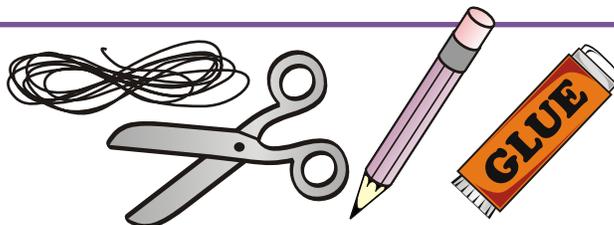


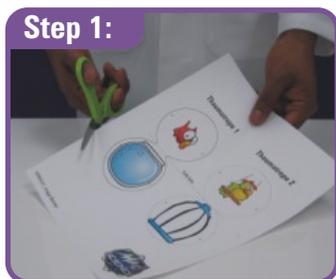
## What you need:

- String
- Scissors
- Sharp pencil
- Glue stick
- Printed thaumatrope images – bird and cage, fish and bowl



## What you do:

- Step 1:** Cut out one set of two circles – either the bird and cage or the fish and bowl. Keep the two circles attached to each other.
- Step 2:** Use the pencil to punch holes through the two small circles marked at the edges on each of the two paper circles.
- Step 3:** Spread glue on the blank side of one paper circle. Fold the other paper circle down to glue the two blank sides together. Make sure to line up the holes.
- Step 4:** Cut two short lengths of string, each about 30cm (12") long.
- Step 5:** Tie one string to each hole. This is your thaumatrope!
- Step 6:** To use your thaumatrope, hold one string in each hand, and spin the thaumatrope like a skipping rope to wind it up. Gently pull the strings to unwind them and look at the center of the spinning thaumatrope. What do you see?



## What's going on:

The name thaumatrope ("THAW-ma-trope") has Greek roots. In English, it means, "wonder turner". If you spin the thaumatrope quickly, you see the bird inside the cage, or the fish inside the fishbowl. If you spin it more slowly, you will see more flickering between the two pictures. Your eyes see two images as one image if they move fast enough. You see the same thing happen when you watch a movie – this is due to a phenomenon called "persistence of vision".



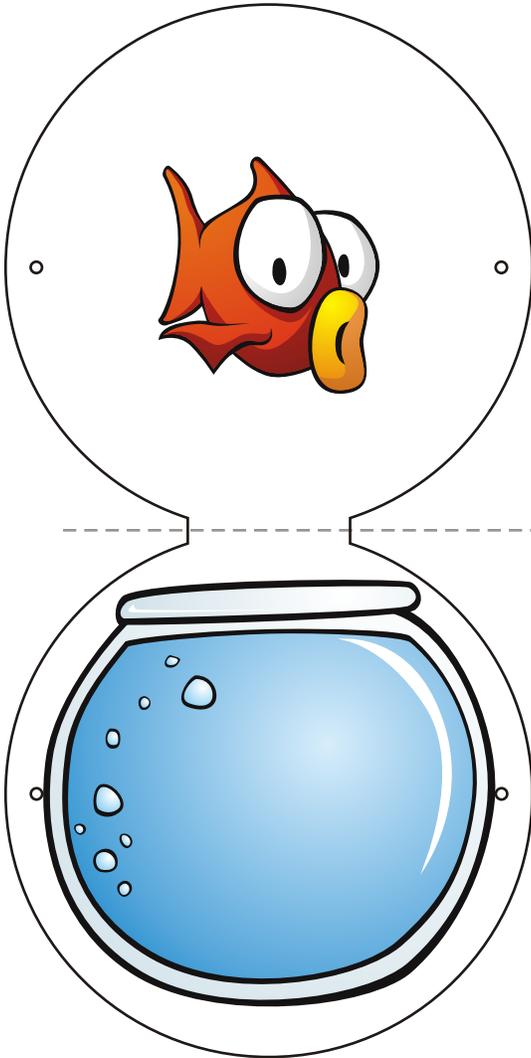
## Now try this:

You can draw your own images to create a new thaumatrope! Draw two images that will overlap, or draw two halves of a picture that will make a whole. Make sure that one image is upside-down relative to the other image. Put the two images back-to-back and look at them against a light. They should line up! Here are some examples of pictures you can try out:

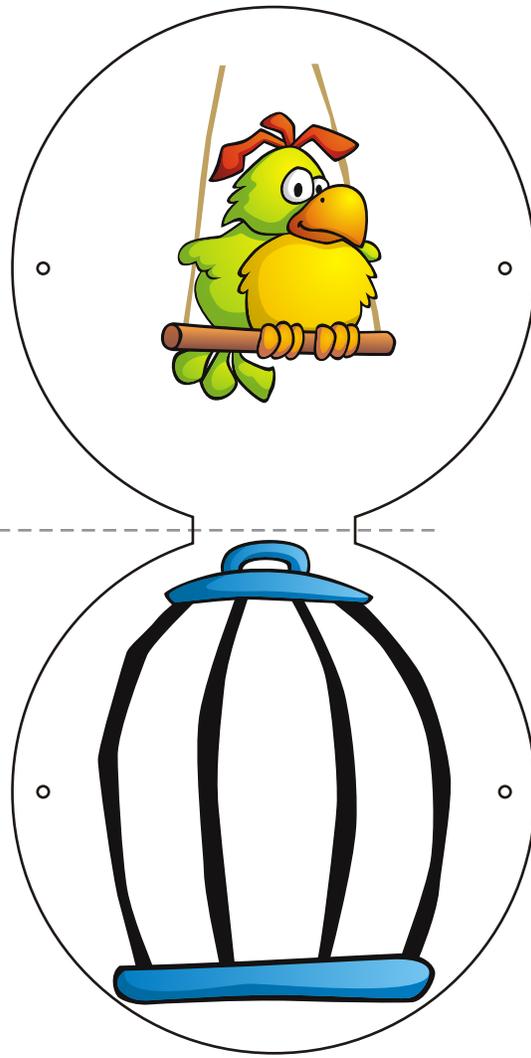
- Flowers in a flower pot
- Head with a face
- Bug in a jar
- Car on a racetrack
- Leaves on a tree
- Spider on a web



# Thaumatrope 1



# Thaumatrope 2



Fold Line

