

ELECTRIC COLOR SPINNER

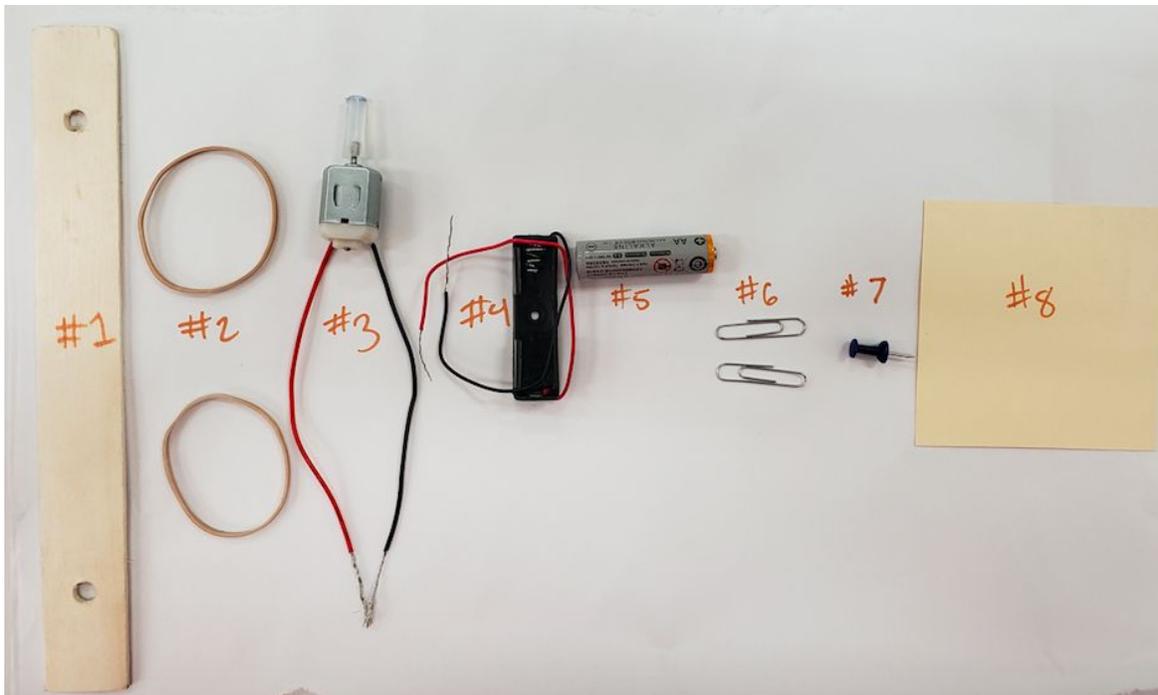
Project #2

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

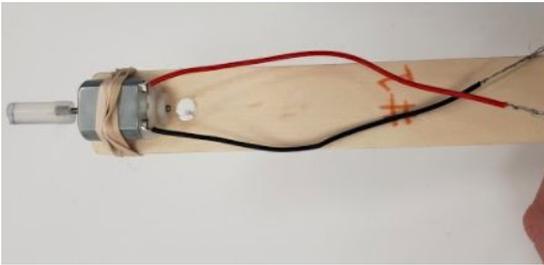


- #1. Paint stirrer
- #2. 2 rubber bands
- #3. Motor with red & black wire leads
- #4. AA Battery pack with red & black wire leads
- #5. AA Battery
- #6. 2 paper clips
- #7. Push pin
- #8. Square piece of cardstock

MISSION SCIENCE WORKSHOP

STEPS

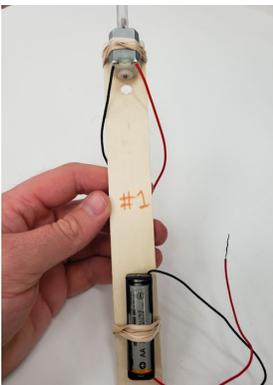
Step 1. Attach the Motor (#3) to the end of the paint stirrer (#1) using one rubber band (#2) so that the motor's point is off the end. Wrap the rubber band around the motor and paint stick until the motor doesn't move easily (at least 5 times.)



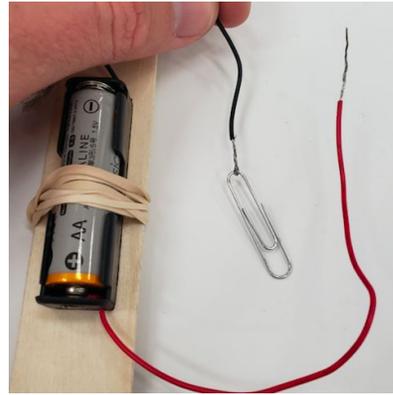
Step 2. Insert the AA battery (#5) into the AA battery pack (#4) – remember the flat negative end (-) presses down on the spring.



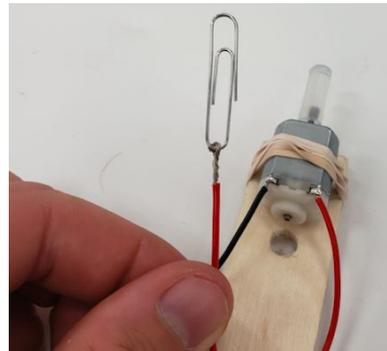
Step 3. Attach the battery pack (#4 and 5) to the paint stirrer by wrapping a rubber band around the battery until the battery pack doesn't move (at least 5 times.)



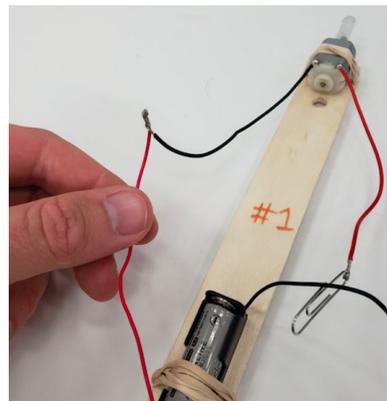
Step 4. Wrap the exposed metal wire from the black wire of the **BATTERY PACK** (#4) around the bottom of one paper clip (#6) so that the wire holds onto the paper clip.



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.

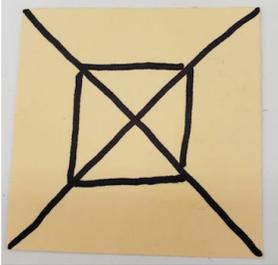


Step 6. Connect the red wire of the battery pack (#4) and the black wire of the motor (#3) together by twisting the metal together.



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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)



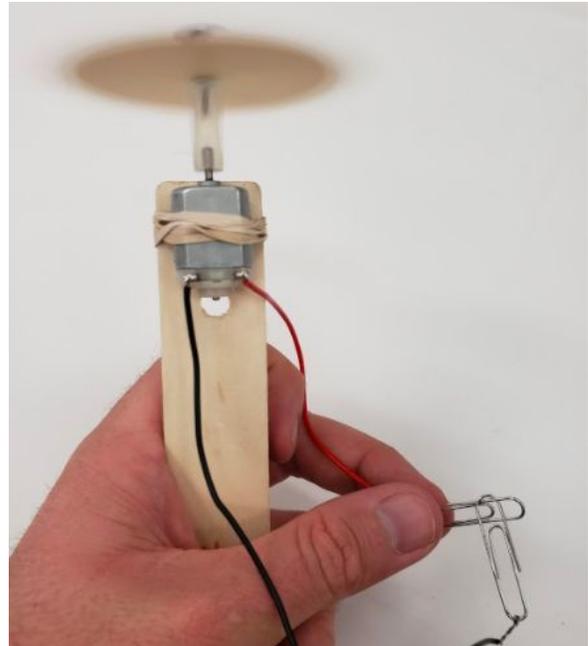
Step 9. Use the pushpin (#7) to poke a hole in the center of the cardstock (#8) with the pointed end on the opposite side of the colored end.



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!