GET STARTED

In order to solve problems and meet their creative goals, Walt Disney and his animators and Imagineers often had to invent new tools or improve existing ones using STEAM—science, technology, engineering, art, and math. This guide includes a timeline of Walt's life and work to help you keep track of his use of these important areas of study as you explore the museum's galleries. Along the way be sure to respond to the questions on the STEAM timeline. The extension activity on the back of this guide can be completed

ABOUT STEAM

Science
A search for the general laws about how the world works. Scientists are curious.

Technology
The inventions, systems, tools, or methods used to solve real-world problems.

Engineering
Using scientific or mathematical knowledge to solve practical problems. Engineers are imaginative and practical.

Art
The creation of things that are meant to be beautiful or meaningful. Artists are creative.

Math
The study of numbers, amounts, and shapes, and the relationships between them. Mathematicians are precise problem solvers.

BEGINNINGS
1902-1928

GALLERY 1A, 1B & 2A

Walt lived in many different places during his childhood and young adulthood, but wherever he went, he brought with him a curiosity about the world and a love of drawing.

RECORD

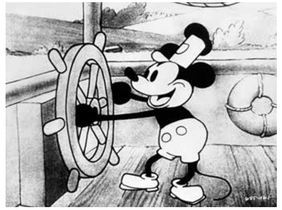
While exploring these galleries, find an example of STEAM and write a description of it here:

Circle all that apply

MATURITY
1928

GALLERY 2B

Walt gained much success in Hollywood during the 1920s. He established the Disney Bros. Cartoon Studio and created one of his most popular animated characters: Mickey Mouse.



Steamboat Willie is a short animated film created in 1928. It was one of the first animated films to successfully synchronize sound. This wall presents individual drawings (or frames) from the film, showing how precise animators must be.

REASON

It takes 24 individual film frames to create one second of animation. Look closely at the wall of drawings from *Steamboat Willie*. Estimate how many drawings there are on this wall. Then, with your knowledge of how many drawings it takes to create one second of animation, estimate how many seconds of the cartoon *Steamboat Willie* this wall of drawings represents.

Number of Drawings

Number of Seconds

Categories that apply

EXPERIMENTATION
1929-1937

GALLERIES 3 & 4

The success of Walt's cartoons led to a revolution in the art and technology of animation. The objects in these galleries show the creative explosion of the 1930s.

OBSERVE

While exploring these galleries, find an example of STEAM and sketch it here:

Circle all that apply

INNOVATION
1937

GALLERY 5

In the 1930s, Walt pushed the art of animation forward in many ways. One example is the development of the Multiplane Camera, which allowed for more realistic depth in animation.

CONSIDER

Look carefully at the Multiplane Camera. and write down a list of your observations here.



How do you think the Multiplane Camera works? Describe your ideas here:

What questions do you have about the Multiplane Camera?

Read the wall text, watch the video, and listen to the headsets, and/or discuss with a classmate to try to find the answers to your questions.

Categories that apply

NEW DIRECTIONS
1938-1955

GALLERIES 6, 7, 8 & 9A

Later in Walt's career, he began to explore new and exciting forms of entertainment. He ventured into live-action films, documentaries, television shows, and theme park design.

WONDER

While exploring these galleries, find an example of STEAM and write down three questions you have about that example here:

Now, discuss the possible answers to your questions with a classmate.

Circle all that apply

LOOKING TO THE FUTURE
1955-1966

GALLERY 9B

With the success of Disneyland, Walt became increasingly interested in city planning and design as tools for solving some of the world's most pressing issues.



In the mid-1960s, Walt was asked to create four pavilions for the 1964/1965 New York World's Fair, including the *Carousel of Progress* for the General Electric Company. The portion of the carousel you see here represents the modern world of 1964, showing a family living among the most advanced technology, including a washer and dryer, a microwave, and a television.

IMAGINE

If you were to create a portion of the carousel for the year 2064, what would you include to show how technology will affect the future? Sketch or write your idea:

Categories that apply

LEGACY
1966-PRESENT

GALLERY 10

Walt's death in 1966 shocked and saddened the world, but his legacy continues today.

REFLECT

Take a moment to reflect on your experience at the museum today. What did you learn from Walt's life story?



What one word would you use to describe his legacy?

DESIGN

In the 1960s, Walt was also working on the "Florida Project." The project was divided into two parts, a theme park and an experimental community. The community was called EPCOT, or the Experimental Prototype Community of Tomorrow, and it was intended to be a real community where people experimented with new, efficient ways of living and working.

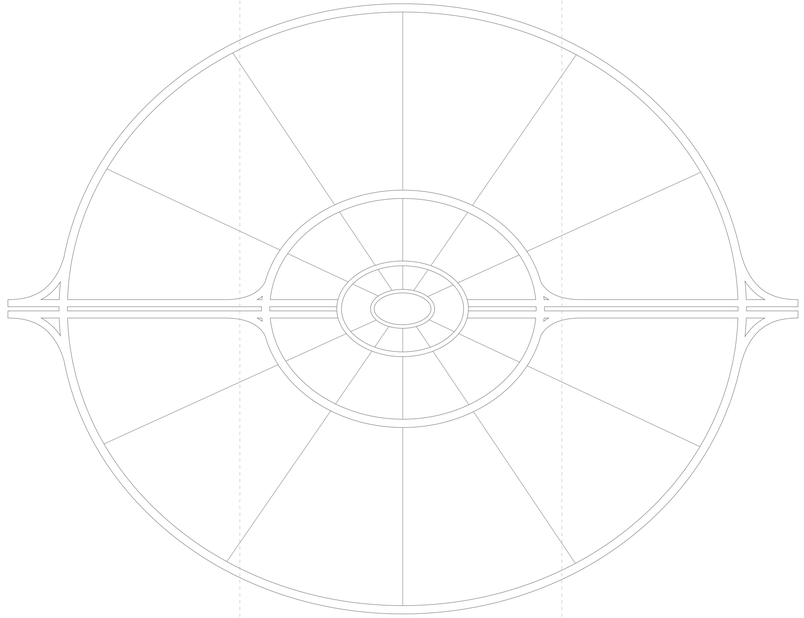
If you were to create an experimental community of tomorrow now, what would it look like? What types of experiments would people conduct there? Use this template to plan your design, then consider building a model!

CONNECT

Share your work with us using #wdfmSTEAM

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Draw your plans for an experimental community of tomorrow.



Write an essay describing your plans for this project, explaining how your experimental community of tomorrow will help solve some of the problems facing people today. Explain how completion of the project will require skills used in science, technology, engineering, art, and math.

Steamboat Willie Still image from *Steamboat Willie*, © 1928 Disney; Courtesy of The Walt Disney Company, © Disney **Multiplane Camera** Walt Disney demonstrates the Multiplane Camera, c. 1950; Courtesy of The Walt Disney Company, © Disney **Carousel of Progress model** Courtesy of The Walt Disney Company, © Disney **Walt Disney** Walt tips his hat, 1966; Collection Walt Disney Family Foundation

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SCIENCE
TECH-
NOLOGY
ENGIN-
EERING
ART
+ MATH

THE WALT DISNEY FAMILY MUSEUM

STEAM Student Self Guide
Grades 4–12