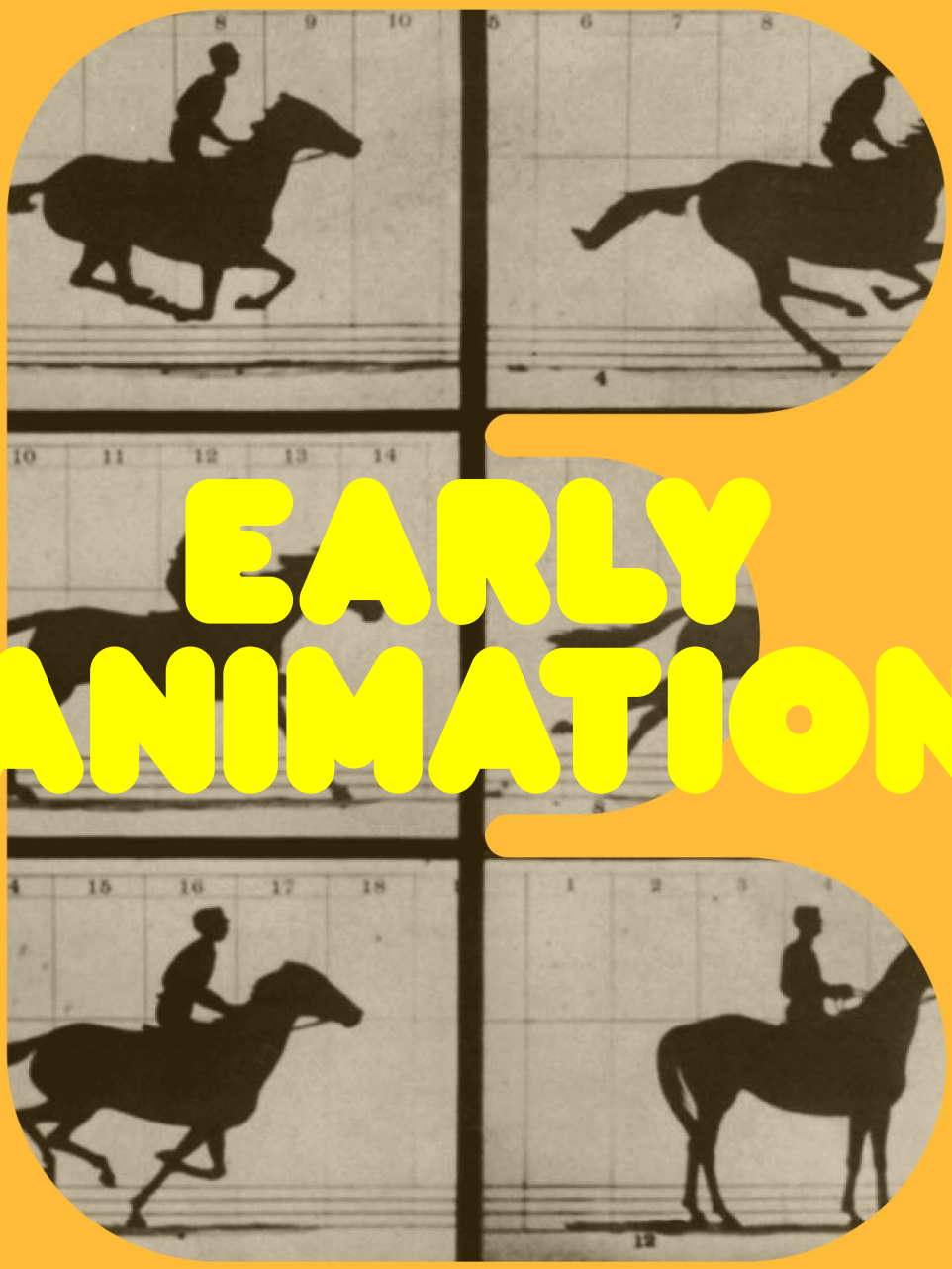
INTO FILM

MINI FILMMAKING GUIDES



EARLY ANIMATION

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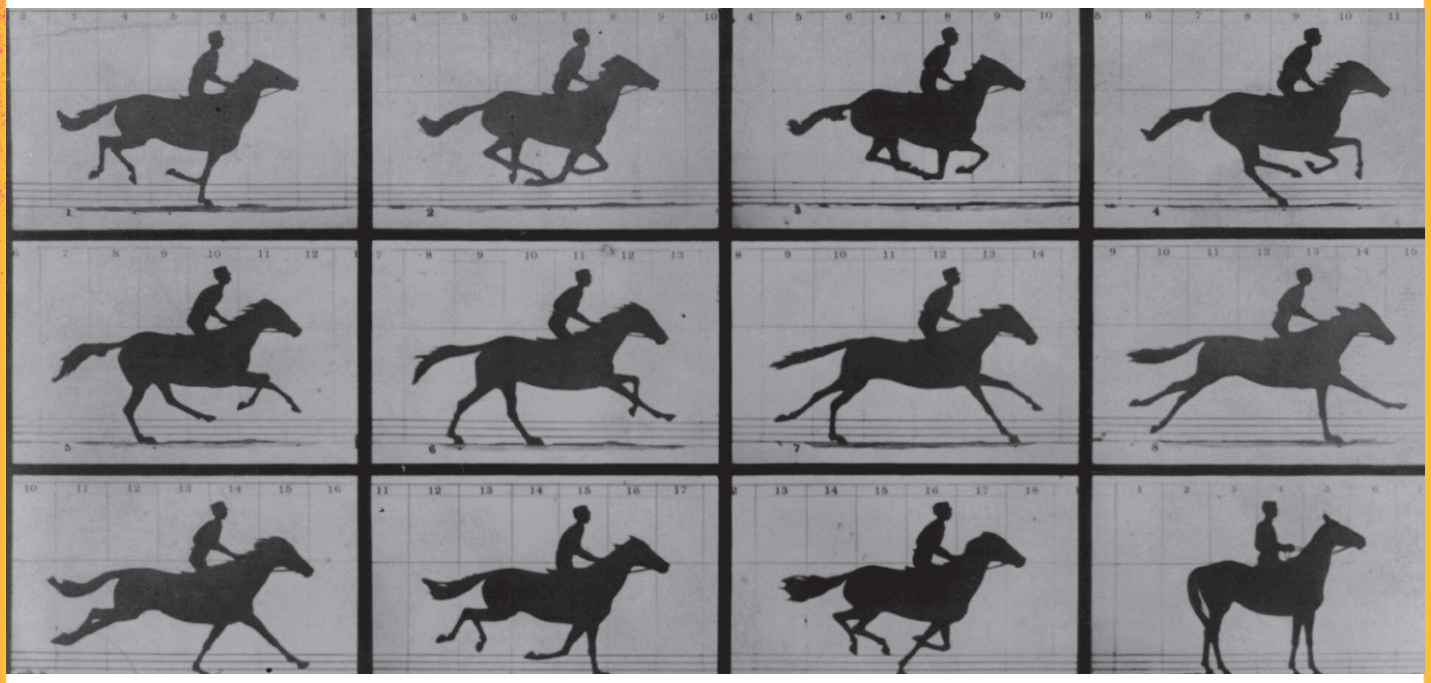


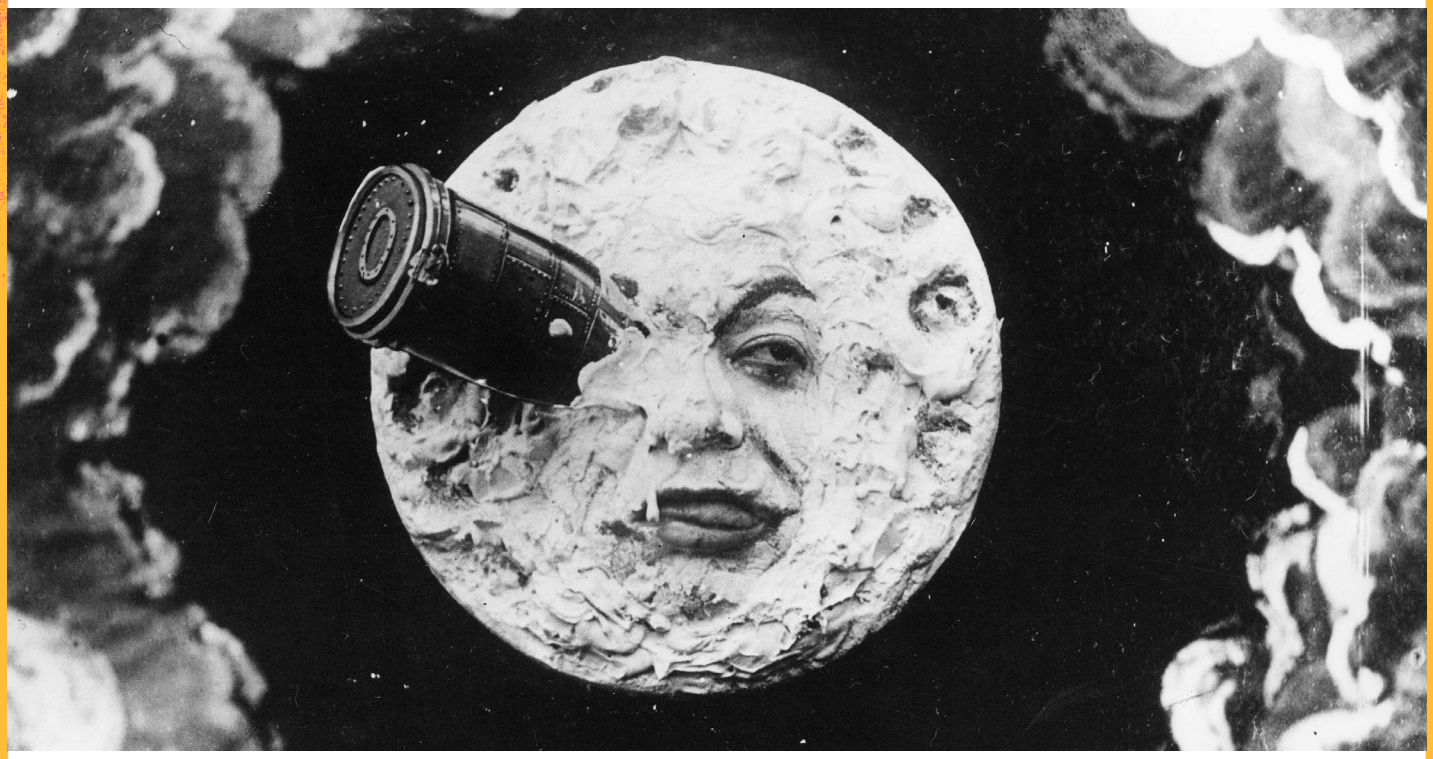
How it works

Animation creates the impression of movement through an optical illusion referred to as the **persistence of vision**. The eye retains an image for a split second after it has actually been shown. Animation works by presenting slightly different images in quick succession, with the persistence of vision filling in the gap between each image and allowing for the illusion of motion.

Eadweard Muybridge

In the 19th century Eadweard Muybridge became a household name for his pioneering work in photographing motion. Muybridge advanced high speed photography by working on shutter devices, using trip wires and multiple cameras to capture movement. In 1879 he invented the Zoopraxiscope, considered by many to be the first cinematic projector. The device projected a succession of silhouette images drawn onto glass discs - when these were played through quickly they gave the illusion of movement.

The Horse in Motion clip can be viewed at https://vimeo.com/194142182/a151ab174b.



A Trip to the Moon (1902) © BFI

Georges Méliès

Georges Méliès was a stage magician and illusionist who saw the power and potential of film in its very earliest days. Using his skills and knowledge of stage magic, Méliès developed lots of new ideas in the area of special effects. Many of his films contain tricks and impossible events, such as people appearing and disappearing or items of clothing changing instantly. His films are funny and fantastical – Méliès experimented with what was possible and tried new things all the time. He was also the first filmmaker to use storyboards and create science fiction and fantasy stories. Many of the techniques you can use in your animations (such as pixilation) were first used by Méliès over 100 years ago!

Watch Méliès' film *A Trip to The Moon*, available from the Into Film catalogue. Find out more about Méliès life in the fictional film *Hugo*.

Le Voyage Dans La Lune (A Trip To The Moon) (1902, U) 15 minutes http://bit.ly/Trip2Moon

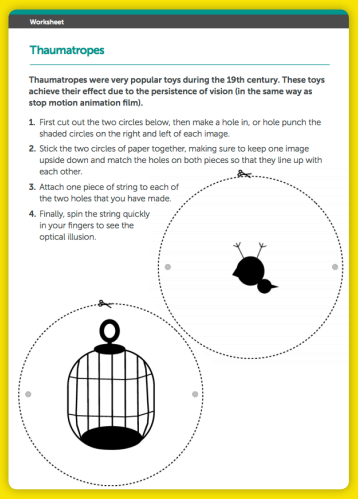
Hugo (2011, U) 126 minutes http://bit.ly/Hugo_Film

Hugo (2011) © Paramount Pictures

Many popular children's toys in the 19th century used the persistence of vision phenomenon to trick the eye into seeing movement.

Thaumatropes

Popularised by John A. Paris in 1824, thaumatropes work by presenting two separate images on the front and back of a piece of card with string attached to each side. When the card is spun quickly using the string the two images are shown in quick succession, giving the illusion of one image. You can have a go at making a Thaumatrope using our **Thaumatrope worksheet**.


Worksheet

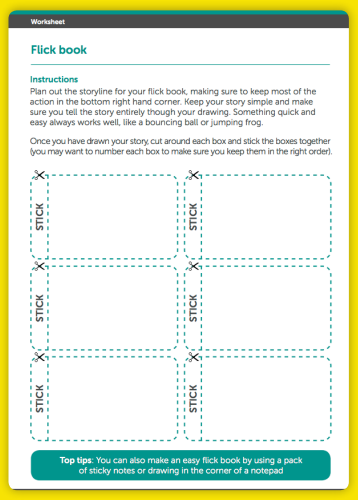
Thaumatropes

Thaumatropes were very popular toys during the 19th century. These toys achieve their effect due to the persistence of vision (in the same way as stop motion animation film).

1. First cut out the two circles below, then make a hole in, or hole punch the shaded circles on the right and left of each image.
2. Stick the two circles of paper together, making sure to keep one image upside down and match the holes on both pieces so that they line up with each other.
3. Attach one piece of string to each of the two holes that you have made.
4. Finally, spin the string quickly in your fingers to see the optical illusion.

Flick books

Flick books were invented in the latter half of the 19th century and it is thought that the first flick book was created by John Barnes Linnett in 1868. Flick books are essentially a collection of slightly altered images bound at one end to allow the user to flick through the images by hand, viewing the images in quick succession and creating the illusion of movement. You can have a go at making a flick book using our **Flick Book worksheet**.


Worksheet

Flick book

Instructions

Plan out the storyline for your flick book, making sure to keep most of the action in the bottom right hand corner. Keep your story simple and make sure you tell the story entirely though your drawing. Something quick and easy always works well, like a bouncing ball or jumping frog.

Once you have drawn your story, cut around each box and stick the boxes together (you may want to number each box to make sure you keep them in the right order).

STICK STICK STICK STICK STICK STICK

Top tips: You can also make an easy flick book by using a pack of sticky notes or drawing in the corner of a notepad

Zoetropes

Zoetropes were also invented in the 19th century and use the persistence of vision to fool the eye into perceiving motion. A zoetrope is a cylindrical drum with slits cut into the sides. On the inside of the drum are a series of slightly different images so when the drum is rotated the viewer looks through the slits to see the animated movement. The invention of the zoetrope is credited to William George Horner in 1884, although a variety of zoetropes that use a similar principle are thought to have been created in China at around 100 BC.