

**History Boredom Busters!**  
***Fun & Games***  
***Whirligigs & Thaumatrope***

Historical Context

Through the ages, people have used their imagination and common materials to invent toys. We do not know who invented the first whirligig, but we do know that children on several continents have played with whirligigs for centuries. Whirligig-like toys are written about in Europe as early as the 17th century. Many Native American whirligigs made from bone and clay have been found in America. Because this toy is easily made with common materials, children from the colonial period right up to the present day have enjoyed it!

The thaumatrope was a popular toy during the Victorian era. It's made from a disc or card that has a different picture on both sides and two pieces of string. Winding up and releasing the strings rapidly spins the card. As the card rotates, the two images appear to combine because of **retinal persistence**. The thaumatrope was invented by John Ayrton Paris (1785-1856), an English physician, in 1825.

Key Words

*Retinal Persistence* - A visual memory that persists for a very, very short amount of time after we see something. Retinal persistence is the reason for optical illusions like the thaumatrope.

*Whirligig* - An object that spins, or whirls



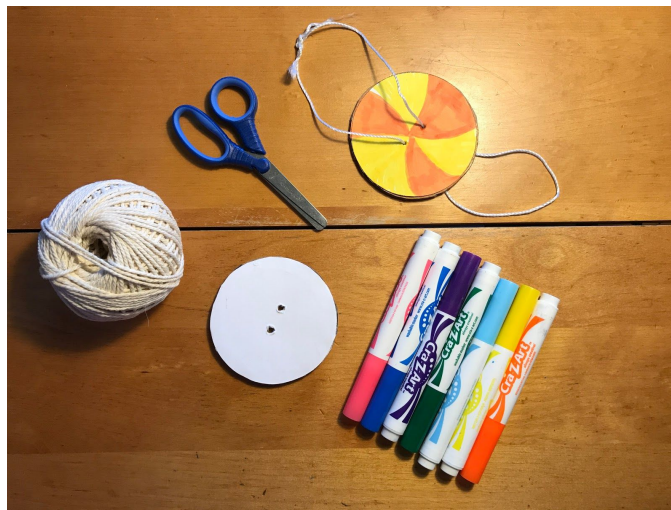
Photo Credit: NPR

Activity : Whirligigs

Supplies

- Whirligig discs (prepared in advance using the template)\*
- Markers/crayons
- String
- Scissors (to cut string)

\* If you have cardstock, cut two circles out and glue together. If you do not have card stock, you can glue one circle to a piece of cardboard, cut out the circle from the cardboard, and then glue the other circle on the other side. When gluing try to line up the dots in the center of the circle. Have an adult use a sharp object like a nail to poke two holes in the center of the circle.



Instructions

1. Decorate your whirligig disc with crayons or markers.
2. Cut a piece of string approximately 2.5 - 3 feet long per whirligig.
3. Thread the string through one hole in the whirligig and then back through the other hole. Tie both ends of the string together into a knot so the string is looped. If you have difficulty, wrap a piece of tape around the end of the string to make a needle.
4. Center the whirligig on the looped string. Hold one end of the loop in each hand. Then swing the whirligig around in a circular motion to wind the string.
5. Once it's fully wound, move your hands slowly in and out a couple of inches. It takes practice! As you pull your hands in and out, the disc will spin back and forth as it unwinds and rewinds the string.

Activity 2:Thaumatrope

Supplies

- Template printed on card stock\*
- Rubber bands
- Hole punch
- Glue stick
- Scissors
- Crayons/markers (optional)

\*If you don't have cardstock, glue a thin layer of cardboard in between the two paper circles to stiffen the disc.



Instructions

1. Color and cut out the two sides of the thaumatrope.
2. Glue the two sides together. Glue the images upside down from one another with one side facing up and one side facing down and the images facing out on both sides. Try to line up the holes on the sides.
3. Hole punch both sides.

