each marker in place, twist the end of the rubber band farthest from the cap and pull it around over the cap.

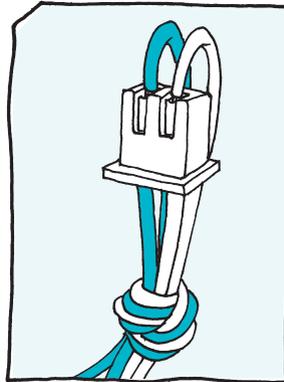
5. PREPARE AND KNOT THE WIRES

Line up the ends of the wires from the fan and the ends of the wires from the 9V battery clip so the battery clip wires extend an inch farther. Then tie the wire ends in an overhand knot. After the knot is made, the wires from the battery clip should still extend farther than those from the fan.



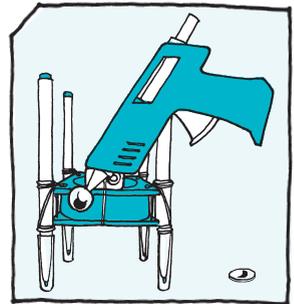
6. WIRE IT UP

Plug the red wire from the battery clip into the fan's wire socket so that it lines up with the red wire. Repeat with the black wire.



7. GOOGLY EYES

A Squiggle Bot would not be complete without googly eyes. Apply a small amount of hot glue on the back of the googly eyes and press them next to each other on one side of the Squiggle Bot frame.



8. SQUIGGLE AWAY!

To start squiggling and doodling, place a large sheet of paper on the floor, remove all of the marker caps, and plug in the battery.

