

## ELECTRIC COLOR SPINNER

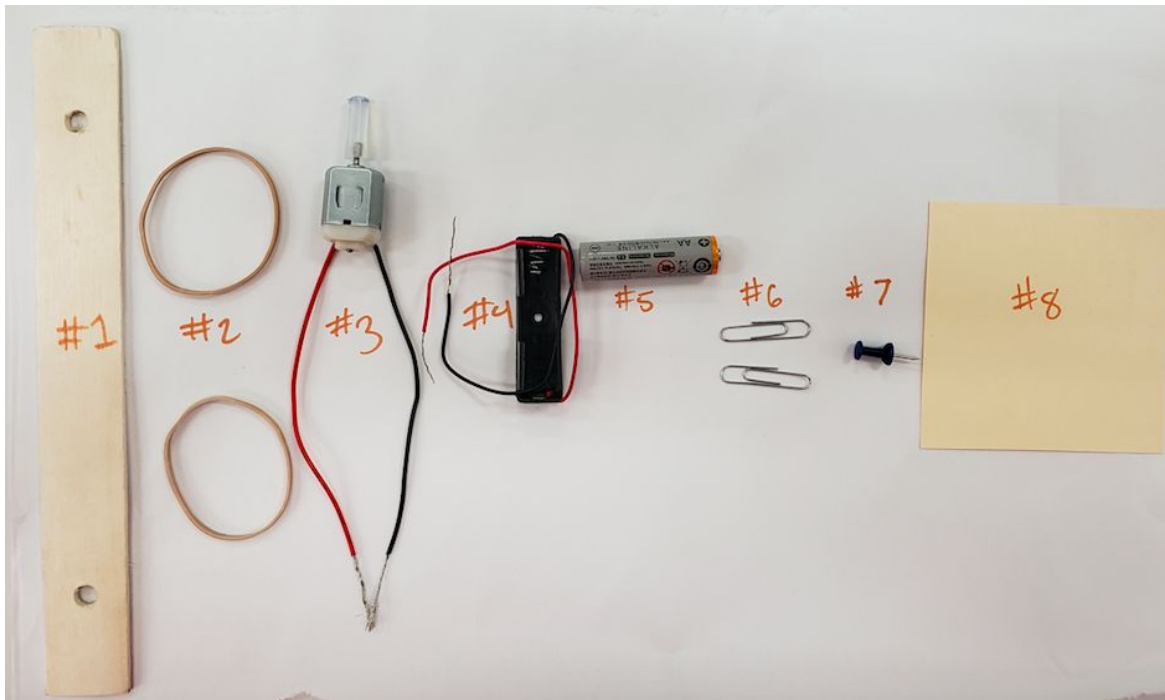
### Project #2

Ages 8+

Make your own motorized color spinner! In this project, you will connect a circuit that includes a motor to get a color wheel to spin. When it spins, you will see the colors “mixing”! This is because our eyes cannot see the individual colors when they are moving at a very high speed. Instead, we see the “average” of the colors.

**Tip:** Choose colors that mix together to make a color you like. Using primary colors works best!

### MATERIALS

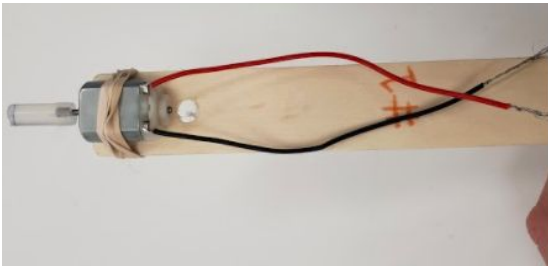


- #1. Paint stirrer
- #2. 2 rubber bands
- #3. Motor with red & black wire leads
- #4. AA Battery pack with red & black wire leads
- #5. AA Battery
- #6. 2 paper clips
- #7. Push pin
- #8. Square piece of cardstock

# MISSION SCIENCE WORKSHOP

## STEPS

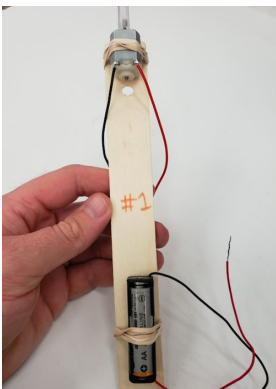
**Step 1.** Attach the Motor (#3) to the end of the paint stirrer (#1) using one rubber band (#2) so that the motor's point is off the end. Wrap the rubber band around the motor and paint stick until the motor doesn't move easily (at least 5 times.)



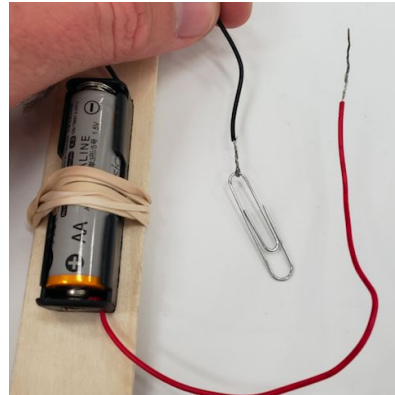
**Step 2.** Insert the AA battery (#5) into the AA battery pack (#4) – remember the flat negative end (-) presses down on the spring.



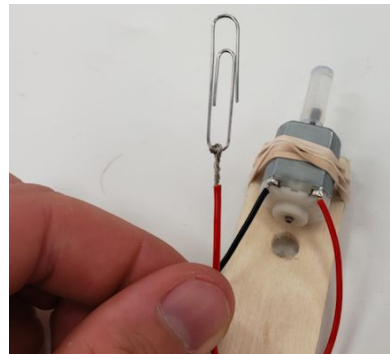
**Step 3.** Attach the battery pack (#4 and 5) to the paint stirrer by wrapping a rubber band around the battery until the battery pack doesn't move (at least 5 times.)



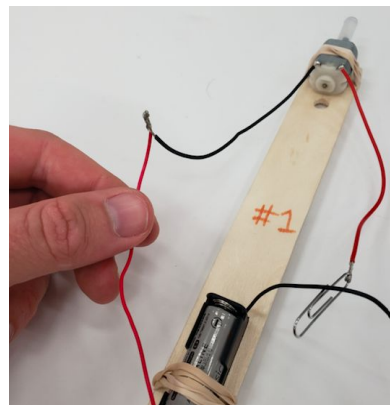
**Step 4.** Wrap the exposed metal wire from the black wire of the **BATTERY PACK** (#4) around the bottom of one paper clip (#6) so that the wire holds onto the paper clip.



**Step 5.** Wrap the exposed metal wire from the red wire of the **MOTOR** (#3) around the bottom of one paper clip (#6) so that the wire holds the paper clip to it.

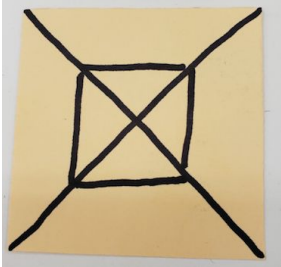


**Step 6.** Connect the red wire of the battery pack (#4) and the black wire of the motor (#3) together by twisting the metal together.

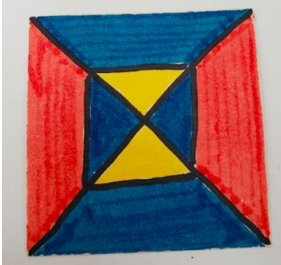


# MISSION SCIENCE WORKSHOP

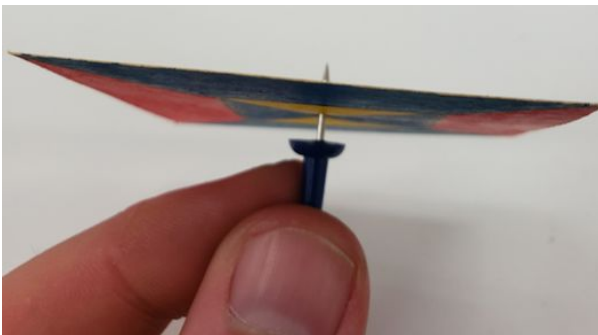
**Step 7.** On the square cardstock (#8) draw one of the patterns provided, or make up your own. Here's one example:



**Step 8.** Color in your pattern. It works best to alternate two primary colors (Ex: red & blue, blue & yellow, or red & yellow)



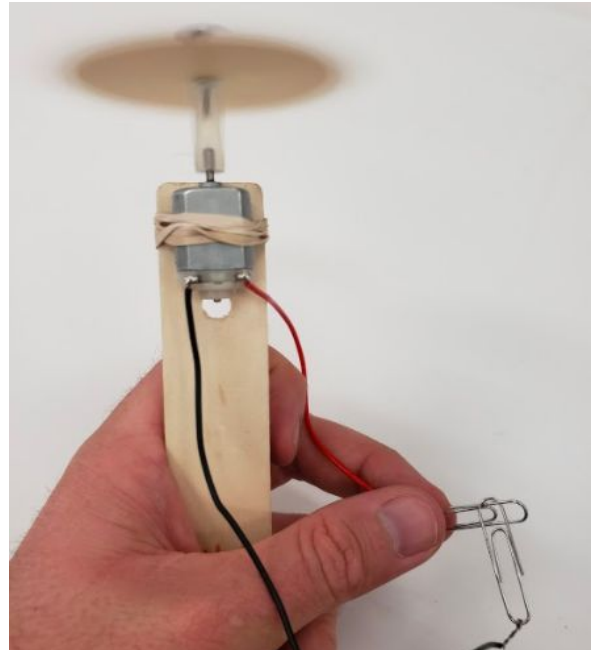
**Step 9.** Use the pushpin (#7) to poke a hole in the center of the cardstock (#8) with the pointed end on the opposite side of the colored end.



**Step 10.** Push the pushpin into the glue stick attached to the motor (#3).



**Step 11.** To get your color spinner to spin, touch the two paper clips together!



**Step 12.** Have fun! You can also use the other side of your cardstock to draw another pattern using other colors to experiment!