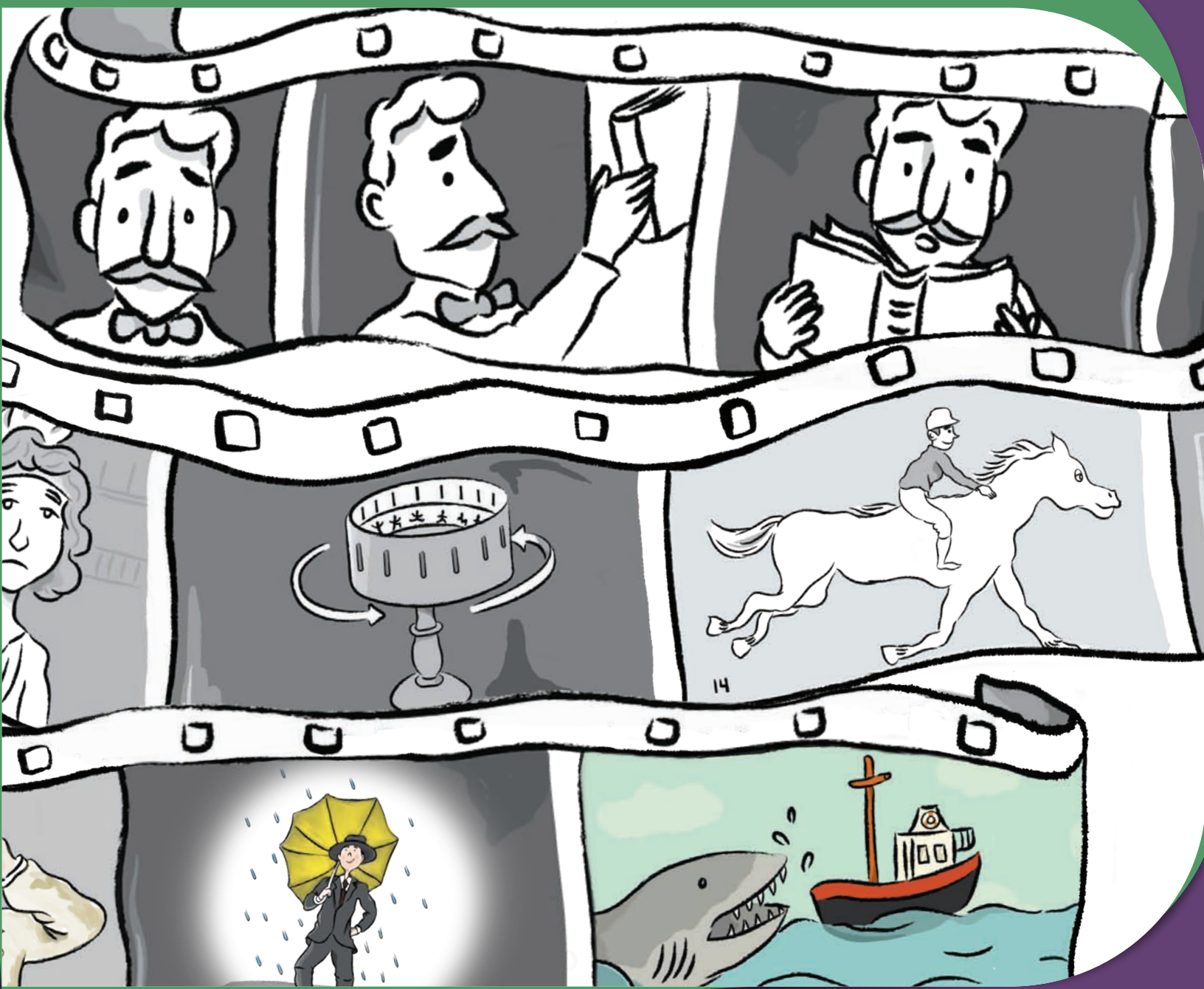


Early Cinema

# Magic and Moving Pictures

**5<sup>th</sup>**  
Grade



# Table of Contents

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## Early Cinema: Magic and Moving Pictures

Lights, Camera, Action  
Moving Pictures  
How to Make a Zoetrope  
Inventors of Cinema Memory Match  
How to Make a Thaumatrope  
The Early Years of Cinema  
The First Films  
The Silent Era  
Georges Méliès: The Father of Special Effects  
Film Strip Coloring Page  
Say Hello to Talkies \*  
That's What They Said! \*  
Setting the Scene: Sound Effects  
Fun Movie Sounds Trivia  
That Sounds So Familiar  
Let's All Go To the Lobby  
Movies & Munchies: An M&Ms Activity  
Links to Online Videos

*Certificate of Completion*

*Answer Sheets*

*\* Has an Answer Sheet*



Before we dive into the exciting world of cinema, let's get familiar with the major events of early movie history. Cut out the years and events below and paste them onto the historical timeline on the next pages to get an idea of when these exhilarating events took place.

HUMOROUS PHASES OF FUNNY FACES

1906  
The first animated cartoon is made.

1893  
Thomas Edison invents a device in which film is moved past light. They name it the Kinetoscope.

1903  
The push toward storytelling in film begins with films such as *The Great Train Robbery* and *The Life of an American Fireman*.

1878  
Photographer Eadweard Muybridge successfully captures motion using photography.

1903  
Louis and August Lumière present the first paid exhibition of projected motion pictures in Paris.

1913  
The first feature-length film, Cecil B. DeMille's *The Squaw Man*, is produced in Hollywood.

1900 U.K.  
The London  
Underground railway  
system opens.

1875

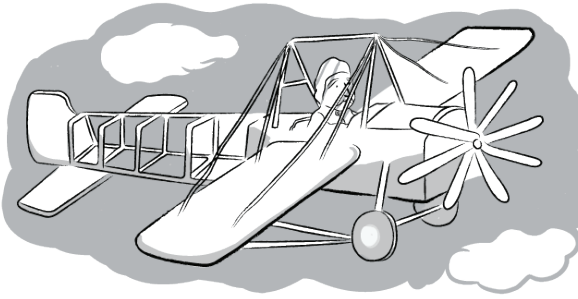
1896 U.S.  
Utah becomes  
a State.

1903 U.S.  
The Wright Brothers  
complete the first  
successful flight  
in Kitty Hawk,  
North Carolina.

1906 U.S.  
The Great San Francisco  
Earthquake & Fire shakes  
the West Coast, centered  
in California.

1907 U.S.  
Oklahoma  
becomes  
a state.

**1909 U.S.**  
Louis Blériot crosses from France to Britain over the English Channel in an airplane. It takes 37 minutes.



**1912 U.S.**  
New Mexico becomes a state. Arizona also becomes a state; another state will not be adopted into the Union until 47 years later.



**1918**  
World War I ends and countries sign the Armistice, followed by the Treaty of Versailles in 1919.

**1914 SERBIA**  
Archduke Franz Ferdinand is assassinated.

**1914 EUROPE**  
World War I begins.



**1920 U.K.**  
The first roadside gas station opens in Great Britain.

**1919 U.S.**  
Congress passes the 19th Amendment, which guarantees American women the right to vote. (It's put into law August 18, 1920.)



**1922 EGYPT**  
Archaeologists discover the tomb of King Tutankhamun.

# MOVING PICTURES

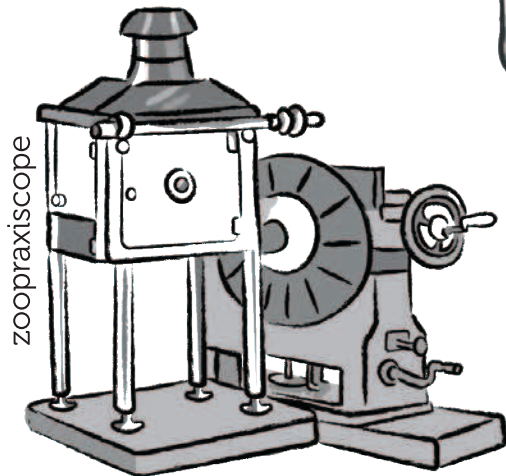
## The Invention of The Moving Picture

Pictures have been an important part of human culture for a long, long time, but only in the last 100 years have we invented machines to capture images of real life.

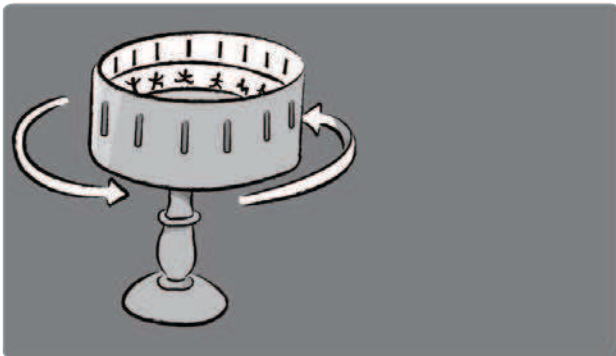
Means of photographing the world were invented in the very early 1800s. A man named Thomas Wedgwood made an early camera, camera obscura, a device that used light to capture an image.



camera obscura



As inventors continued to improve upon the camera, one of the first machines that could project moving pictures was a "zoopraxiscope." This camera-projector was very similar to a device called a zoetrope; the earliest known version was created in China a thousand years earlier.



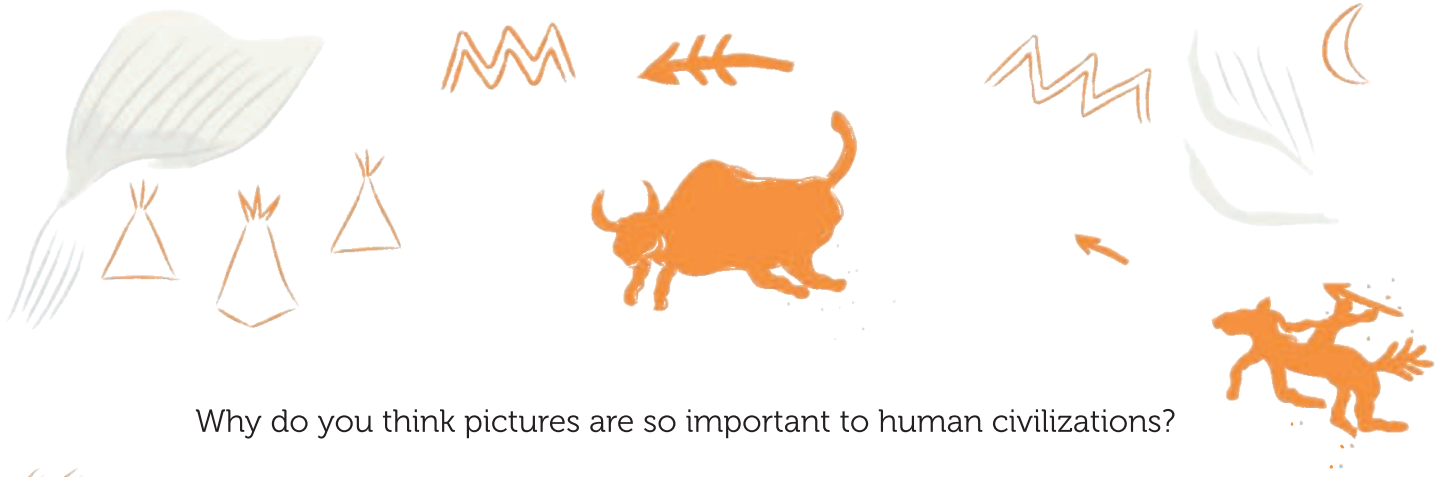
Then Edison created the kinetoscope, and later, the vitascope projector.

The Lumière brothers were famous for creating their version of it, called the cinematographe, which conveniently operated as a portable motion-picture camera, film processor, and projector.

Kinetoscope



The first moving pictures were novelties; they were popular and exciting because they were a new technology. "Movies" were a new, cheap way to entertain the masses.



Why do you think pictures are so important to human civilizations?



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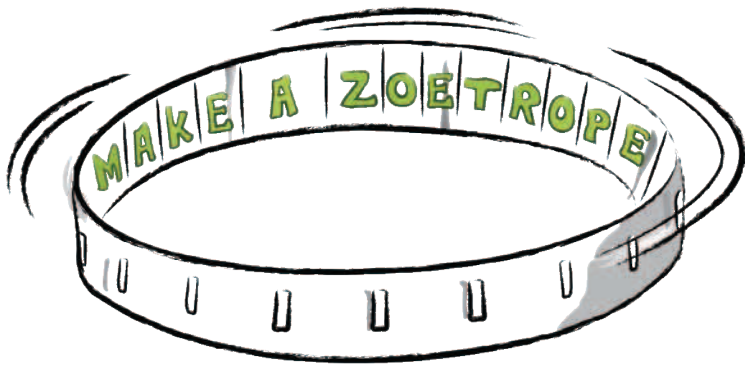
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Before moving pictures were invented, and in fact before photography was invented, people found easy ways to create the illusion of motion in pictures. One great example of a fun optical illusion is a zoetrope. You may have seen a toy like this when you were smaller.

A zoetrope involves a series of pictures like a running horse or flying bird. If you spin the images quickly, they give the illusion of a moving picture, much like a movie. For this project, we've included two templates: one with a running cat and one that's blank. Try it with the cat pictures to see how it works, and then make a customized one by drawing on the blank template!

What You Need:

- Templates (included)
- Thick card stock
- Compass
- Tape
- Pencil
- Scissors
- Glue stick

### What You Do:

Print the templates and cut them out. Whether you're using the cat one or drawing your own pictures, the process is the same.



1

Fold each template in half lengthwise and glue the two sides together. Cut out the white strips.

2



Tape the two portions together to form a loop. Make sure that the black side is facing out with the pictures on the inside of the circle.

3

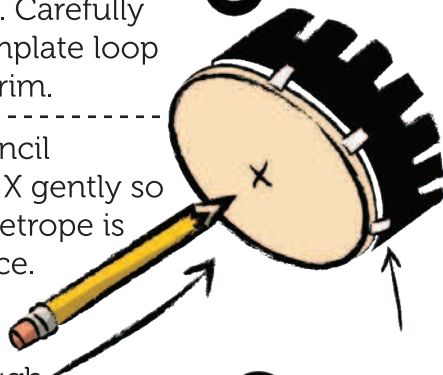


Cut a tiny X in the center of the circle. Carefully tape the template loop around the rim.

5

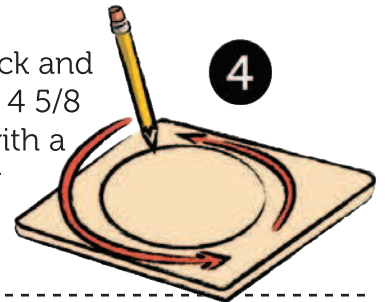
Work the pencil through the X gently so that your zoetrope is firmly in place. Don't push the pencil too far through or it will block the images.

6

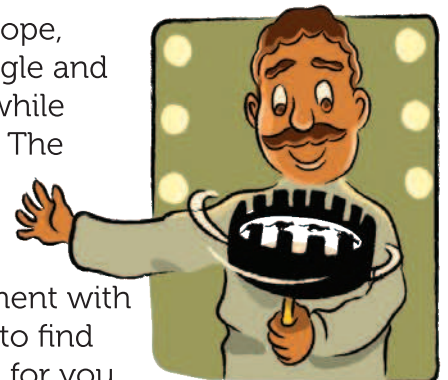


Take your card stock and draw a circle that's  $4 \frac{5}{8}$  inch in diameter with a compass or simply trace a CD/DVD. Cut out the circle.

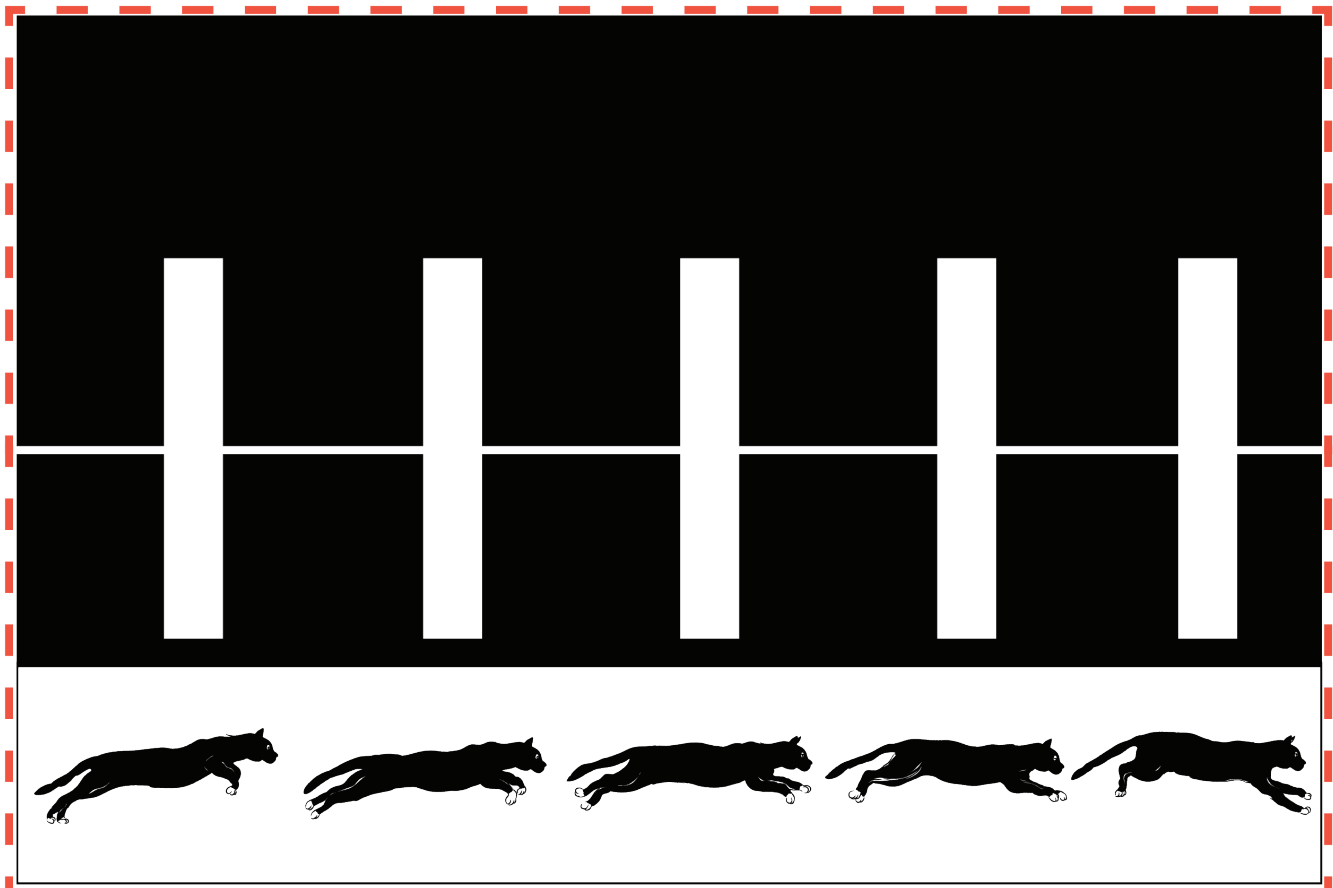
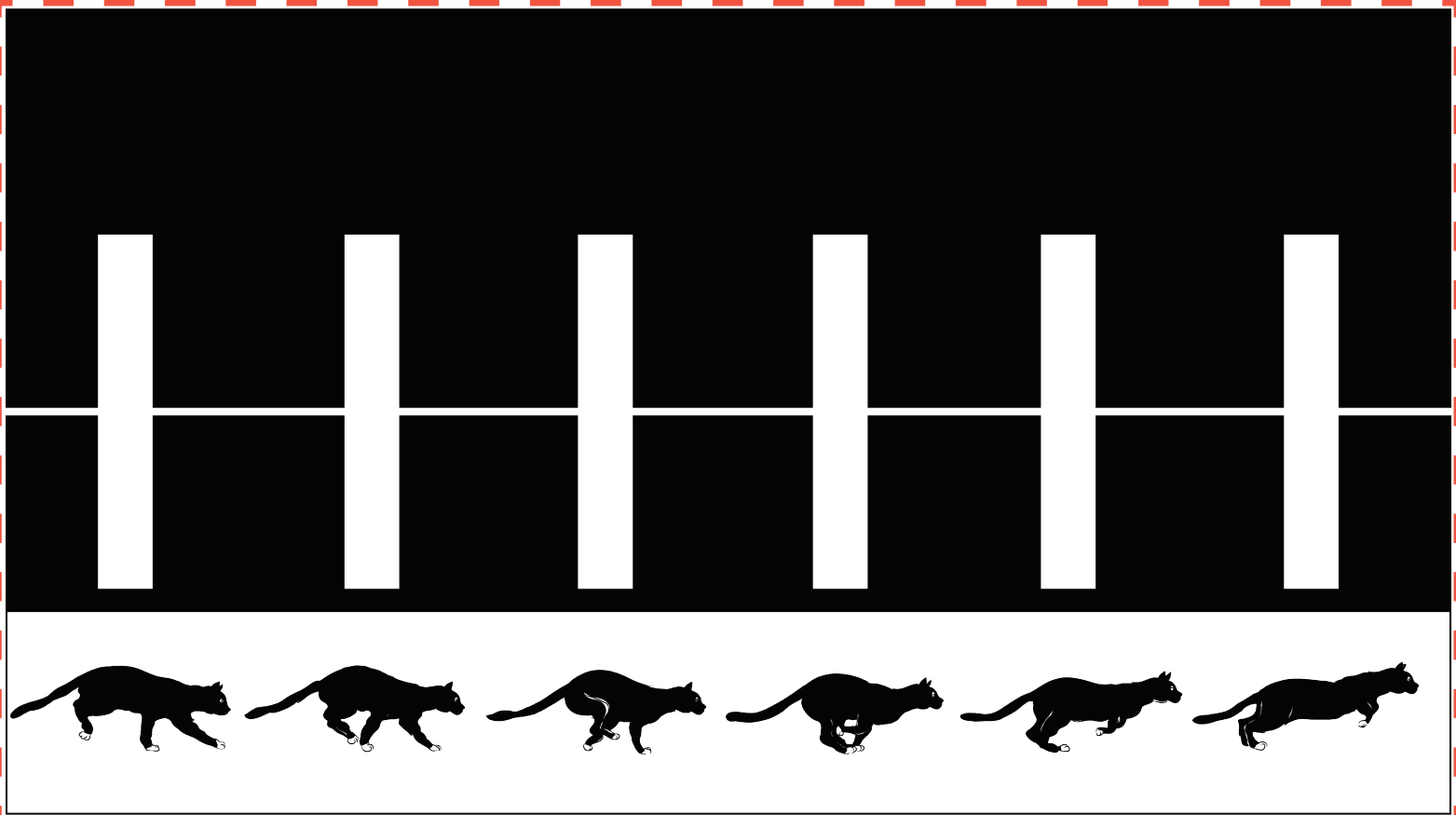
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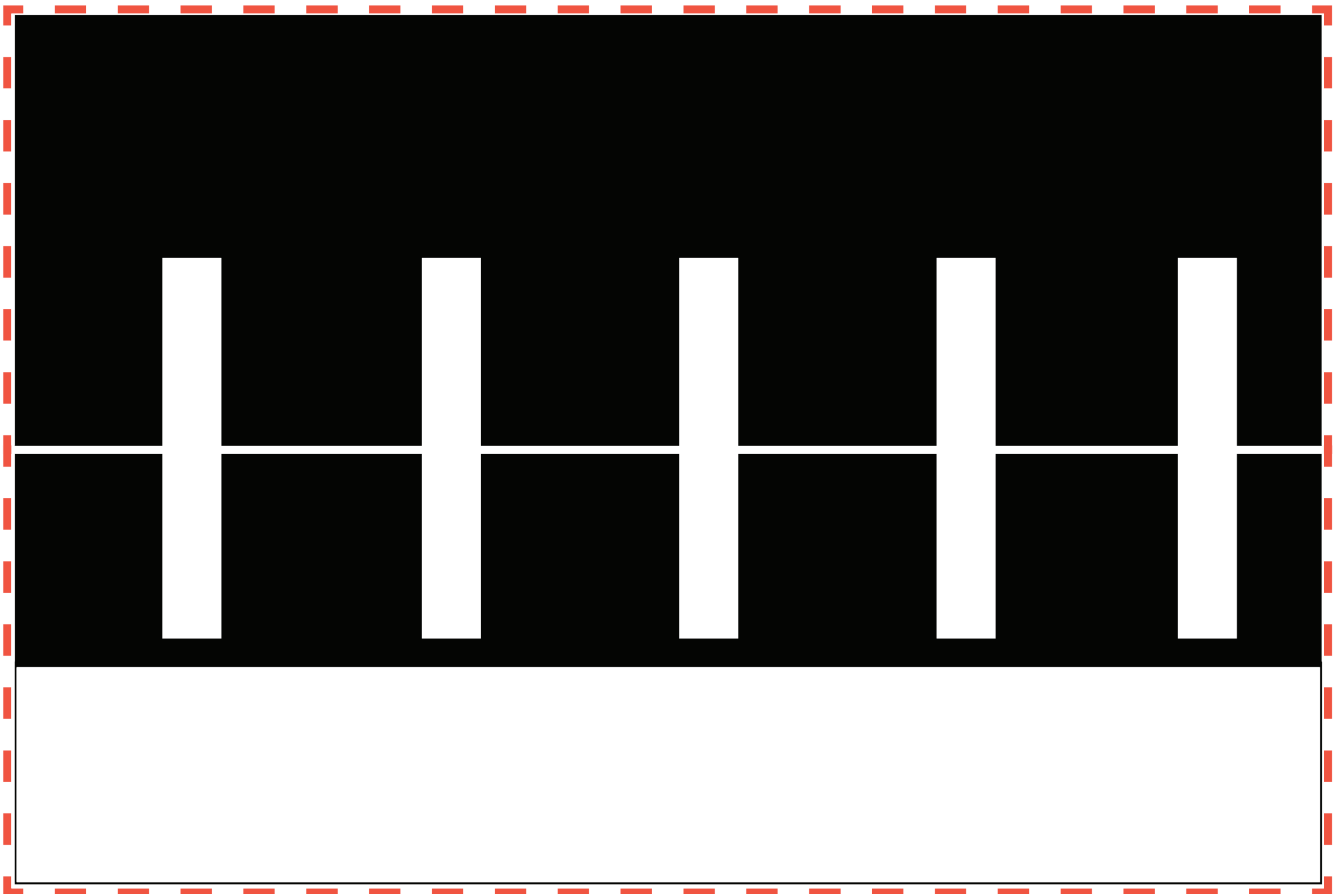
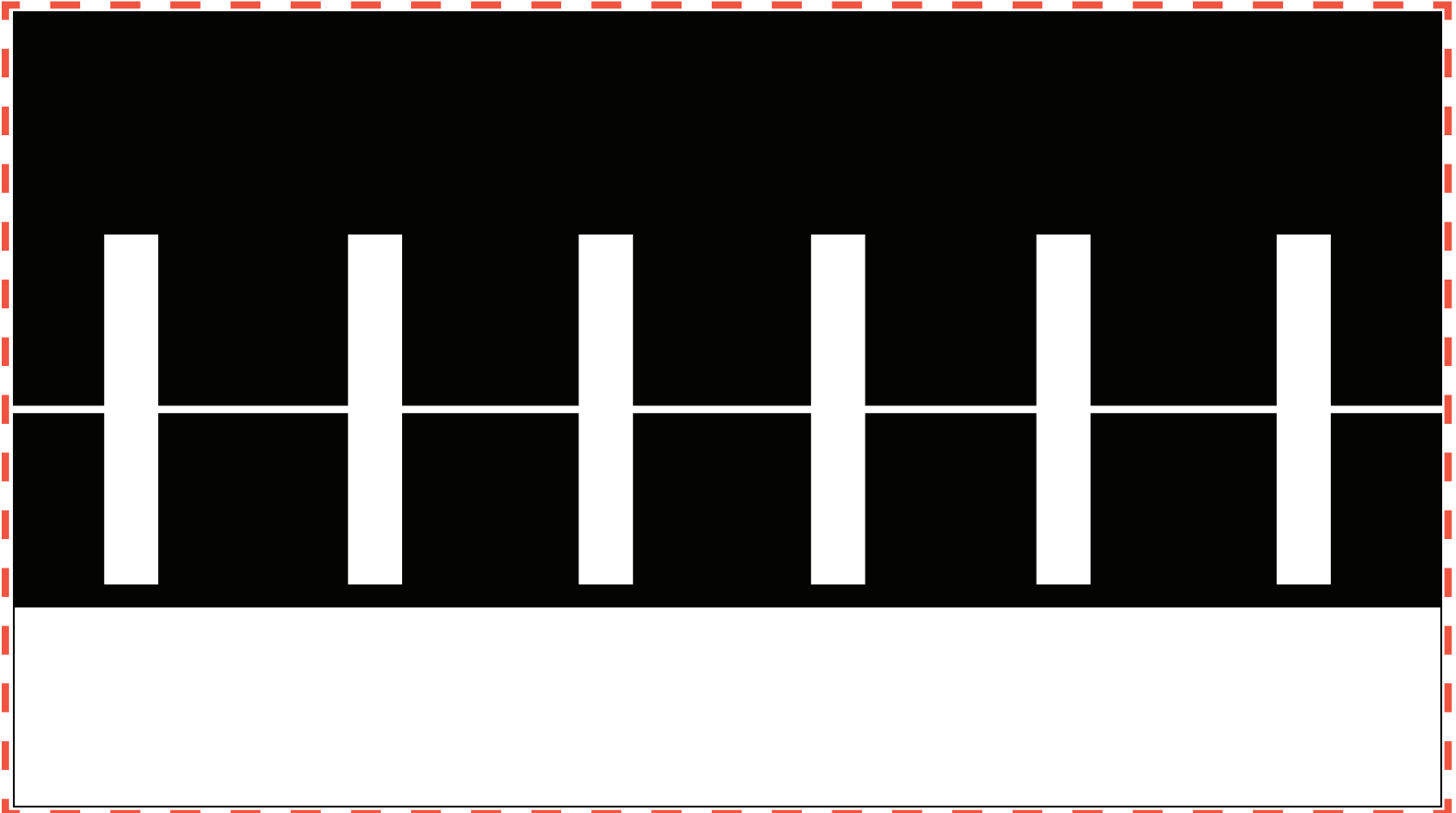


To enjoy your zoetrope, hold it at a slight angle and look through a slit while spinning the pencil. The images passing by rapidly give the amazing illusion of movement! Experiment with the spinning speed to find one that works best for you.



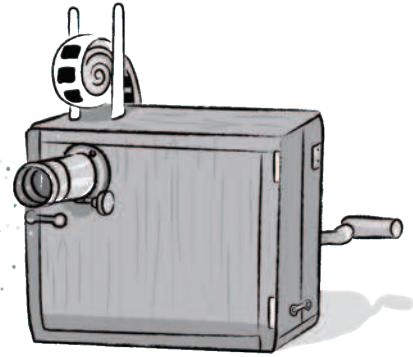






# INVENTORS OF CINEMA

## Memory Match



Like many great things, movies weren't invented overnight by one person. It was a collaboration among many people over decades—people who sometimes didn't even know they were all working towards one thing! Five inventors in particular played big parts in bringing us cinema today as we know it. Read on to learn about these five creative minds and their inventions, then find out if you have a photographic memory with a game that challenges you to match the picture of the inventor with his invention.

Muybridge's zoopraxiscope is made up of a projector and a disc printed with a sequence of images around the edge, like a galloping horse. You mount the disc on the projector, get it spinning, and a beam of light shoots through the top image of the disc. As images pass through the light, it gets projected and the sequence of images going by makes it look like the pictures are moving.

Marey invented a way to take photographs quickly, one after another. He wanted to study movement so he took series of photos, called chronographs, and laid the celluloid prints on top of each other. That way, he could see the entire sequence of movement at once and study it.

An inventor of many things, Edison is responsible for giving us the kinetoscope, a device that moves film past light so that pictures appear to be moving. This device is in a box, so you must look through a hole to watch.

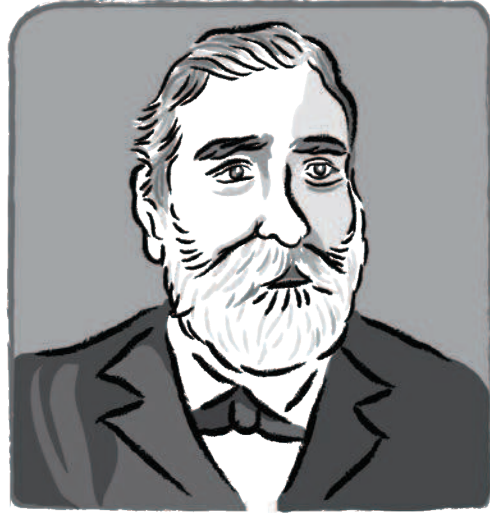
The first device to project film that a whole group of people can watch at once, a cinematograph is a camera and projector combined. The Lumière brothers also brought us the first paid movie experience, which took place in Paris in 1903.

**Quick Pick Review** Cut out the cards, mix them up and pick one at random.  
Quick, can you recall the inventor and his invention?

The Lumière brothers



Etienne-Jules Marey



Eadweard Muybridge



Thomas Edison



cinematograph



zoopraxiscope disc



kinetoscope



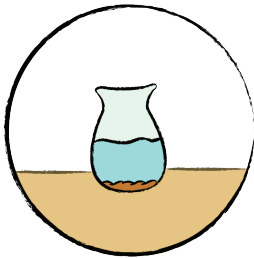
chronograph



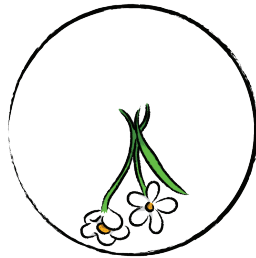
# THAUMATROPE

The history of animation and movie-making begins with a simple device called the thaumatrope. This optical illusion toy was in wide circulation by 1826, and it may have been known much earlier than that. The thaumatrope is the most basic of motion toys. It consists of a disc that is attached to two pieces of string. When twirled, the images on the sides of the disc are perceived together as a single image.

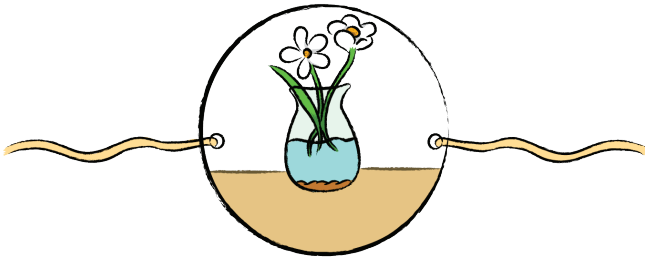
Front



Back (upside-down)



when the disk is twirled



## Instructions:

1. Color the images found on the next page.
2. Cut both disks and glue them together (pictures facing out and top sides up).
3. Use an eight-inch hole punch to punch two holes on opposite sides of the circle—left and right.
4. Cut two lengths of string about 8 inches long. Thread a piece of string through one hole and tie the ends together to form a loop. Repeat for the other hole.
5. Spin the disk by twirling the strings between the thumb and index finger of each hand. Your two images should appear like a single image.

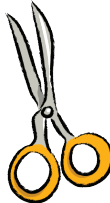
Are you ready to make your own thaumatrope? Here's what you need:



Heavy stock paper, or cardboard

Thick string, yarn, or rubber band

Scissors



Paper hole punch

Coloring materials



## Vocabulary:

1. Animation - A simulation of movement created by displaying a series of pictures, or frames. Cartoons on television are one example of animation.
2. Optical Illusion - An illusion resulting from certain visual effects that cause a viewer to misunderstand or misinterpret what he or she actually sees.

# THE EARLY YEARS OF CINEMA

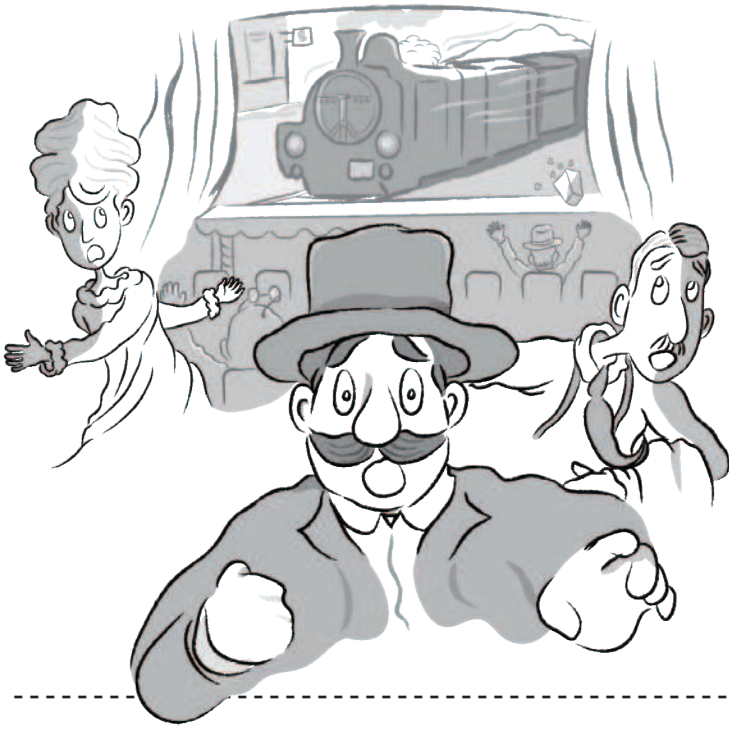


In the early years of cinema, films were short, silent, and in black and white. In fact, the first films didn't have any dialogue, didn't offer much in the way of plot, and clocked in at around ten minutes.

People would head to nickelodeons, the first indoor theaters dedicated to the showing of motion pictures. Nickelodeons were popular from around 1905 to 1915. Just five cents would get you in the door and you could enjoy all the latest cinematic productions.



Although films shown in nickelodeons would seem crude to us today, they were groundbreaking at their time. People were awestruck by the projection of moving images onto a giant screen.



A popular urban legend involves one of the very first films, the Lumière brothers' short film, *The Arrival of a Train at La Ciotat Station*, which premiered in 1896. It's said that when the film began to roll, people were so shocked by the realistic appearance of a train rushing towards the screen that many of them fled their seats!

About how long was the average film in the early years of cinema?

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What were the theaters where admission was only 5 cents called?

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Why did people supposedly run out of the theater during *The Arrival of a Train at La Ciotat Station*?

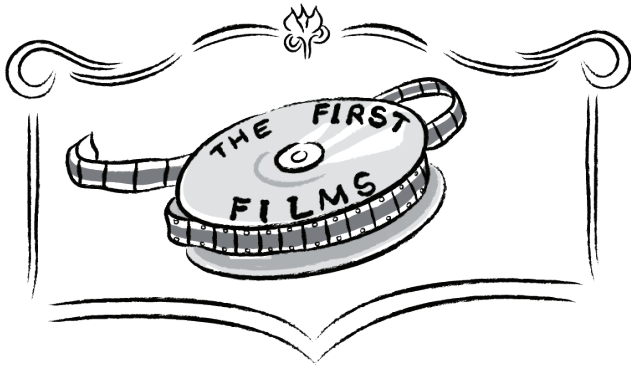
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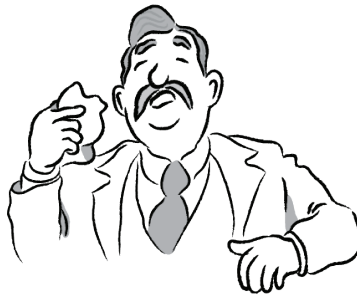
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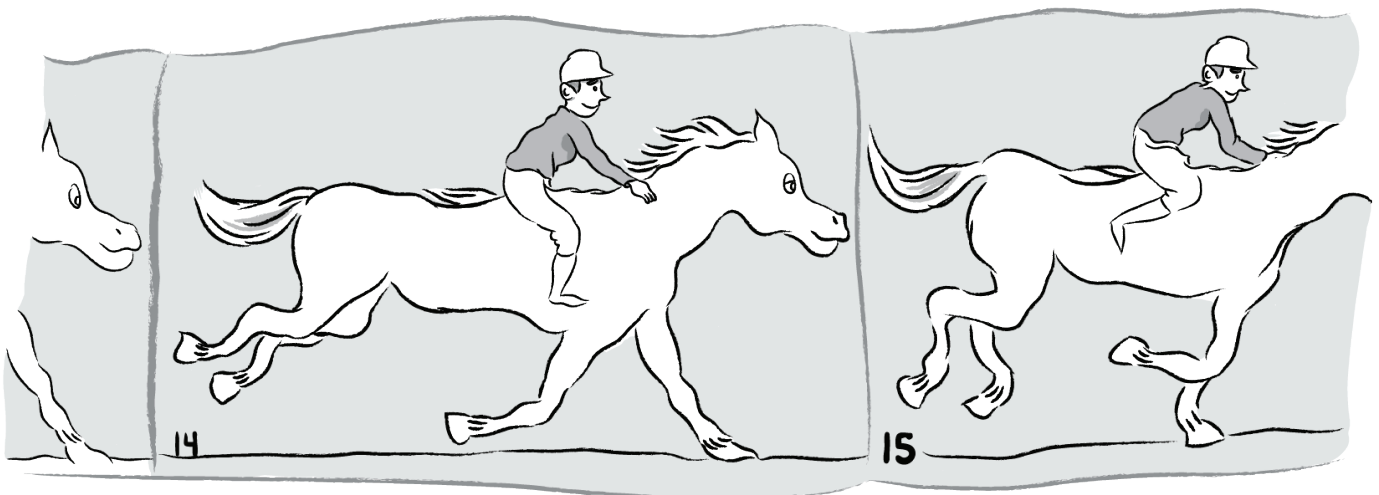


Grab some popcorn and settle in for a night at the movies! Instead of the two-hour features packed with CGI and big explosions that we have today, the first movies ever created were very short and showed mainly everyday activities. This is simply because there was only enough film to capture a few minutes. Back then, people found even the simplest moving picture entertaining.

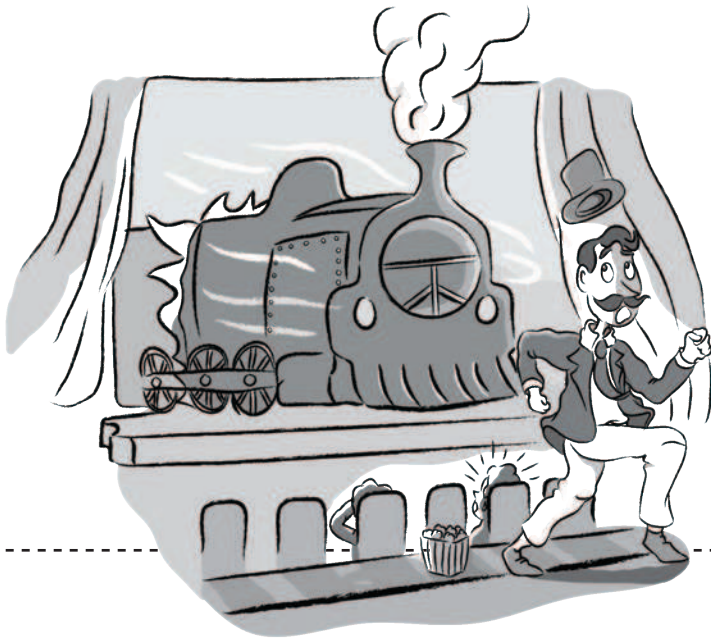
Here are a few suggestions to give you a peek at what early film was like. Get someone to help you locate these movies online.



*Edison Kinetoscopic Record of a Sneeze* is the oldest copyrighted motion picture on record. It was made by W.K.L. Dickson in 1894 with—you guessed it—an Edison kinetoscope. At just four seconds long, it is a simple yet significant part of movie history.



*Sallie Gardner at a Gallop* may not seem that exciting today, but it made a big splash when it debuted for two reasons. One, it is one of the first films ever made. Two, it answered a very old question that had always puzzled people: Do all four of a horse's hooves leave the ground when it gallops? *Sallie Gardner at a Gallop* answered that question with a resounding "yes!"



No movie has ever caused as great a panic as the film *The Arrival of a Train at La Ciotat Station*. Made in 1895 by the Lumière brothers, this movie shows a train chugging towards the camera. Most people back then had never experienced a film, so some of the audience thought the train was going to burst out and run them over! Reportedly, people screamed and fled the theater.

Pretend you are a pioneer in early filmmaking. What would be your subject for a silent film? Remember, you only have about a minute of film time and it must be in black and white!

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People were supposedly so terrified of *The Arrival of a Train at La Ciotat Station* that they ran out of the theater. Describe a movie that scared you and made you want to run away.

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Filmmakers a hundred years ago could not have dreamed of movies today, from 3-D to Blu-ray to special effects made on computers. Think about cinema a hundred years from now. What do you think it might be like?

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# The Silent Era

1894-1929

Can you imagine putting on your favorite movie and turning off the sound? There wouldn't be much to see! That's why silent films, which were made mostly from 1894-1929, drew from a handy bucket of tools to tell understandable and entertaining stories.

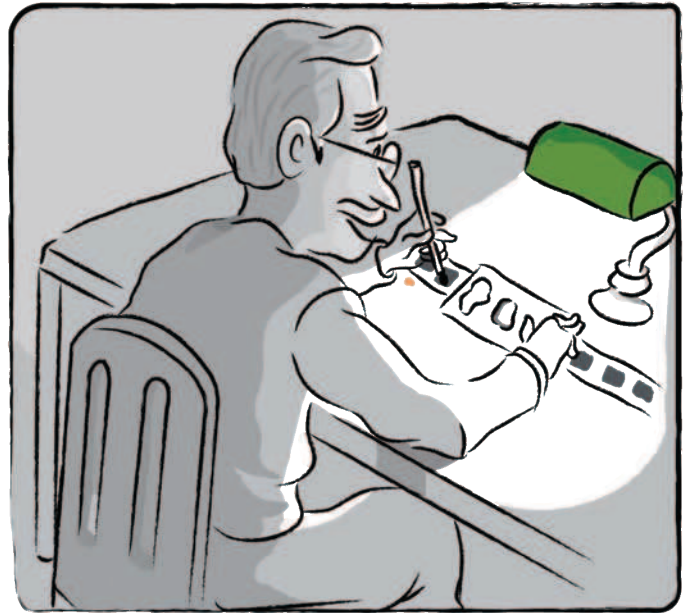
Miming and title cards were an integral part of silent cinema. Silent film actors exaggerated their body language and facial expressions to make sure the audience understood. That's why slapstick was such a popular genre. (Think Charlie Chaplin!) Title cards filled in parts of the story like dialogue and narration to be even clearer.





By 1914, silent films were no longer completely silent. The movies still had no sound, but an orchestra would play while the movie was showing to create mood and signal the tone of the film to the audience.

Pretty soon, silent movies also got color—but not in the way movies are made nowadays. Color film had not been invented yet, so the film itself was tinted by hand! That's a whole lot of coloring.



### To Review!

If you had lived during the silent era do you think you would have gone to the movies very often? Why?

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What two techniques were used to influence the audience's viewing of a silent era film?

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With a grown-up, look on MUBI.com for a Charlie Chaplin film. What techniques discussed above are used to tell the story?

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Draw a line from the word to its meaning.

**1. integral**

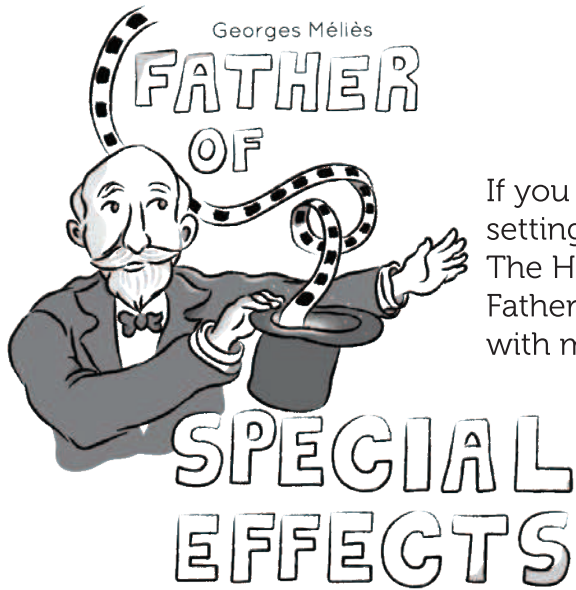
The art of portraying a character or idea by gestures and movements

**2. mime**

Comedy that's largely physical, like throwing pies in actors' faces

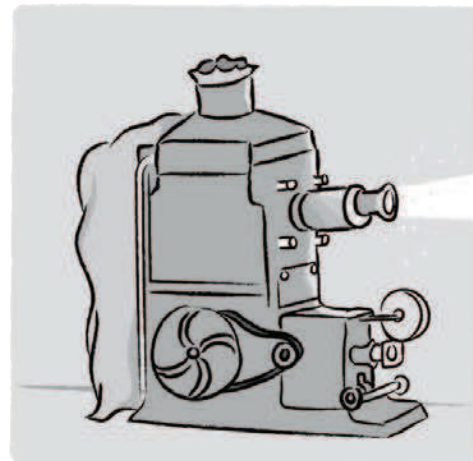
**3. slapstick**

Necessary or essential to complete a whole



If you love movies with CGI like big explosions, fantastic settings like Hogwarts Castle, or jaw-dropping characters like The Hulk, then you have Georges Méliès to thank. Called the Father of Special Effects, Méliès was the first to experiment with many incredible techniques.

You can say it was fate that brought Méliès to the Lumière brothers' premiere of their cinematograph. Méliès was so enchanted that he asked the Lumière brothers if he could buy their machine. Alas, the brothers said no, so Méliès made his very own camera. He was a trained magician and experimented with filming in brand-new ways. Just a few years later, in 1902, he released his most famous movie, *A Trip to the Moon*.



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Méliès soon earned the title "the cinemagician" and went on to make a whopping 500 films! Movies and moviegoers will remain forever in his debt for his innovative work.

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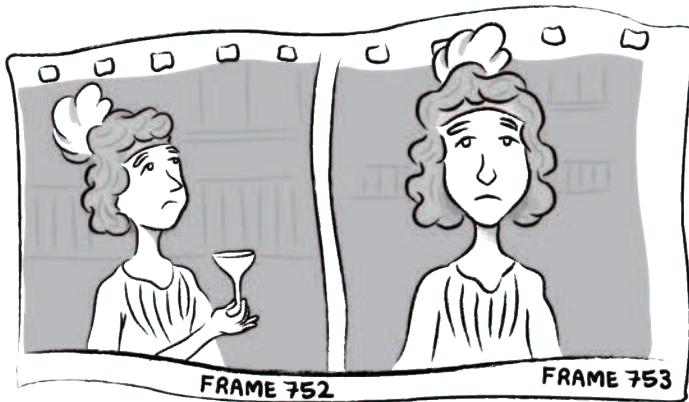


**Dissolve:** While we may not think of this as a special effect today, the dissolve was a groundbreaking innovation. The dissolve is simply a transition effect where one scene slowly fades out and another scene fades in to replace it. What's cool is that the two images are briefly one on top of another. This is still a very common technique—you've probably seen it hundreds of times in movies and TV shows!

**Double exposure:** To get spooky-cool effects like Méliès talking with his four bodiless heads, Georges first filmed his actors against a black background, then rewound the film and used it again to shoot so that the images are superimposed on one another.



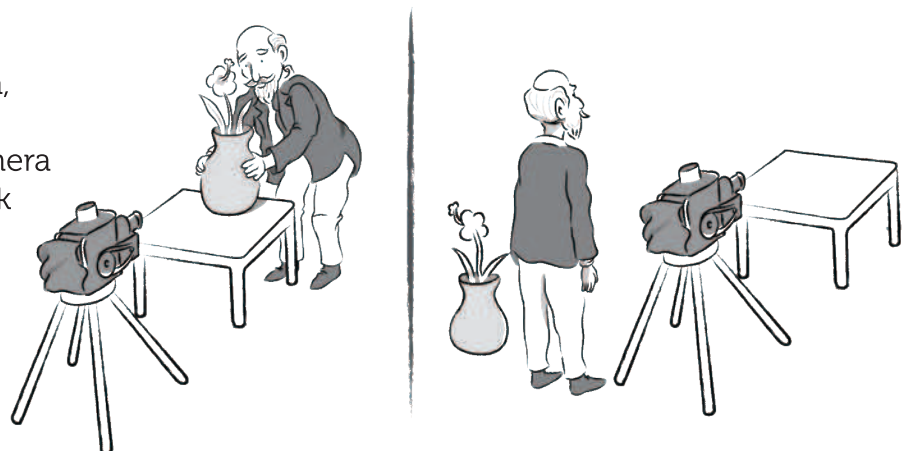
**Jump cut:** Méliès discovered this editing technique by accident! He didn't know that his camera had stopped and then started up again while filming, so things in the film look like they "jumped." Nowadays, filmmakers do this on purpose to show in an obvious way that time has passed.



**Split screen:** With this neat trick Méliès was able to double himself on film with his two selves talking to each other! He did this by first covering up half the lens for one shot, then rewinding the film and using it again to shoot, this time covering up the other half of the lens. He positioned himself to appear in both shots so it looks like there are two of him!



**Stop-trick:** To achieve this special effect during filming, Méliès turned off the camera, moved objects or people around, then turned the camera back on again, making it look like things have magically appeared and disappeared.



**To Review!**

Why was Méliès called a "cinemagician"? What do you think this word means?

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Think about when you've seen one of the special effects above used in a movie. Describe it and how it made the movie better (or didn't!).

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Watch *A Trip to the Moon* (<https://archive.org/details/Levoyagedanslalune>). Describe any special effects Méliès uses.

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**Bonus:** Watch the 2011 movie *Hugo* with a grown-up or a group of your friends. Afterwards, talk about anything you learned about Georges Méliès.



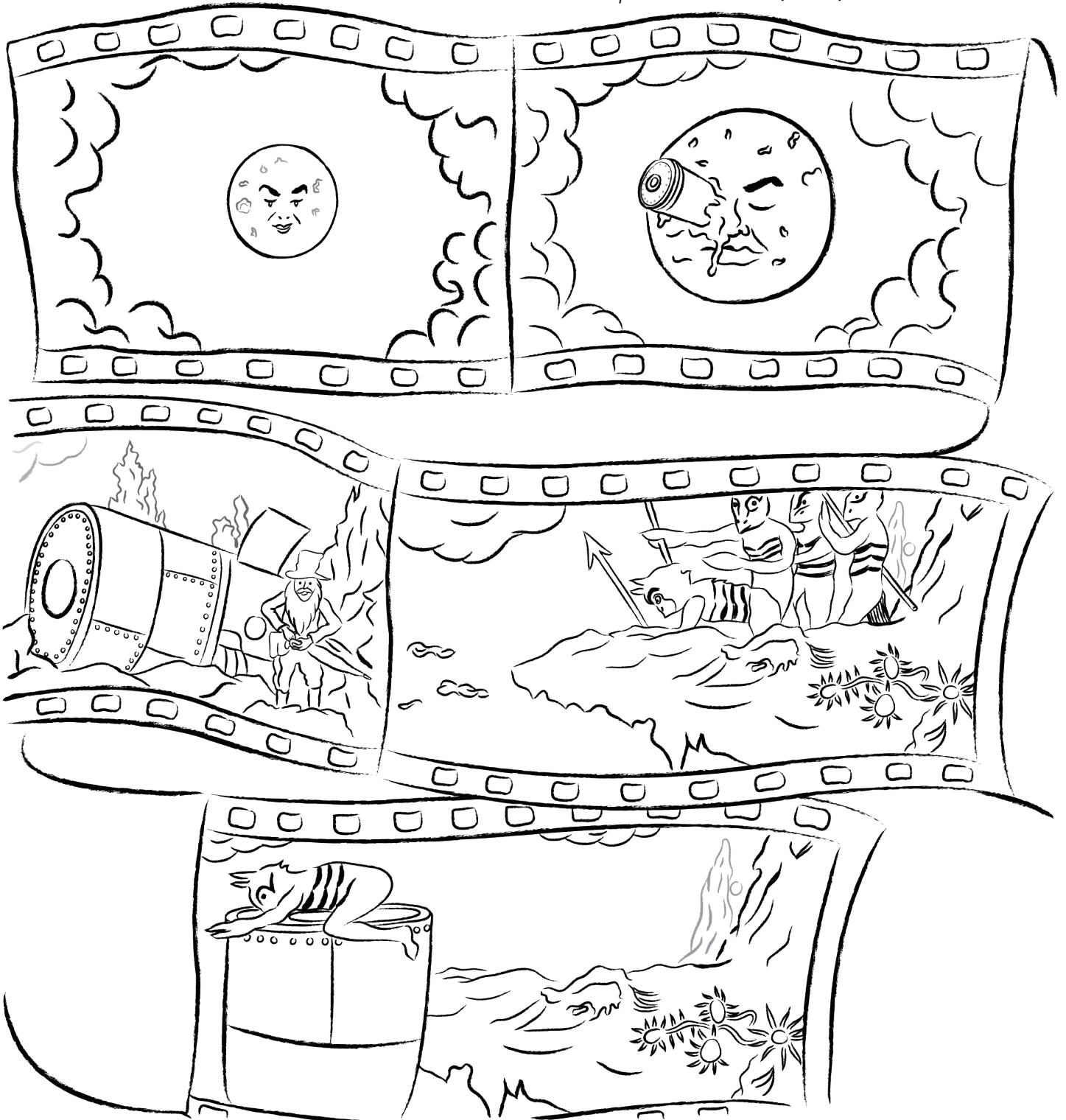


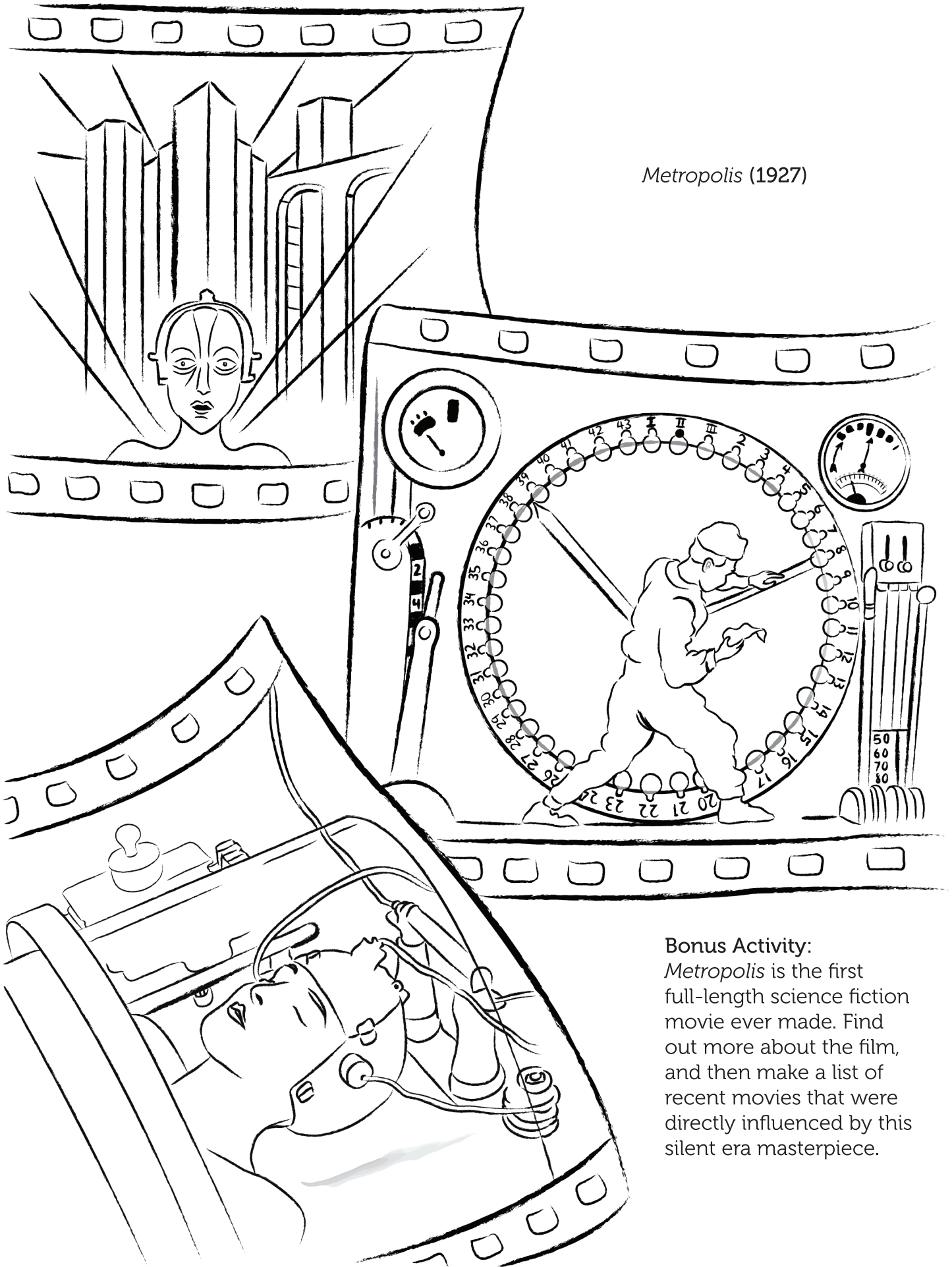
# FILM STRIP

COLORING PAGE

See how long it takes you to color each of these frames. Imagine coloring hundreds of them, just so a few minutes of film will be in color!

*A Trip to the Moon (1902)*





*Metropolis* (1927)

**Bonus Activity:**

*Metropolis* is the first full-length science fiction movie ever made. Find out more about the film, and then make a list of recent movies that were directly influenced by this silent era masterpiece.



Change came knocking loudly on Hollywood's door with the introduction of sound. In 1925, the movie studio Warner Brothers joined forces with Western Electric to bring sound to the movies. New films with people talking in them soon got the name "talkies." A machine called the Vitaphone recorded sound, like actors' dialogue, onto a wax disc. The disc was then played in time with the moving picture to give the movie sound!



In 1927, *The Jazz Singer* was released and cinema changed forever. The first movie with spoken words, *The Jazz Singer* was such a smash hit that movie studios leaped to make talkies. Warner Brothers made millions of dollars and got its place as one of Hollywood's top studios—which it still is today.



Not everyone was happy with the change, however. Actors and actresses who only had to act with their facial expressions and body language suddenly had to memorize lines and practice speaking clearly. Filmmakers had to adjust to a new way of shooting, like not being able to tell actors what to do while the film was rolling.



Norma Talmadge was a silent film sensation who everyone loved. But in 1929, she started starring in talkies and moviegoers could not believe that such a glamorous movie starlet had a Brooklyn accent. She tried to change the way she spoke but it did little good. Not long after, though she was still very young, Norma retired from acting.



# WORD SEARCH

Circle each word from the list in the puzzle. Words can go up, down, backwards, and diagonally.

Warner Brothers	:	dialogue	:	recording	:	talkie
Western Electric	:	glamorous	:	wax disc	:	microphone
Vitaphone	:	starlet	:	Jazz Singer	:	studio

N	G	E	N	O	H	P	O	R	C	I	M	W	G	R
L	L	S	T	M	L	O	X	J	S	W	C	X	E	L
S	A	G	N	I	D	R	O	C	E	R	T	G	H	X
O	M	Z	D	I	A	L	O	G	U	E	N	Z	V	C
I	O	R	J	F	X	E	W	B	Q	I	F	I	M	B
D	R	L	U	A	X	I	J	F	S	A	T	H	P	U
U	O	K	U	X	L	K	N	Z	Z	A	J	K	P	K
T	U	T	R	S	W	L	Z	X	P	V	P	A	F	W
S	S	W	M	X	I	A	G	H	W	S	T	B	D	P
L	Y	Z	T	E	J	T	O	X	A	C	Z	F	Q	N
G	K	Z	X	O	P	N	Q	R	P	M	B	T	H	K
A	N	B	Y	L	E	A	C	S	I	D	X	A	W	M
S	R	E	H	T	O	R	B	R	E	N	R	A	W	L
C	I	R	T	C	E	L	E	N	R	E	T	S	E	W
I	G	N	L	X	T	E	L	R	A	T	S	G	T	C



Take a look at this hilarious clip from the movie *Singin' in the Rain*. Think of some other problems actors and filmmakers may have encountered during the transition to talkies and write them down.

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Just as silent movies have been replaced by talkies, the items on this checklist have all been replaced by newer technologies. Do you know what each of the things listed are? Take this page with you to explore around your house and check off the objects you can find. Maybe you'll discover a few things we forgot to include!

- Videotape
- VHS player
- Cassette tape
- Floppy disc
- PDA or flip phone
- Video game cartridge
- Vinyl record
- Record player

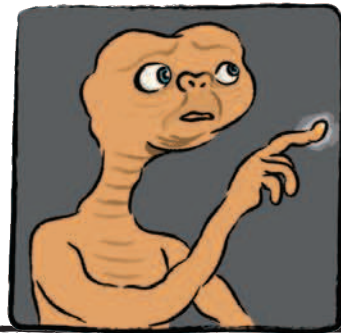


- Pager
- Walkman
- Typewriter
- "Rabbit ears" TV antenna
- Answering machine
- Boombox
- -----
- -----



# THAT'S WHAT THEY SAID!

These famous movie lines would not exist if talking pictures hadn't been invented. Test your knowledge of the movies and draw lines to match the films with their quotes.



Toto, I've a feeling we're not in Kansas anymore.

*Titanic*

May the Force be with you.

*E.T. The Extra-Terrestrial*

E.T. phone home.

*Casablanca*

You're gonna need a bigger boat.

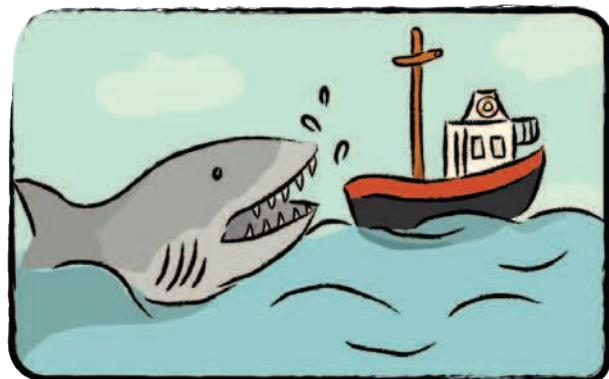
*Jaws*

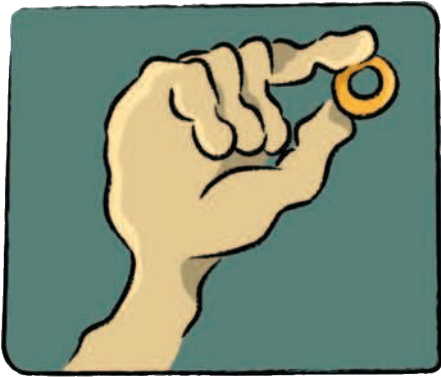
I'm the king of the world!

*The Wizard of Oz*

Louis, I think this is the beginning of a beautiful friendship.

*Star Wars*





These quotes aren't quite as famous (yet) as the ones on the last page, but we bet you'll know these, too!



If you had a chance to change your fate, would you?

*Finding Nemo*

To infinity, and beyond!

*Mulan*

Fish are friends, not food.

*Brave*

My precious.

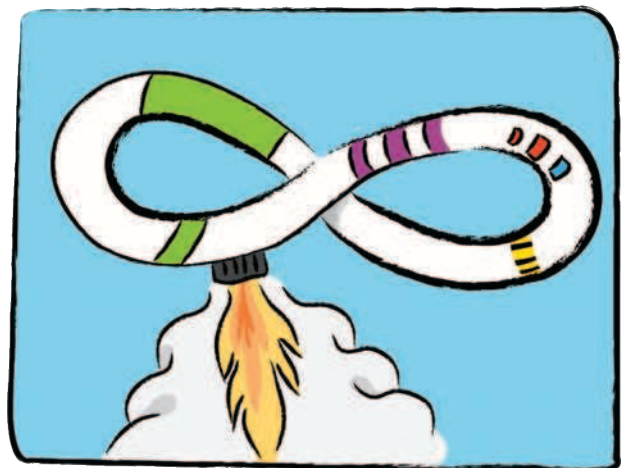
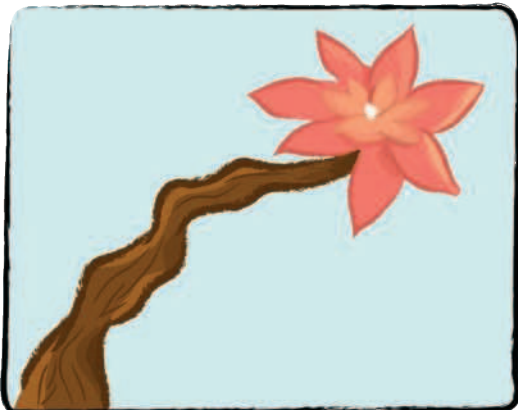
*Lilo and Stitch*

The flower that blooms in adversity is the most rare and beautiful of all.

*Toy Story*

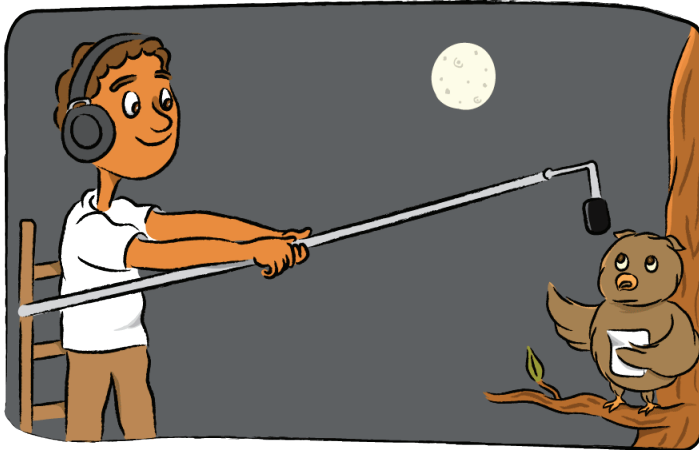
Ohana means family. And family means nobody gets left behind or forgotten.

*The Lord of the Rings:  
The Two Towers*





Imagine you're a movie director shooting a creepy nighttime scene in a forest. It's spooky, but you want to make it even spookier. You contemplate what to do. Then it hits you: Add the sound of an eerie owl hooting! You look around but there are no owls nearby. What to do?

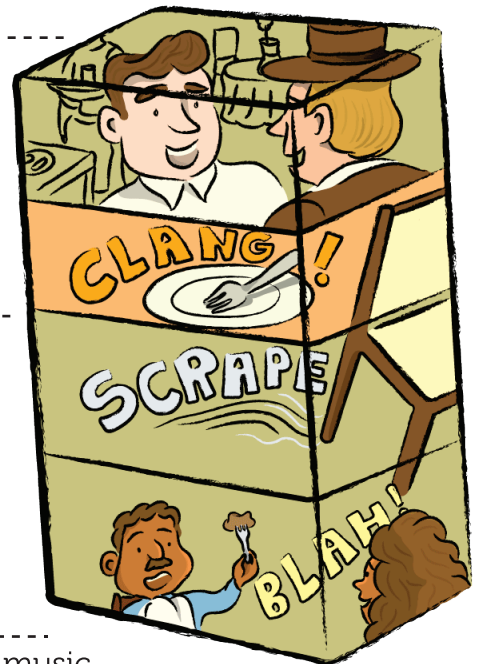


Sound designers work to layer all the sounds you hear during a scene. For example, two characters may be talking in a crowded restaurant with lots of background noise: other diners' conversations, forks clanging against dishes, chairs scraping, and so on. They also have to balance all these sounds with the music.

Ever since it became possible to play sound in movies, filmmakers have been adding in all kinds of sound effects to help tell the story. If you need an owl's hoot, all you have to do is record it anytime, then place it in the movie at the right moment. Even easier, you can get it from sound libraries where all kinds of sound effects are available, from a door slamming to an audience clapping to a phone ringing.



Put on your favorite movie and watch five minutes of your favorite part. Write down ALL the sounds you hear. Listen carefully: some sounds are sneaking in the background to set the mood!



Now watch the whole film, paying close attention to just the music. You've probably noticed any singing, but what about just the score, or the orchestra music? Write about how the score sets the tone or mood of the scene and any observations you have, such as whether the music tempo is fast or slow, if it's loud or soft, etc.

\* Write on the back of this worksheet.



# FUN MOVIE SOUNDS TRIVIA

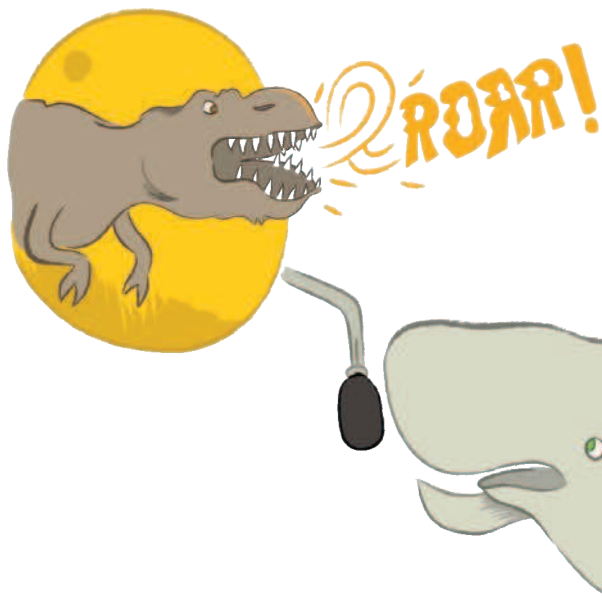
Did you know...



that the "pew-pew" blaster noises in *Star Wars* is made by the sound designer whacking a hammer against radio tower cables? Sound designers often have to get creative!



that filmmakers often record dialogue separately from the filming? Even though you're hearing the voice of the actor speaking onscreen, it was very likely recorded later! This is so filmmakers can make sure the actors' voices are balanced with background noises.



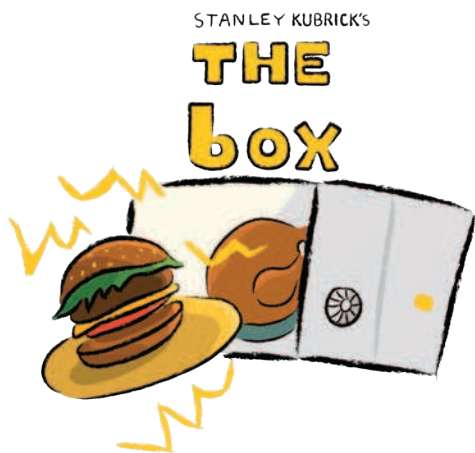
that the *Jurassic Park* dinosaurs' terrifying chomps and roars are actually a combination of sounds from whales, lions, alligators, tigers, elephants, koalas, and horses? The filmmakers didn't know what dinosaurs really sounded like, so they made it up!



## Did you know...



That in many animated movies, such as Disney cartoons, the singing voice is often different from the speaking voice of a character? For example, in *Aladdin*, one actress says all of Jasmine's lines and another actress sings her songs!



### To Review

You're making a movie about a box that can instantly make any food you want to eat out of thin air. Write about the noise the box makes as it's working and how you would create that noise.

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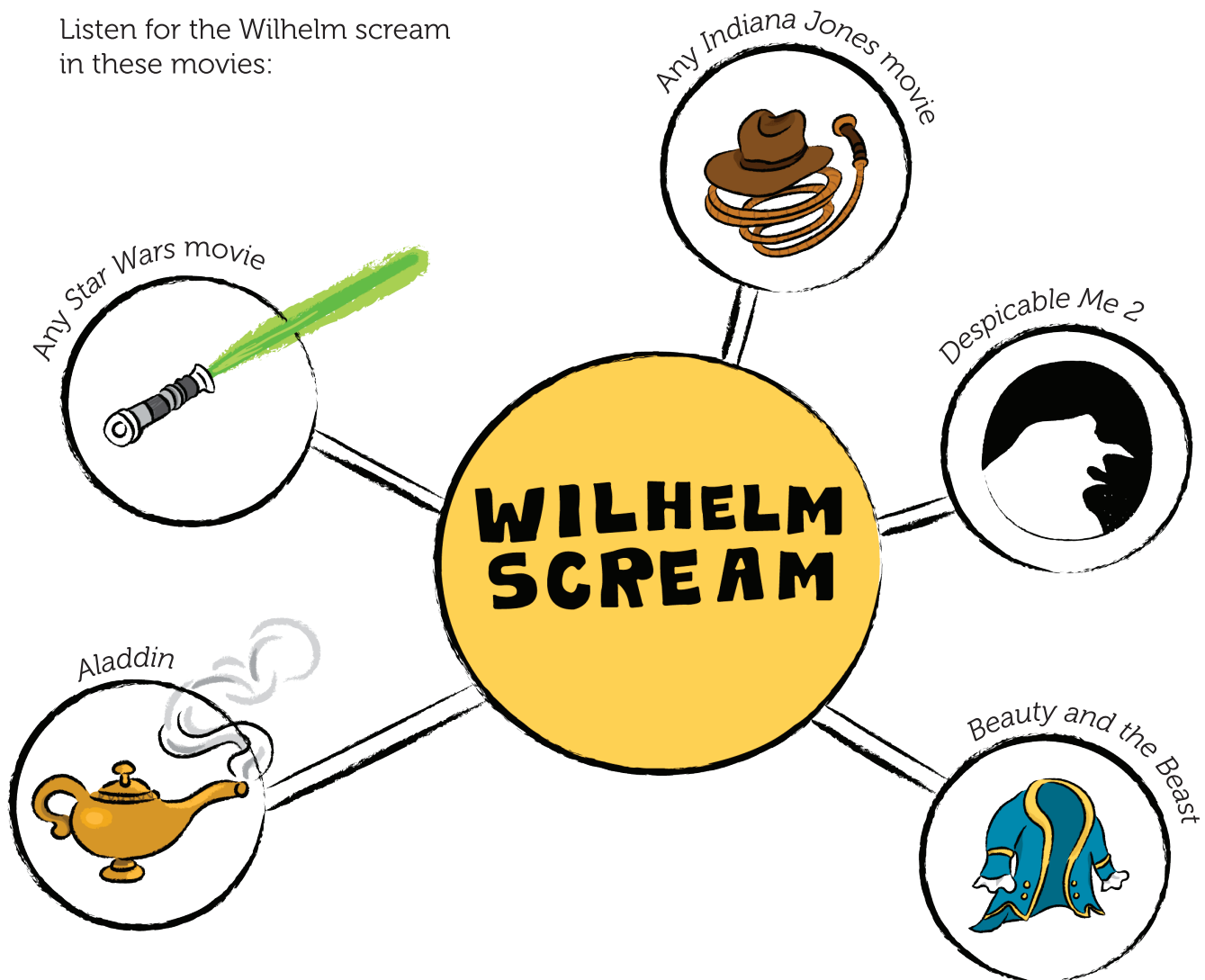
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In a long-held tradition, directors like Peter Jackson and Steven Spielberg have used the Wilhelm scream in many movies. This recording of a man screaming was originally made for a 1951 movie, but has since been broken up and included in over 200 movies, on TV, and in video games!

Listen to the scream here: <https://archive.org/details/WilhelmScreamSample>

Listen for the Wilhelm scream in these movies:



#### Research It!

But how did the scream get its name? Flex your research skills and find online or library resources to learn more about the Wilhelm scream. Hint: Look up sound designer Ben Burtt.



Let's all go to the lobby. Let's all go to the lobby.  
Let's all go to the lobby to get ourselves a treat!

Even if you're not familiar with this old advertising jingle, you probably know what the concession stand offers at the movie theater. Today, popcorn, candy, soda, and pretzels are just the beginning of the treats you can munch on while watching a movie. But did cinemas always sell snacks, and what kind were they? Read on to find out!



In the early 20th century, people flooded the nickelodeons, which sold movie tickets for five cents—but no food. Instead, moviegoers were allowed to bring their own food, and they sure took advantage of it! Here are some popular theater candies of the 1920s that you probably still see today:



Baby Ruth (named for President Grover Cleveland's daughter)

Goobers

Milk Duds

Raisinets

Sno-Caps, which used to be called Bob White

Twizzlers (born in the mid-1800s!)

Red Vines, which used to be called Classic Raspberry Vines

What finally prompted cinema owners to start selling their own movie refreshments was the Great Depression. Times were tough, and movie theaters realized that popcorn was the answer. With the invention of the mobile popcorn maker in 1885, popcorn became cheap to produce, easy to store, and popular with audiences.



After World War II, moviegoers enjoyed more and more options. Junior Mints, Dots, and M&Ms arrived mid-century.



Sour Patch Kids appeared in the 1970s, as did Reese's Pieces and Skittles.



M&Ms, the WWII candy that "melts in your mouth, not in your hand," are still found in every movie theater today. If you need an excuse to grab a bag, play our fun M&Ms probability game below.

What You Need:

- A small bag of M&Ms
- Pencil
- Paper



What You Do:

You can enjoy M&Ms in six different colors: red, orange, yellow, green, blue, and brown. Start by making a guess: How many M&Ms total do you think are in your bag? Write it down.

COLOR	QUANTITY
red	
orange	
yellow	
green	
blue	
brown	

Now, open your bag but don't peek inside! Take one M&M out at a time and record its color on the lines below. Repeat this until you have recorded 10 colors on the spaces below. Make sure you place the M&Ms back in the bag after you take them out.



1 \_\_\_\_\_  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_  
 5 \_\_\_\_\_  
 6 \_\_\_\_\_  
 7 \_\_\_\_\_  
 8 \_\_\_\_\_  
 9 \_\_\_\_\_  
 10 \_\_\_\_\_

Based on your data above, maybe you've changed your mind about your predictions at the beginning. Using this data, make new predictions about the colors of the M&Ms in your bag.

COLOR	QUANTITY
red	
orange	
yellow	
green	
blue	
brown	



Answer the following questions on a separate sheet of paper, or on the back of this worksheet.

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 Dump out your bag and count up the actual total number of M&Ms. Record how many of each color are in your bag. How close were your predictions?



Based on this data, write the probability of picking each color.  
 Example: If there are 5 red M&Ms in a bag with 30 M&Ms total, then the probability of getting a red one is 5 out of 30, or 1 in 6; also written:  $5/30$ , or  $1/6$ .

## Links

"*Edison Kinetoscopic Record of a Sneeze*" by W.K.L. Dickson  
<https://archive.org/details/ThomasEdisonCo.FredOttSneeze>

"*Sallie Gardner at a Gallop*" by Eadward Muybridge  
<https://archive.org/details/SallieGardnerAtGallop>

*The Arrival of a Train at La Ciotat Station* by Auguste and Louis Lumière  
[http://www.youtube.com/watch?v=d\\_9N68MO9gM](http://www.youtube.com/watch?v=d_9N68MO9gM)


A selection of films in the public domain:  
<https://mubi.com/lists/public-domain-greats>

*A Trip to the Moon* by Georges Méliès  
<https://archive.org/details/Levoyagedanslalune>

Clip from *Singin' in the Rain*  
[www.youtube.com/watch?v=OTFCctdiS04](http://www.youtube.com/watch?v=OTFCctdiS04)

Wilhelm scream  
<https://archive.org/details/WilhelmScreamSample>





**Great job!**

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# Answer Sheets

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## Early Cinema: Magic and Moving Pictures

Say Hello to Talkies  
That's What They Said!

# Answer Sheet

## WORD SEARCH

ANSWER KEY

N	G	E	N	O	H	P	O	R	C	I	M	W	G	R
L	L	S	T	M	L	O	X	J	S	W	C	X	E	L
S	A	G	N	I	D	R	O	C	E	R	T	G	H	X
O	M	Z	D	I	A	L	O	G	U	E	N	Z	V	C
I	O	R	J	F	X	E	W	B	Q	I	F	I	M	B
D	R	L	U	A	X	I	J	F	S	A	T	H	P	U
U	O	K	U	X	L	K	N	Z	Z	A	J	K	P	K
T	U	T	R	S	W	L	Z	X	P	V	P	A	F	W
S	S	W	M	X	I	A	G	H	W	S	T	B	D	P
L	Y	Z	T	E	J	T	O	X	A	C	Z	F	Q	N
G	K	Z	X	O	P	N	Q	R	P	M	B	T	H	K
A	N	B	Y	L	E	A	C	S	I	D	X	A	W	M
S	R	E	H	T	O	R	B	R	E	N	R	A	W	L
C	I	R	T	C	E	L	E	N	R	E	T	S	E	W
I	G	N	L	X	T	E	L	R	A	T	S	G	T	C

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