**Make: Scribble Machines**

1. **Prepare your motor**

   Test the motor. Hold one wire to each end of the battery. Does it spin? What if you switch the wires?

   Tape one wire to the top of the battery (+) with masking tape. Stretch a rubber band around the battery to cover the top and bottom.

   Cut a piece of eraser. Press it on to the motor’s shaft. Slip the second wire under the band. Watch how the motor spins. What can you change so it shakes? It’s now an **offset motor!**

2. **Design your Scribble Machine**

   A scribble machine needs a body and something that makes marks. A simple design is a cup with pen legs.

   Tape the offset motor and battery to your scribble machine. Check that the wires reach and your eraser weight can spin.

   Test your scribble machine with the pen caps on. Connect the second wire and set it down. How does it move? Do you want to make any changes?

3. **Scribble and explore!**

   Take your scribble machine to the scribble area. Take off the caps, connect the motor, and watch it go!

   Ask questions, test ideas, and explore! See what happens when you move or add parts. Can you make your machine draw circles, straight lines, or little loops? Can the motor shaft be used as a wheel? What else could be used as a body? Scribble machines can be anything!

Try “masking” your paper with tape or sticky notes to create a pattern under the scribbles.