

PART 1: PREPARE YOUR MATERIALS

- 1 x AA Battery Holder (*with exposed leads*)
- 1 x AA Battery
- 1 x 130g DC Vibration Motor
- 1 x Paper Cup
- 2 x Double-Stick Foam
- 1 x Paper Clip (small)
- 1 x Rubber Band
- 3 x Markers
- Tape (Scotch or Masking)
- Construction Paper
- 1 x Scratch Paper/Poster
- Miscellaneous Craft Materials

PART 2: CREATE YOUR ROBOT'S BODY

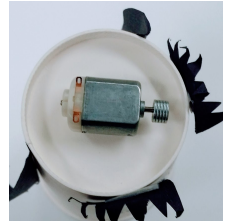
A) The cup is your robot's body. Put the cup upside down on a table. (The base of the cup will be the top of your robot's head.)

B) Use markers, construction paper, and other craft supplies to give your robot a face (eyes, nose, mouth, ears).



PART 3: CREATE YOUR ROBOT'S HEART

A) Attaching the Motor - Using the double stick foam tape, attach the motor onto the top of the robot's head with the two copper holes facing up.

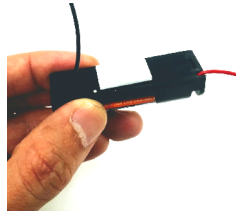


B) Attaching the Battery - The battery of your robot is its heart. Put a AA battery into the battery holder. Make sure to match up the end with the red wire to the positive (+) side of the battery and the end with the black wire to the negative (-) end of the battery.

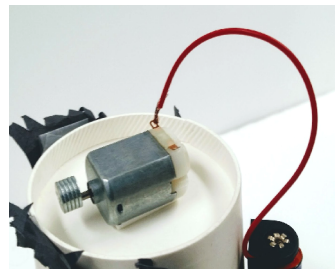
~ **WARNING** ~ Do **NOT** touch the tips of the red and black wires of the battery holder together, as this could cause the battery to get too hot.



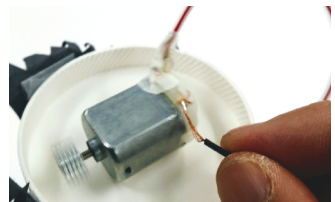
C) Attach your battery holder to the side of the robot using double stick foam tape.



D) Connecting the Battery to Motor - Stick the red wire into one hole of the copper leads and tape it down so that it won't come out.

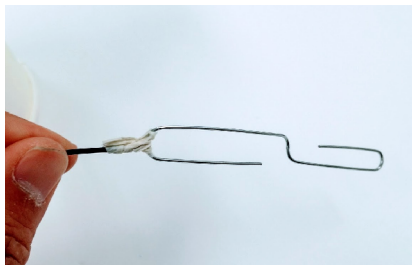


E) Test to see if your robot will turn on by touching the black wire to the other hole of the copper lead.



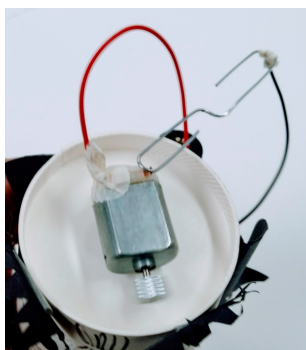
PART 3: BUILD A SWITCH

A) The paper clip will be your robot's switch to turn it on/off. Take the paper clip and make a "S" shape by pulling out the inside loop. Now tie the metal lead on the black wire to the paperclip and tape it secure.



B) Hook the paperclip through the open hole of the copper lead. Your robot should turn on. To turn your circuit off, just unhook your paper clip.

- *Tip: If it doesn't work, it is likely that there are some loose connections. Pinch your connections between the red wire/copper lead & black wire/paper clip so that electricity can flow better.*



PART 4: GIVE YOUR ROBOT LEGS

A) Put a rubberband around the outside of the cup.

B) Your robot's legs will be made up of 3 markers. Tuck 3 markers under the rubberband (see photo). Make sure that the marker tips are facing down.



C) Balancing the Legs - Spread the markers evenly around the cup (like a tripod) so that the cup can stand on its own.

D) Once your robot is balanced, tape the marker-legs down to the cup with scotch tape.

PART 5: LET YOUR ROBOT DRAW

A) Lay down a large piece of scratch paper, poster board, or newspaper. This will be your robot's art canvas!

B) Carefully take off the caps to each of the markers and set down your robot with markers facing down on the scratch paper. Turn on your robot with your paper clip switch and watch it draw!



DO-IT-TOGETHER

Robotics Kits

Inside this packet is a creative robotics project designed for kids (ages 6-10) to build under the supervision and guidance of an adult.

If you have any questions or feedback during the robot-building process, you can reach us via the following ways:



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