THOMASVILLE
HISTORY CENTER

# DIY Spinning Top

**About Spinning Tops:**

A top is a toy that is made to whirl by twisting your fingers. The post has a disc threaded through it at the top or bottom that acts as a balance. Tops are thousands of years old.

Learn more:

- Spinning Tops History, Arts Mendocino, https://www.artsmendocino.org/wp-content/uploads/sites/www.artsmendocino.org/images/2016/11/Spinning-Top-History-Handout.pdf
- USYD "Physics of Spinning Tops," University of Sydney (Australia) http://www.physics.usyd.edu.au/~cross/SPINNING%20TOPS.htm

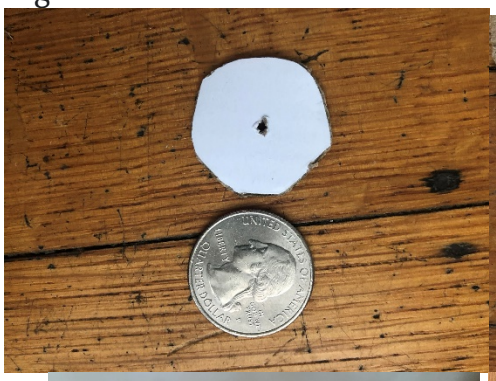
## Spinning Top

**Supplies:**

- 1 piece of cardboard
- Compass (you can also trace a quarter)
- Pencil
- Thumbtack or pushpin
- Toothpick
- Scissors
- Ruler
- Markers (optional)

**Instructions:**

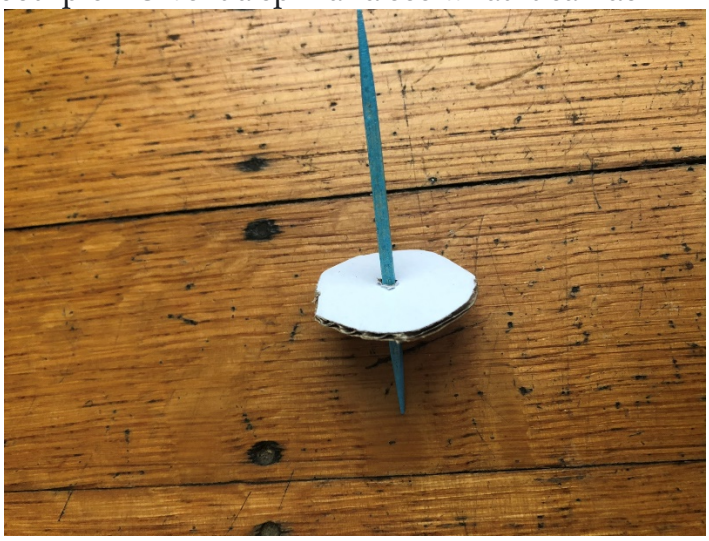
Step 1: Use a compass to draw a 3cm circle on a piece of cardboard. You can also trace a quarter and get the same result. Cut out the circle.



Set your compass to “2” on the CM side

Step 2: Use a ruler to find the center of the circle and mark with a pencil. Use a thumbtack or pushpin to poke a small hole in the center of the circle.

Step 3: Push a toothpick through the hole and settle the disc in either the top third or lower third of the toothpick. Give it a spin and see what it can do!



## Conduct an Experiment!

**Challenge**: Come up with a new design for a top that can spin for 30 seconds.
What would happen if you stacked 2 discs on the toothpick? What if you used a bigger disc? Try out a few different hypothesis and see what happens!

Use the steps of the Scientific Method to test your designs:

1. Ask a question
2. Gather information and observe (research)
3. Form a hypothesis (guess the answer)
4. Test the hypothesis (experiment and test your guesses)
5. Make observations and record the results
6. Draw a conclusion

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|---|---|
| **Ask a Question** ? | |
| **Research** | |
| **Hypothesis** | |
| **Test** | |
| **Make Observations & Record Results** | |
| **Conclusion** | |