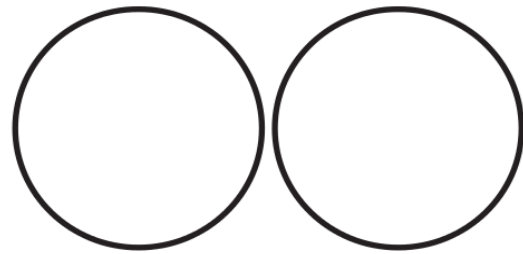


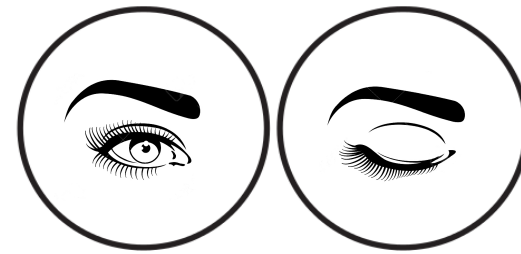
Making Thaumatrope

A **thaumatrope** is a classic optical illusion toy consisting of a two-sided card with two different pictures on each side. When spun rapidly the two pictures appear to combine and create an illusion.

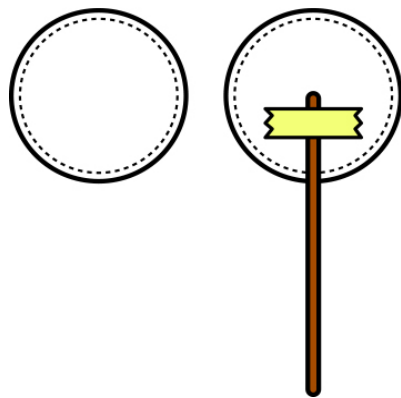
HOW TO MAKE A THAUMATROPE?



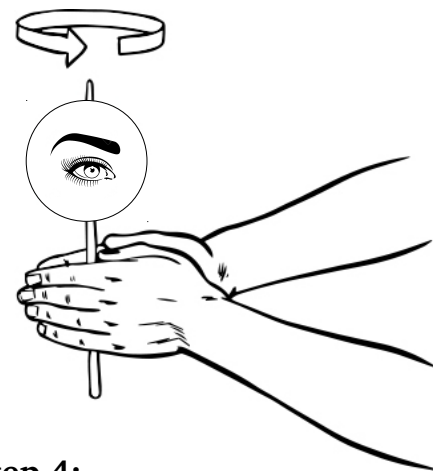
Step 1:
Cut two identical circles on a thick paper.



Step 2:
Draw complementary images on each of the circles. For example, here we see an open eye on one circle and a shut eye on the other circle.



Step 3:
Lay the circles back to back, and paste them with a stick in between.



Step 4:
Hold the stick in both your palms and spin to see the action.

Make another thaumatrope with your choice of drawing.

Background

In the 19th century, John Herschel spun a coin vigorously on the table, making both sides of the coin visible to the eyes at the same time (Babbage, 1864). The thaumatrope is a toy developed by William Henry Fitton using the same principle. The word thaumatrope from ancient Greek would translate to “wonder turner”. Thaumatrope are antecedents of motion pictures and in particular of animation. It comprises of a two-sided card with two different (complementary) pictures or patterns on each side. When spun rapidly, the two pictures appear to merge and create an illusion of one complete picture or depict movement. The key to making a working thaumatrope is in the selection of images and proper alignment as well as correct placement of the images to strategically create a new image.

The activity of making a thaumatrope can enhance the understanding of concepts of vision, perception, sequencing & measurement. It can help in improving visualization skills and hand-eye coordination, and gives an opportunity to showcase one's creativity by selecting novel images.

Earlier research has studied the benefits of teaching animation to children (Ehrlich, 1995). It has also focused on the use of motion animated storybooks and their effects on children's visual attention and story comprehension (Takacs & Bus, 2016). Studies have specifically looked at the use of animation in STEM education (Harrison & Hummell, 2010) and how film-making could involve students in iterative experimentation, reviewing, redrafting and collaborations (Cannon, 2018).

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