

tricky thaumatrope

Create a couple of thaumatropes (spinning toys), take them for a spin, and watch them come alive in your hands!

You'll need:

- thaumatrope templates
- tape
- cardstock or paper
- scissors
- skewers



Before you start

Print the thaumatrope templates found on the third page of this PDF. Print on cardstock for better results.

robot animation

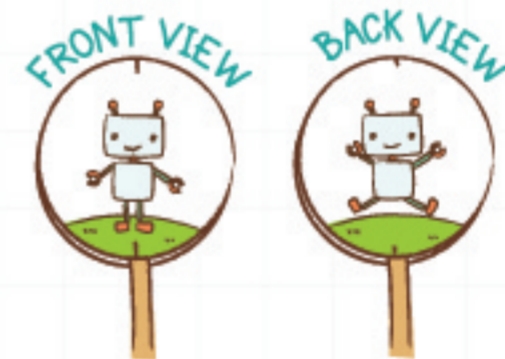
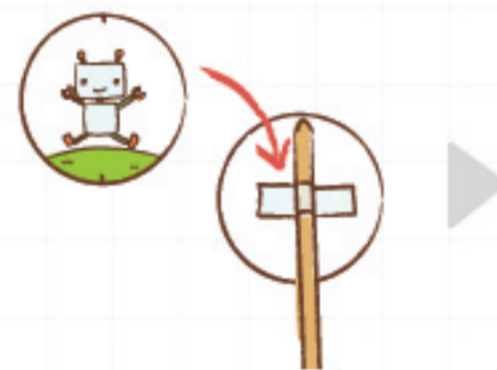
- 1 Cut out the circles on your jumping robot template.



- 2 Tape a skewer onto the back side of one circle so that it lines up with the dashes on the edge.



- 3 Tape the other circle on top of the skewer, making sure that the dashes line up.



You made a thaumatrope!
(THAW-muh-TROPE)

- 4 Hold the skewer between your hands, then rub your hands back and forth **slowly** to spin your thaumatrope. What do you see?



fishbowl trick

- 1 Repeat Steps 1-3 of the "robot animation" instructions to make your fishbowl thaumatrope.



- 2 This time, spin the thaumatrope **quickly**. What happens?



Use the blank template to make a third thaumatrope that's uniquely you!



When you were spinning your thaumatropes,
you were using . . .

SCIENCE

Before movies and animation were invented, **thaumatropes** (spinning toys made of two pictures — one on either side) were all the rage.

When your robot thaumatrope spins, your eyes and brain blend the two pictures together into a simple animation — your robot stands, then jumps, then stands, then jumps, and on and on (until your hands get tired)!

But your eyes and brain can do more than create the illusion of a moving image. They can also *completely combine* two images! That's what happens when you spin the fishbowl thaumatrope quickly — you see both pictures at once, and the fish looks like it's safely back inside the fishbowl.

template

