



Everyday Engineering

Make a Spinning Top

What you need:

- CD, paper plate, cardboard circle, or plastic lid for the body of your top
- pencil, crayon, or marker for the axis of your top
- paper

Optional materials:

- marble, bouncy ball, or even an acorn
- pennies
- tape
- hot glue
- box or plastic tub
- paint (in a squeeze bottle)

Things to try:

- Try taping pennies near the edge of the top. Does this change how it spins? Tape pennies near the center. Which one spins faster? Longer? Does the number of pennies used change the spin?
- If you used a pencil or marker in the center do they leave marks on the paper when it spins? What do the marks look like?
- Draw designs on the tops and see how they look when the top is spinning.
- Experiment with circles and axis materials of different sizes. Try a short crayon with a bigger circle or a tall marker with a smaller circle. Then swap them around. Does one pairing spin better than another?

For a Little Something Extra—Make Spin Art:

1. Feel free to use the same style of top from above or try something new. For example, use a CD, plastic lid, or paper plate, hot glue a marble, bouncy ball, or even an acorn to the center of one side. On the reverse side, hot glue a crayon, marker lid, or something similar to use as a handle.
2. Cut paper to fit on the flat, spinning surface. Make sure you have a hole in the middle that lines up with the handle. Place cut paper on the top.
3. Place your top in a small box or plastic tub to keep the paint contained.
4. Start spinning the top. While spinning, gently squeeze paint onto the paper.
5. Get creative! Experiment with colors; what happens if you add two colors? Does it make a third color? What happens if you just add a drop of paint? Have fun!

What you do:

1. Carefully push a pencil, marker, crayon or similar through the center of whatever material you are using as the body of your top. You may need an adult's help to cut a hole if you are using plastic. The pencil, marker or crayon will act as the axis.
2. Put a piece of paper down on a smooth, flat surface.
3. Give your top a spin!

