

Required Tools and Supplies

3d printed parts
Must be PETG not PLA
5 solid layers, 5 perimeters

1 Machine Screw, 10-24 Thread, 2" Long

1 Nylon-Insert Locknut 10-24 Thread

3 ft of String

A #2 Phillips Screwdriver

A Crayon

A Pencil



Test fit the axle and top

Make sure that the axle can slide freely on and off the nut on the top.

If needed clean up any blemishes that prevent the parts from fitting freely



Test fit the axle and handle

Make sure that the axle can fit and spin freely in the handle.

If needed clean up any blemishes that prevent the parts from fitting freely.



Lubricate the axle

3 Thoroughly color all of the bearing surface of the spinner axle with the crayon as shown in the circles.

This is required and will lubricate the axle.

The axle will seize without the wax from the crayon.



Install the axle cap

Put the cap onto the machine screw so that the head of the machine screw is recessed into the cap.



Insert the nut

Put the nylon side of the nut onto the pencil and use the pencil to insert the nut into the axle..



Complete the assembly

Use the eraser end of the pencil to hold the nut.

Insert the machine screw with the axle cap.

Tighten the machine screw with the screwdriver.

You can use the top as a handle to get it tight.

Make sure the cap and axle are tight against each other!



Prepare the string

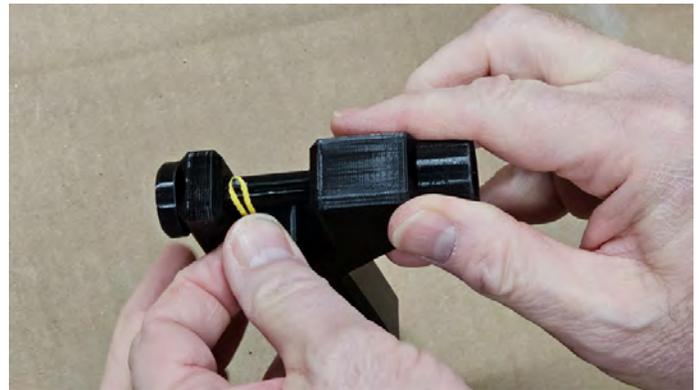
Cut a 3 foot piece of string

Tie a loop in the end of the string



Hook the string

Put the loop onto the spur on the axle



Wind up the string

Roll the axle to wind the string

Spin the top!!!

