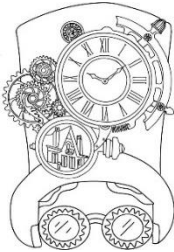


Victorian Time Traveler Kit

Engineering Activity:

Photography & the Magic Wheel



In this activity, learn about photography, which progressed rapidly in Victorian times, and make a Magic Wheel optical illusion.

Supplies Needed: large circle (manila folder), Magic Wheel template, pencil or pen, scissors, glue, thumbtack, pencil

Time: Approximately 45 min – 1 hour

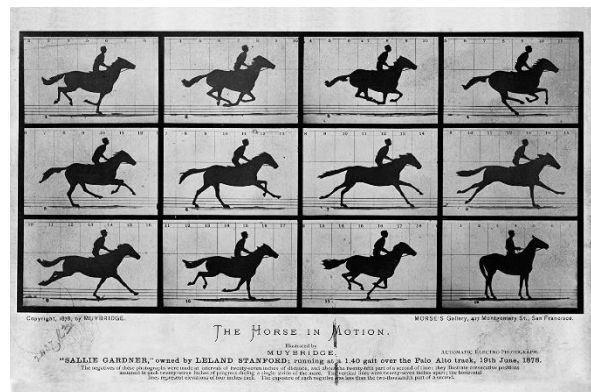
The MAGIC WHEEL, or Phenokistoscope, was first conceived in 1839 as a way of illustrating an optical illusion called the persistence of memory, where the brain fills in gaps of what the eye sees. It was the first animation device that paved the way for the motion picture and film industry. A spinning cardboard disc with a vertical handle, the Magic Wheel featured small slits, which the user would look through in a mirror while spinning the disc, making the individual pictures drawn or printed on the disc to flow together. This creates the illusion of a “moving picture,” or film.

The famous English photographer Eadward Muybridge created a projector for the Magic Wheel, that he called a Zoopraxiscope. He painted images on glass discs of a running horse, which was the first example of the stop-motion technique ever recorded.

We can create a MAGIC WHEEL of our own to create this animation technique. Use the link provided in the download kit for video demonstration.

Here, we see the first MAGIC WHEEL (on left) and the images that Muybridge created (on right). Follow this link to see them in motion:

<https://www.youtube.com/watch?v=heRuLp7CyTM>



Advances in photography during the 1800s allowed scientists, researchers, artists, and everyday people to record images easily for the first time. The daguerreotype, invented by Louis Daguerre in 1839, worked by exposing sensitive metal plates to a long exposure of light, which inscribed the “picture” on the plate, which was then developed in a darkroom using different chemical solutions.

The Körner family, especially Jule, used this new technology to record images of his home, his family, and his interior designs, which he used to promote his business. In this family portrait below we see Jule, Gilmer, Doré, and Polly Alice (clockwise) assembled in the Reception Room of Körner’s Folly in an image taken about 1910.

If you look closely, you can see some of Jule’s original furniture designs, as well as an unusual rug! You might also notice that it seems as though Polly Alice has her eyes closed, and that Gilmer is looking away from the camera. This frequently happened in early photographs, when a long exposure time meant having to sit very still for several minutes. Often, this would result in less-than-perfect photographs that we might discard today. But in Victorian times, photography was expensive, difficult, and rarely thrown away.

