Spinning Snowflake

Make a Spinning Snowflake that's powered by a motor, a CR2032 Battery, and some Maker Tape!

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INTRODUCTION

Make a Spinning Snowflake that's powered by a motor, a CR2032 Battery, and some Maker Tape!

To adhere the motor to the craft stick and the snowflake to the motor you can use hot glue, but we'll use double sided foam tape in this guide.

You can make this project (and many more!) using parts from Brown Dog Gadgets.

TOOLS:

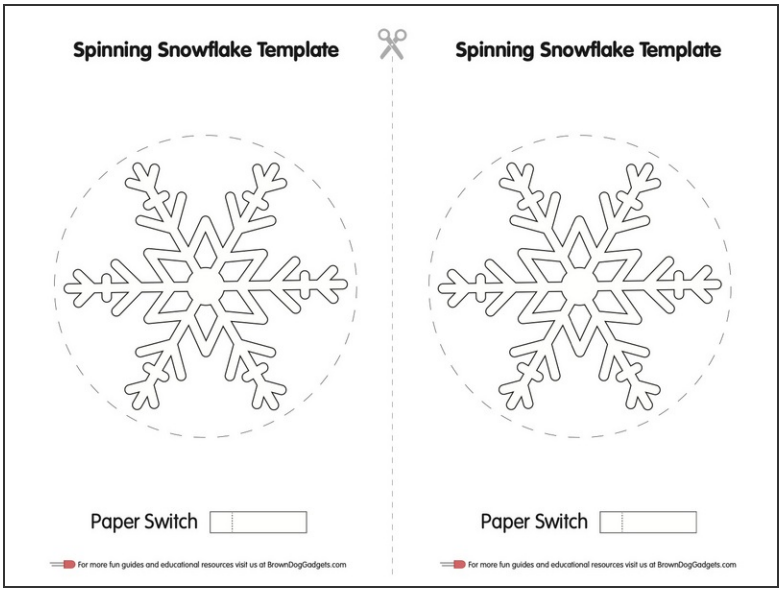
- Scissors (1)
- Hot Glue Gun (1)

Optional

PARTS:

- Maker Tape (1)
- CR2032 Battery (1)
- Vibrating Bristlebot Motor (1)
- Foam Mounting Tape (1)
- Jumbo Craft Sticks (1)

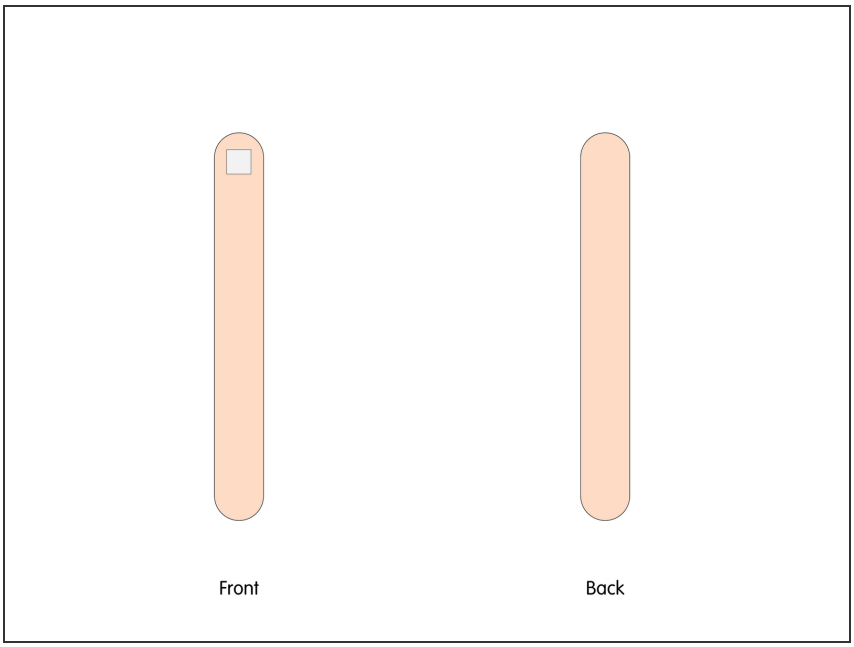
Step 1 — Cut Template





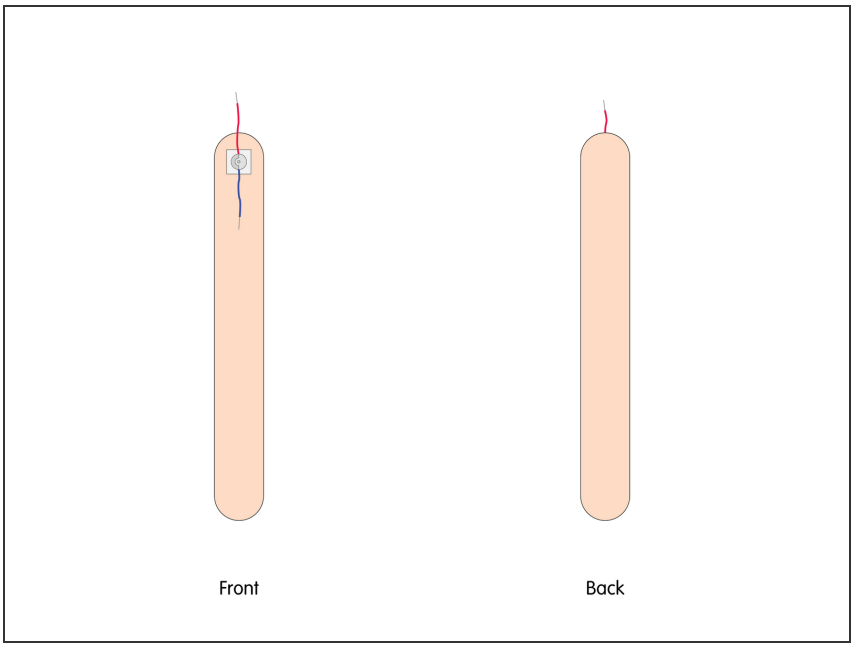
- Print out the spinning snowflake template on regular (20 lb.) printer paper.
- Cut out the snowflake template and the paper switch.
  - ⓘ You can cut on the dotted line around the snowflake or cut closer to the design to make it more whimsical.
- Use colored pencils, crayons, or markers to color your snowflake if desired.

Step 2 — Add Double Sided Tape to Craft Stick



- Add a small piece of double sided tape to the craft stick.
- We'll be adding our motor to the tape in the next step.
- Instead of double sided tape you **can** use hot glue but be careful when using a hot glue gun!

Step 3 — Add Motor to Craft Stick

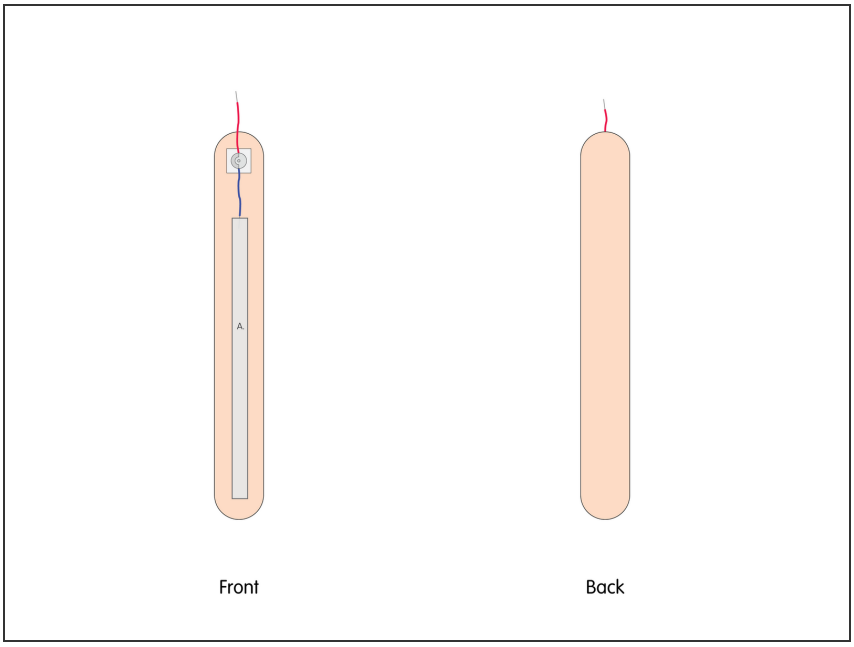


- **Stick the motor to the double sided tape** (or hot glue) making sure the back of the motor (with the wires) is stuck down to the tape and the part that spins faces upwards so it can move freely.

Note that we've placed the motor so the **red wire is at the top.**

- **This will make our snowflake turn anti-clockwise.** If you place the blue wire at the top you'll **reverse the rotation** of the motor.

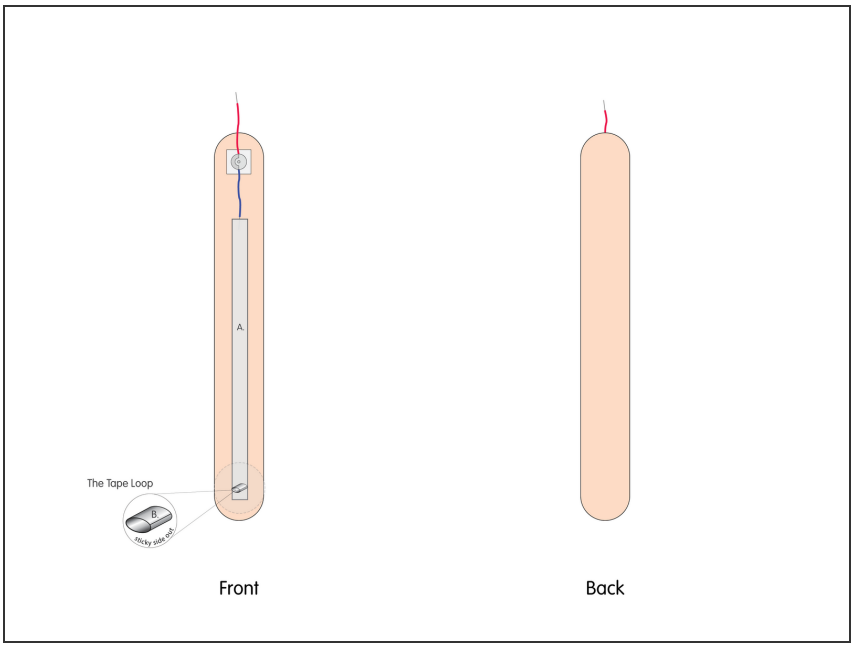
Step 4 — Add Tape Path A.



- **Add Tape Path A.** pressing it down atop the blue wire, and then running down the length of the craft stick not quite to the bottom.

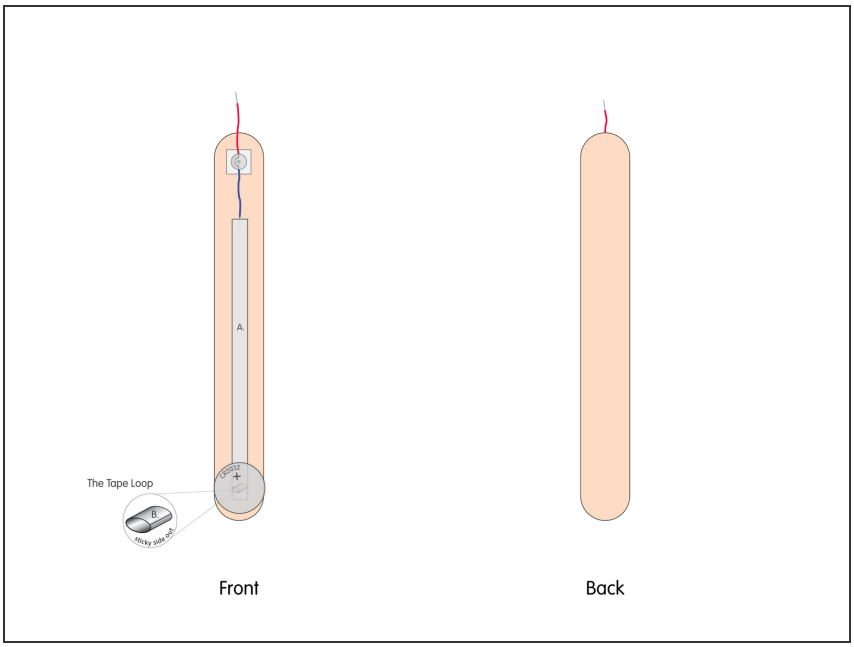
When adding Maker Tape atop a wire make sure you give a good press down to ensure a solid connection.

Step 5 — Add Tape Loop B.



- Make a loop of tape (sticky side out) using a short piece of Maker Tape, and stick it atop the end of Path A.

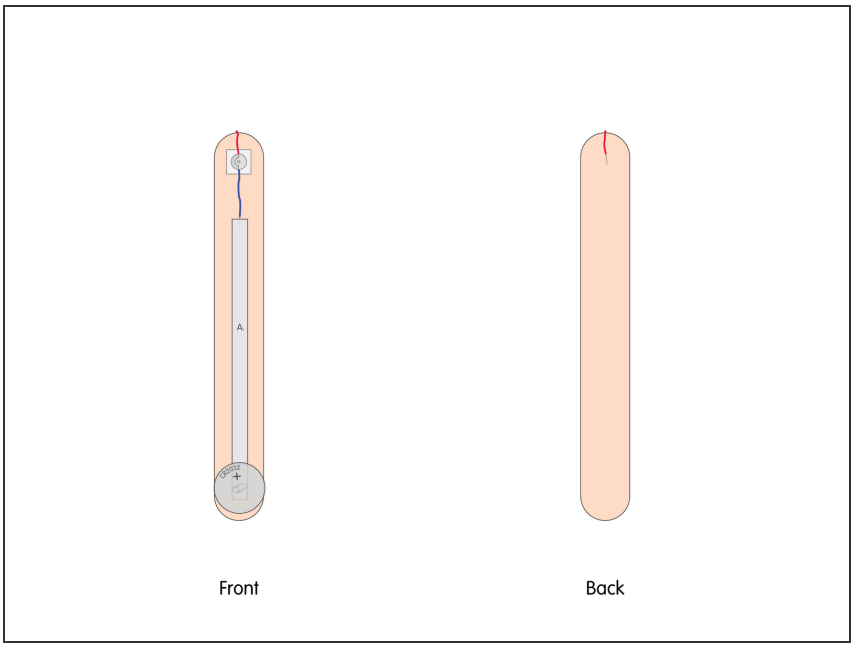
Step 6 — Add Battery



- Once your Tape Loop is in place you can add the **Battery** to it.

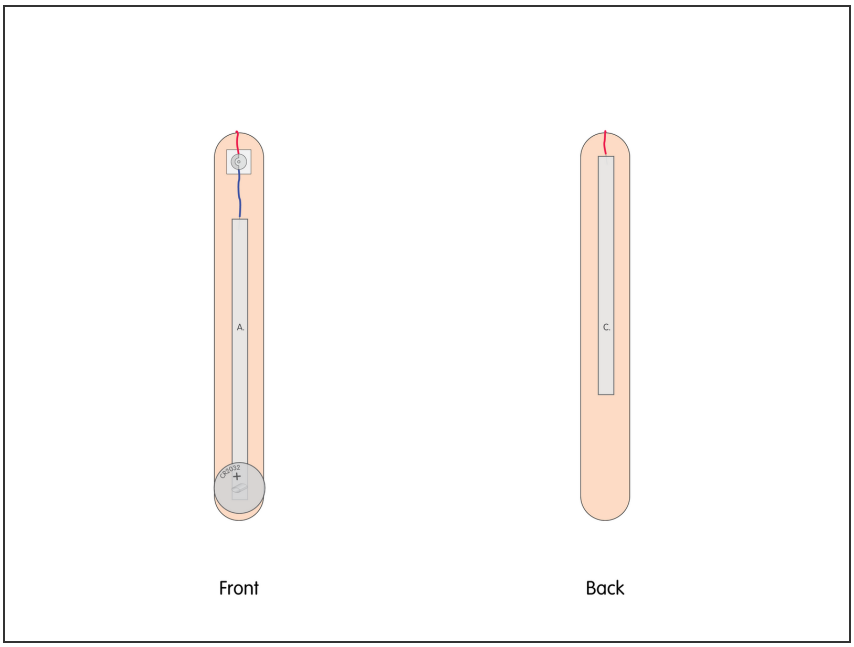
- Make sure the **Positive** side of the Battery is facing upwards, with the **Negative** side stuck down to the tape.

Step 7 — Wrap Wire to Back



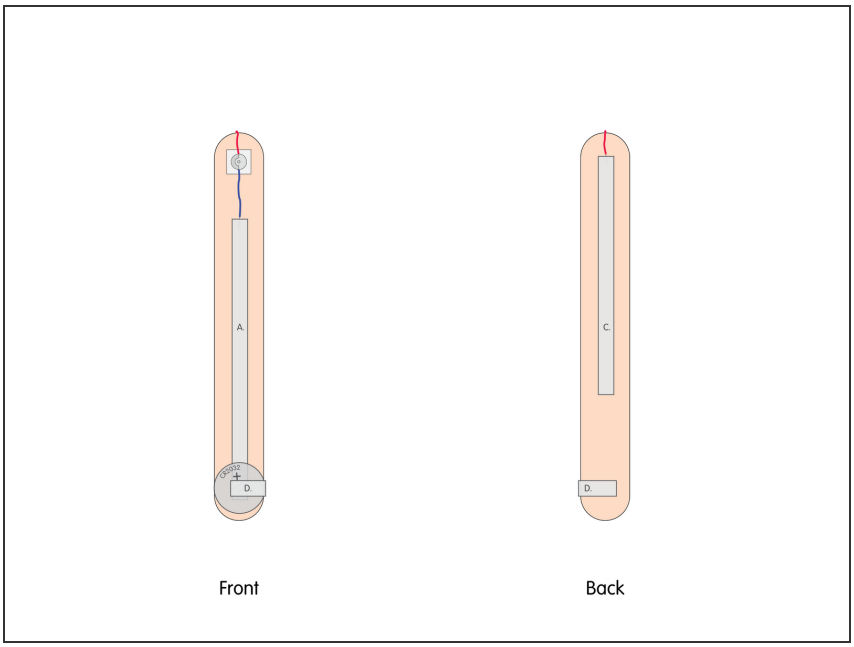
- Take the red wire and wrap it around to the back of the craft stick.
- We'll build the other half of the circuit on the back side.

Step 8 — Add Tape Path C.



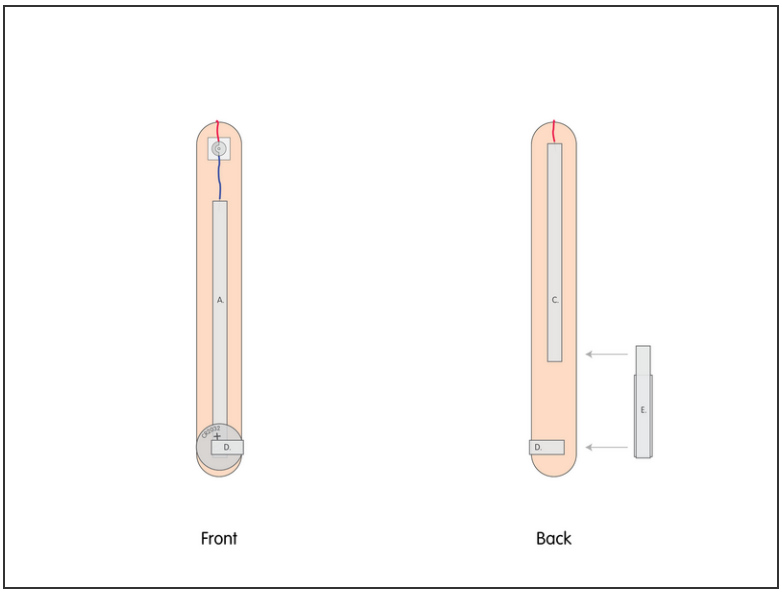
- **Add Tape Path C**. pressing it down atop the red wire, and then run it about 2/3rds down the length of the craft stick.

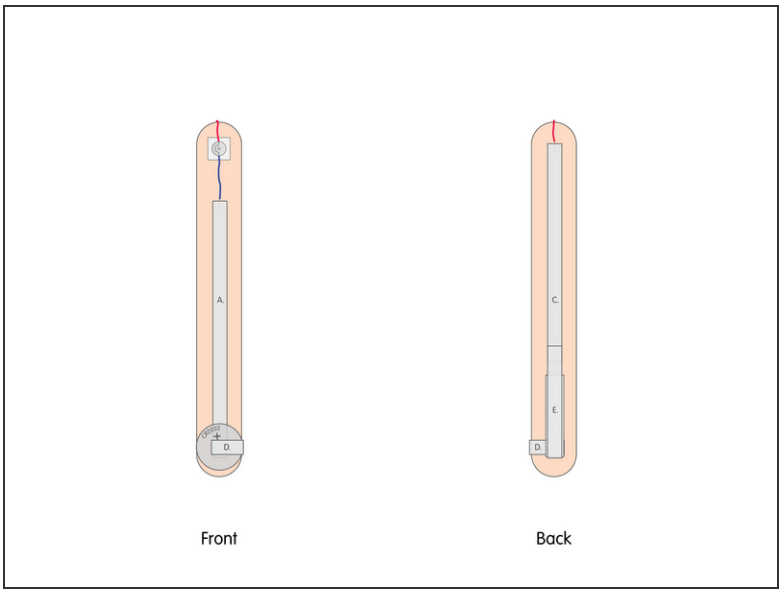
Step 9 — Add Tape Path D.



- **Add Tape Path D.** wrapping it around from the top of the Battery on the front, to the back of the craft stick.

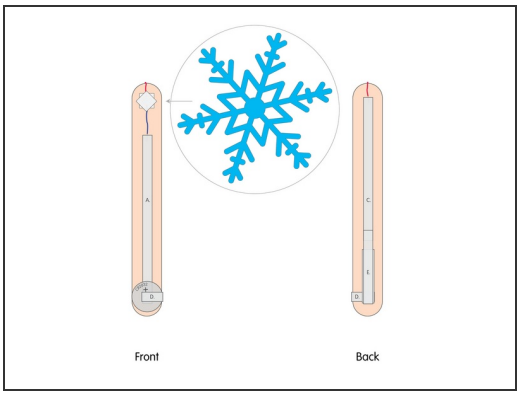
Step 10 — Add the Switch

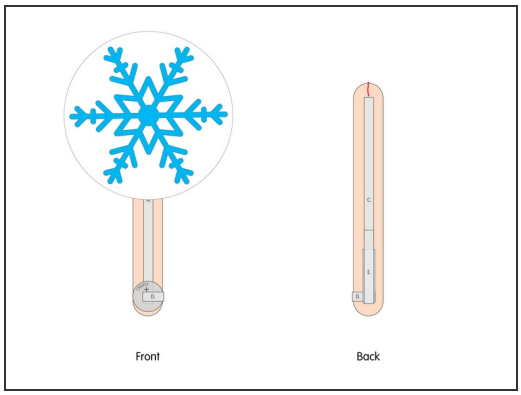




- If you haven't made a paper lever switch yet see the guide: Switch - Lever Switch
- **Add the paper switch to the end of Path C**. so that the Maker Tape overlaps.
- Make sure the other end of the paper switch comes in contact with Path D.
- If the switch does not reach the Path D. tape you can adjust and add more Maker Tape as needed.

Step 11 — Attach Snowflake to Handle



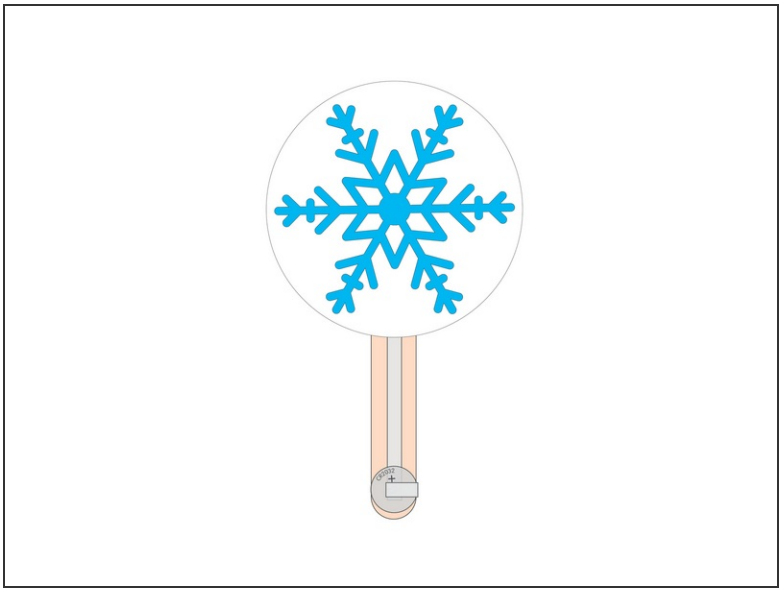




- Add another square of double sided tape onto the shaft of the motor, and then stick the snowflake to it.

- If you're using hot glue instead of double sided tape make sure to be careful when applying it so you don't glue the shaft to the motor housing. It needs to spin freely!

Step 12 — Spinning Snowflake Assembled





- Your spinning snowflake should look like this.

- We're now ready to test it out!

Step 13 — Test it Out!



- Press the switch down and see if your snowflake spins!
- If it doesn't work, make sure your switch is making contact...
- Make sure your motor can spin freely and doesn't have tape or glue impeding movement.
- If you still have issues, go back through the steps and make sure you didn't miss anything.