

Thaumatrope: Make Your Own Optical Illusion



<http://brightbytes.com/collection/thaum.html>

Alice T. Miner Museum

Chazy, NY

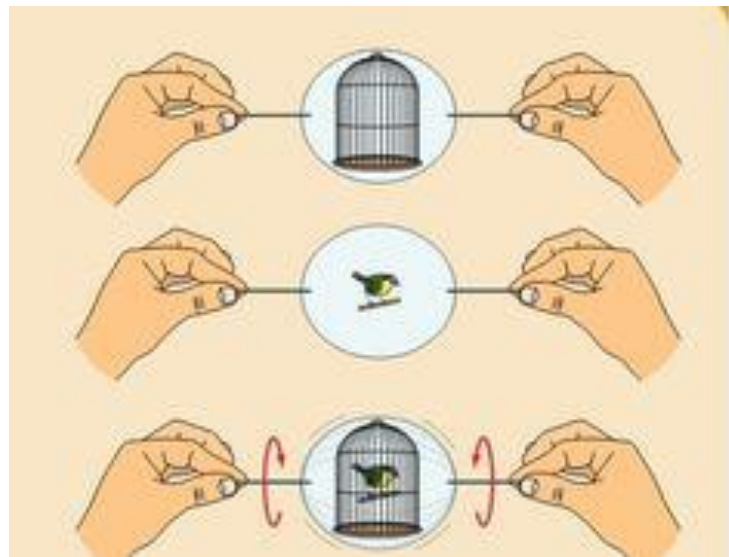


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What Is a Thaumatrope?

Thaumatrope, which were invented in Britain in the early 1800s, use an optical illusion to make us see moving pictures. Two images, one on each side of a card or disk, are spun quickly back and forth so that both images appear to the eye at the same time.

When you spin the thaumatrope, the pictures move so quickly that your eyes and brain can't see them separately. Your brain holds onto each image for a fraction of a second after seeing it—an effect called **persistence of vision**. When the second picture comes into view, your brain is still holding onto the first, and blends the two images into one.



from Andrew Cross

This effect can be used to make two separate pictures look like they are overlaid, like in the picture above, or can be used to make one image look like it is moving slightly.

Thaumatrope Materials

Thaumatropes are very simple to construct, and you only need a few supplies.

Thick paper or cardboard to construct the disk. You can cut out one circle of cardboard and draw on both sides, or cut out two circles of stiff card or paper to glue together, or draw your design on regular printer paper and then glue them to something tougher. A thicker, stiffer circle will stay straight and spin better.

Scissors or an **X-acto knife** (with adult supervision!) to cut out the disk/designs and make holes for string (if you have a **hole punch** for the last part even better!)

String, yarn or twine (2 pieces about 10" long) to spin the thaumatrope.

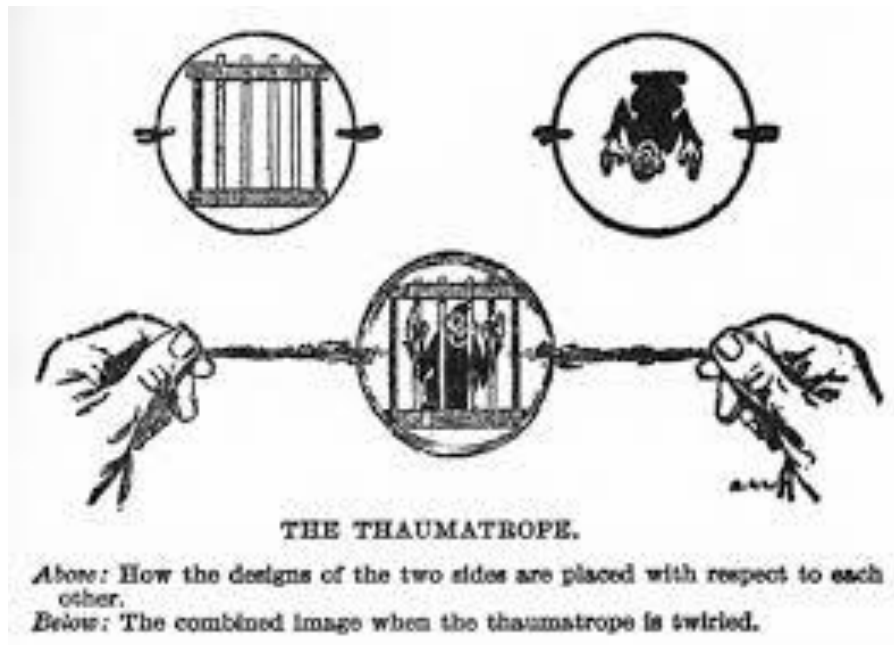
Pens, pencils, crayons or markers to draw or color in your designs!



John Ayrton Paris's original thaumatrope set.

How to Make Your Thaumatrope

Color in a pair of the images on the following pages (or draw your own design in a blank pair of circles), and cut a cardboard circle to match if needed. Glue the two pictures together or to the cardboard circle, remembering that when one image is upside up, the other side needs to be upside-down for the optical illusion to work:



After your designs are in place, punch a hole in each side of the disk (as shown above). Tie a piece of string through each hole so you have a “tail” to hold onto at each side. To use your thaumatrope, “wind” it by twisting the strings repeatedly, then let go and watch the image you’ve created!

SAMPLE THAUMATROPE DESIGNS

(to color in and cut out—or design your own!)

