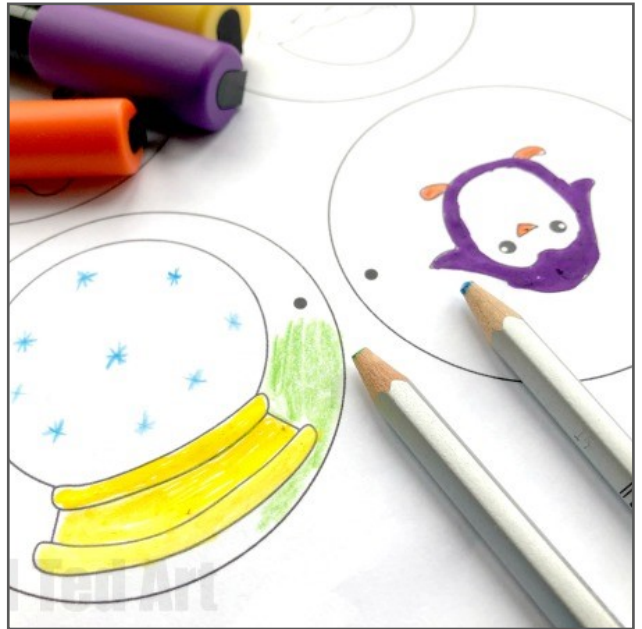


STEM Exploration

SNOW GLOBE THAUMATROPE



Create an optical illusion that blends two pictures into one!

Materials Provided:

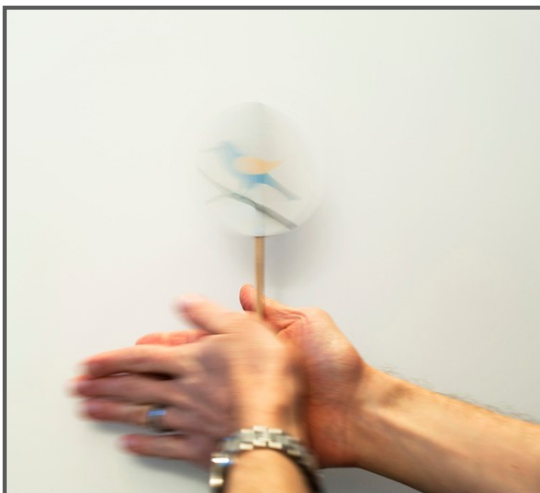
(3) Paper Templates
Paper Straws

Materials Needed:

Markers, Crayons
Tape, Glue
Scissors

INSTRUCTIONS:

1. With this project, you can make 3 thaumatropes, which are simple toys that work by creating an optical illusion. To get started, color in the images on either template #2 or #3, or both.
2. Cut out the templates you've colored. You can cut out both circles completely, or leave them attached where they touch in the middle. These circles will be glued back to back, so it might be easier to leave them attached in the middle and fold one over the other.
3. Place a paper straw between the two circles, with the pictures facing out toward you. If your circles are attached, fold one side over the straw.
4. Glue your two circles back to back, with the straw in the middle. You may need to tape the straw to the back of your circle to keep it secure.
5. When you're finished, you should have something that looks like a lollipop, with the straw sticking out from the bottom of your templates to act as a handle. One side of your glued template should show an empty snow globe, and the other side either a penguin or a snowman.
6. To use your thaumatrope, spin the straw between the palms of your hands to make the images at the top rotate! The faster you spin, the better the images will blend together. Repeat with your second template, and then design your own thaumatrope using blank template #1!



WHAT IS A THAUMATROPE?

Thaumatropes are very simple optical illusions, that work because of the ways our eyes process images. Specifically, they work because of something called **Persistence of Vision**.

When we see an image, our eyes keep responding for a short time (about 1/30th of a second!) after the image itself has gone away. If a new picture appears just before the first one has faded away, your brain blends the two together!

You can make your own thaumatropes, and one blank template has been included for you to try it. Think of two images that can combine together -- like a fish (on one side) swimming inside of a fish bowl (on the other), or maybe a flower (on one side) blooming inside of a flower pot (on the other). Be creative, and draw your own designs to see how they combine together!



This project was provided by Red Ted Art. Visit www.redtedart.com for more projects, printables, and to watch videos of a thaumatrope in action!