



FIDGET SPINNERS

Engineering Meets Toy-Making

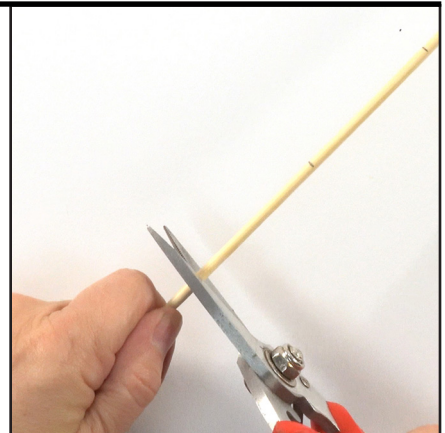
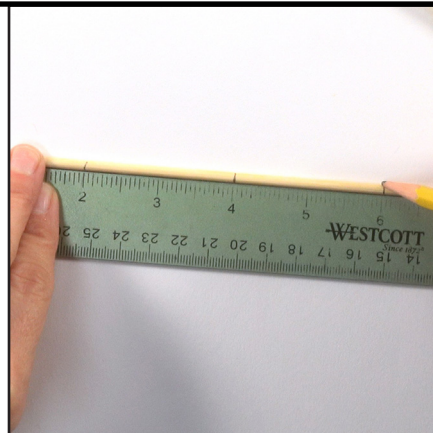
STEP 1

Collect Supplies. This is a great project to re-purpose scrap and spare parts ~ popsicle sticks, straws, caps, small craft items, etc. Print wheel templates onto cardstock. We also like to create a handy bin of cut parts for younger students and shorter Maker events.



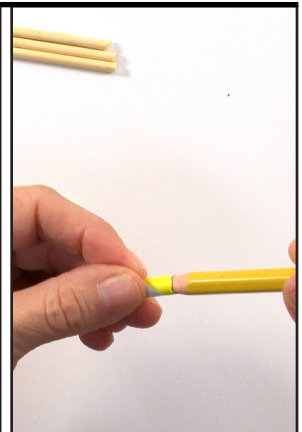
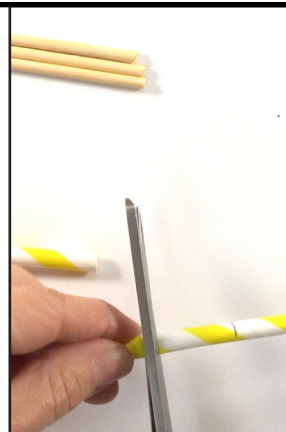
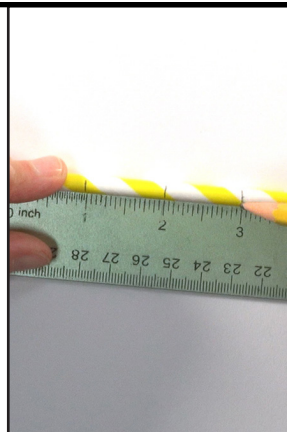
STEP 2

You will use bamboo skewers to create axles for your spinning system. Cut the skewers at 2" lengths. You can use pruning shears, large wire cutters or diagonal cutters to cut wood. We recommend pre-cutting parts for younger students.



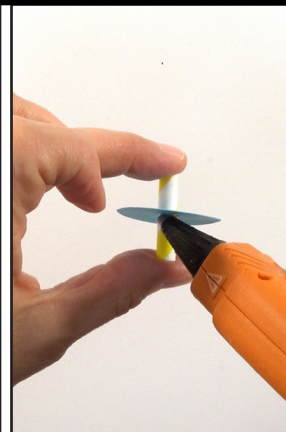
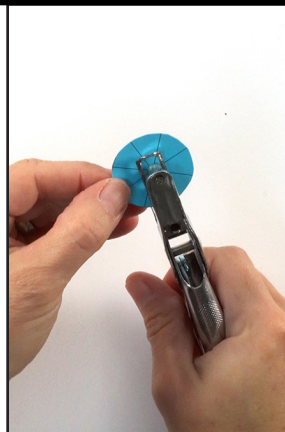
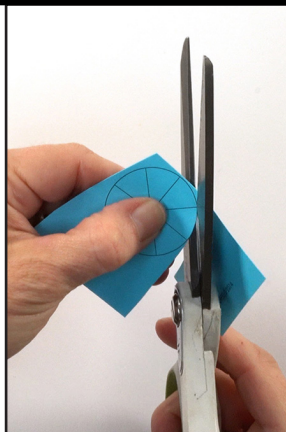
STEP 3

You will use paper straws to make bearings. Cut the straws at 1" lengths. When you cut the straws, the ends will squish. Insert a pencil and twist to make the holes circular again. This is called "reaming" and will prevent friction.



STEP 4

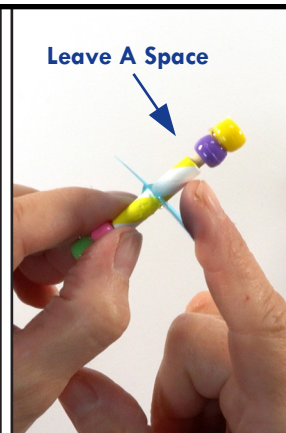
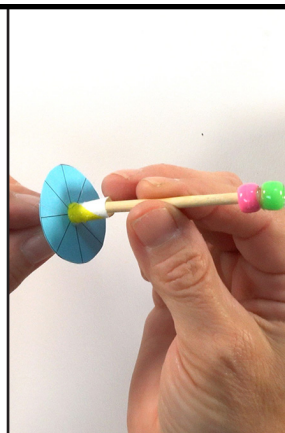
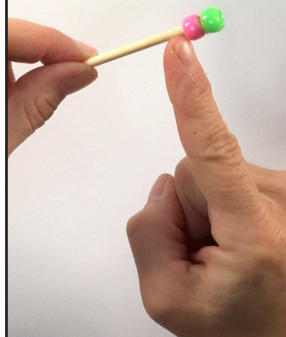
Cut out the cardstock wheel templates along the black circle line. Punch a hole in the center point with a standard hole punch. Insert the paper straw bearing into the hole. Hot glue the wheel to the straw at a perpendicular angle. Hold it straight as it dries.



STEP 5

Hot glue 2 beads to the end of your wooden axle. Glue between the beads so you don't get glue on the length of the skewer. Insert the axle through the straw bearing. Hot glue between 2 beads to add to the other side. Leave a little space between the straw and beads. Test your spin.

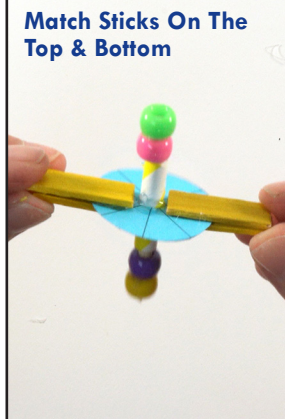
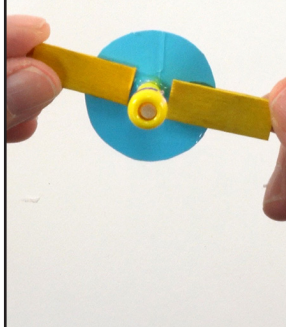
Don't Get Glue On The Exposed Wood



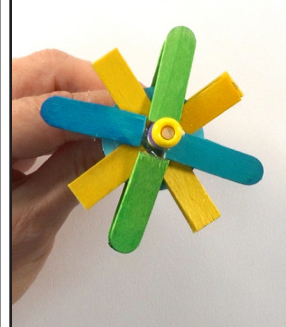
STEP 6

Add sticks and spare parts to create custom designs. Balance and symmetry is important. Hot Glue a stick to one side of your wheel and a matching stick to the other. Then repeat the design on the bottom of the wheel. Add sticks to make a cross shape. Then add sticks on the diagonal.

Match Sticks On Each Side



Designs Should Be Symmetrical



STEP 7

You can add decorative elements like beads, pom pom balls and sequins. Make sure to keep your designs balanced and symmetrical. Hold the fidget spinner between your thumb and finger and give it a twirl. Test and revise designs as needed.

