

About the Zoetrope

The zoetrope (ZOH-trope) was actually invented twice. It was first invented by William Horner in England around 1834 where people called it the “wheel of the devil,” and then again by Pierre Desvignes in France around 1860 where it was renamed the Zoetrope which means “wheel of life.”

The galloping horse movie shown in your zoetrope is based on the pioneering experiments in photography conducted by Edweard Muybridge. In 1872, Governor Leland Stanford of California (who also owned a profitable railroad company) hired Muybridge to photograph a horse in motion in order to settle a bet for \$25,000 and a question which had bothered artists for centuries: did a galloping horse ever have all four legs in the air at the same moment? Ingeniously, Muybridge set up a series of 17 cameras with high-speed shutters that would be triggered by strings which the horse stepped on as it went by. In this way, he took a series of photographs that proved the governor was right: horses do indeed have all four legs tucked under them as they gallop. Muybridge later discovered that the zoetrope was a perfect way to display his horse pictures.

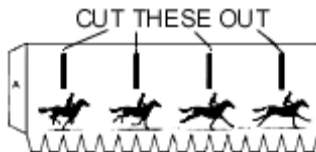
Making Your Own Zoetrope

Materials Needed:

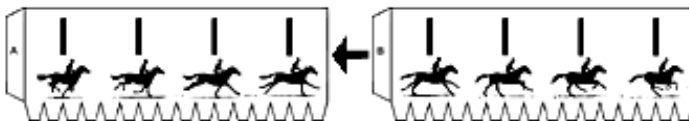
- scissors and/or a craft knife
- glue
- construction paper or cardstock
- a thumbtack or pushpin
- a pencil with an eraser

Directions:

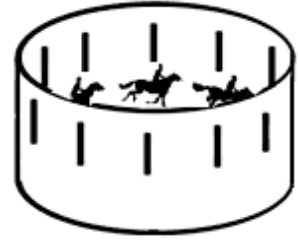
1. Take the pattern for the base of the zoetrope and glue that page to your sheet of cardstock or construction paper. Set it aside while it dries.
2. Cut out the three zoetrope strips (labeled A, B, and C). Make sure that you cut just behind the black line on the right end of the strips so that it won't interfere with the animation (you don't want the black line showing up in your zoetrope sequence).
3. Using the craft knife, cut out the black rectangles above each horse.



4. Glue or paste tab B (found on strip B) onto the right edge of strip A. The line that separates tab B from strip B should be just barely covered by strip A (so that it won't interfere with the animation). Keep the strips as straight as possible.



5. Do the same thing with strips B and C.
6. Glue tab A to the right edge of strip C to form a loop. The horses should be on the inside of the loop.
7. Now return to the base of your zoetrope and cut out this disc.
8. Glue the assembled strips (the ones with the horse animation) to the base of the zoetrope using the saw tooth tabs.
9. Push a thumbtack or pushpin through the center point of the base. Then push the thumbtack into the rubber eraser of a pencil.

**How to Operate the Zoetrope:**

Put the zoetrope under a bright light like a desk lamp. As you spin or twirl the zoetrope, look through the outer slits at the image opposite you and you should see the horse running. Try spinning it backwards or at different speeds for fun. If you happen to have an old record player at home, you can just cut a hole in the center of the zoetrope for the record player's spindle, then set the zoetrope on the turntable and turn it on.

