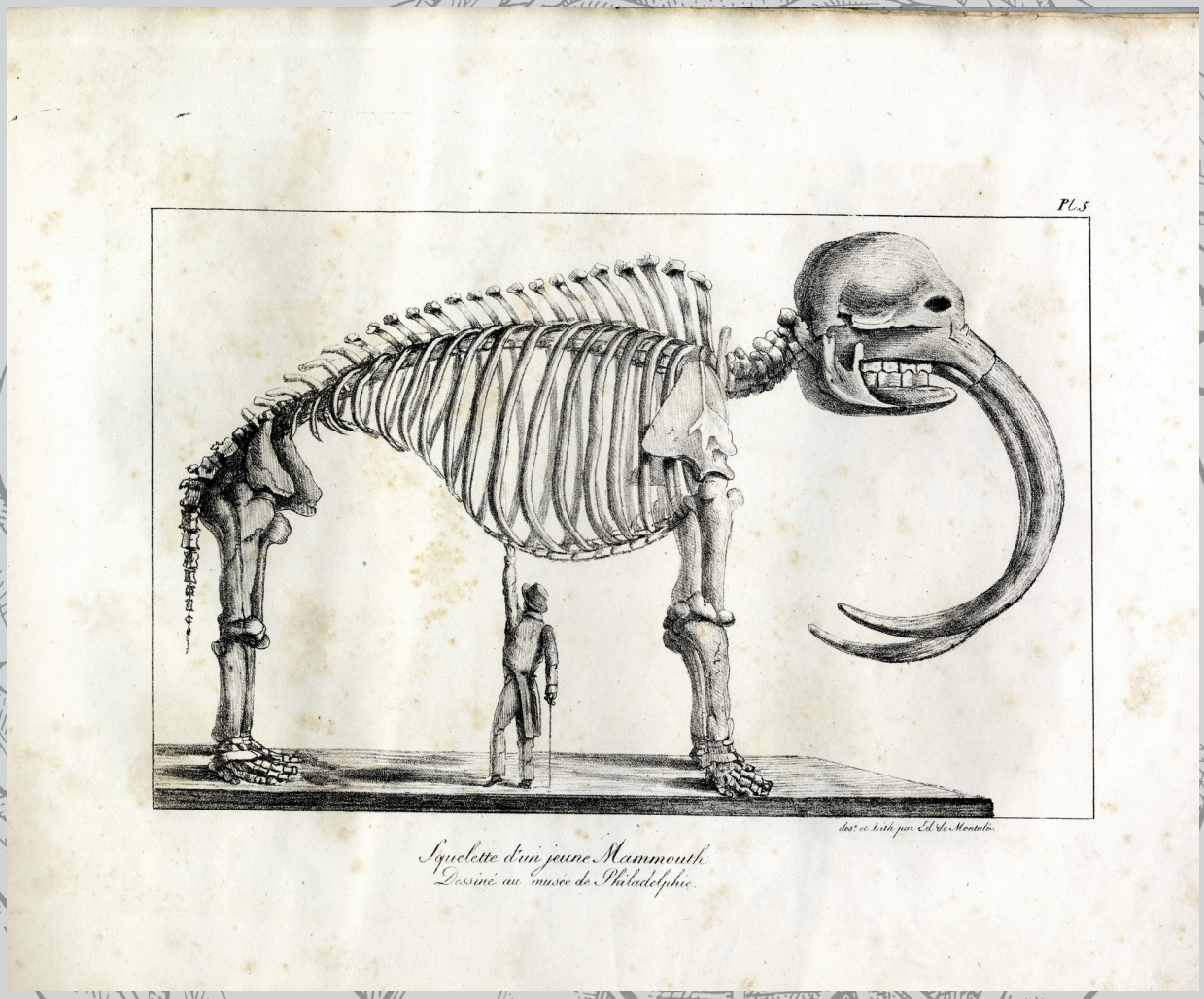
LEARNING ACTIVITY

# Observing Your World: Charles Willson Peale




AMERICAN PHILOSOPHICAL SOCIETY
Library &Museum

# OBSERVING YOUR WORLD: CHARLES WILLSON PEALE

## Introduction

Pair this learning activity with the short educational film "Charles Willson Peale: Artist of the Revolution" to explore how primary sources, such as natural history images, help us understand the world around us, both in the 18th century and today.

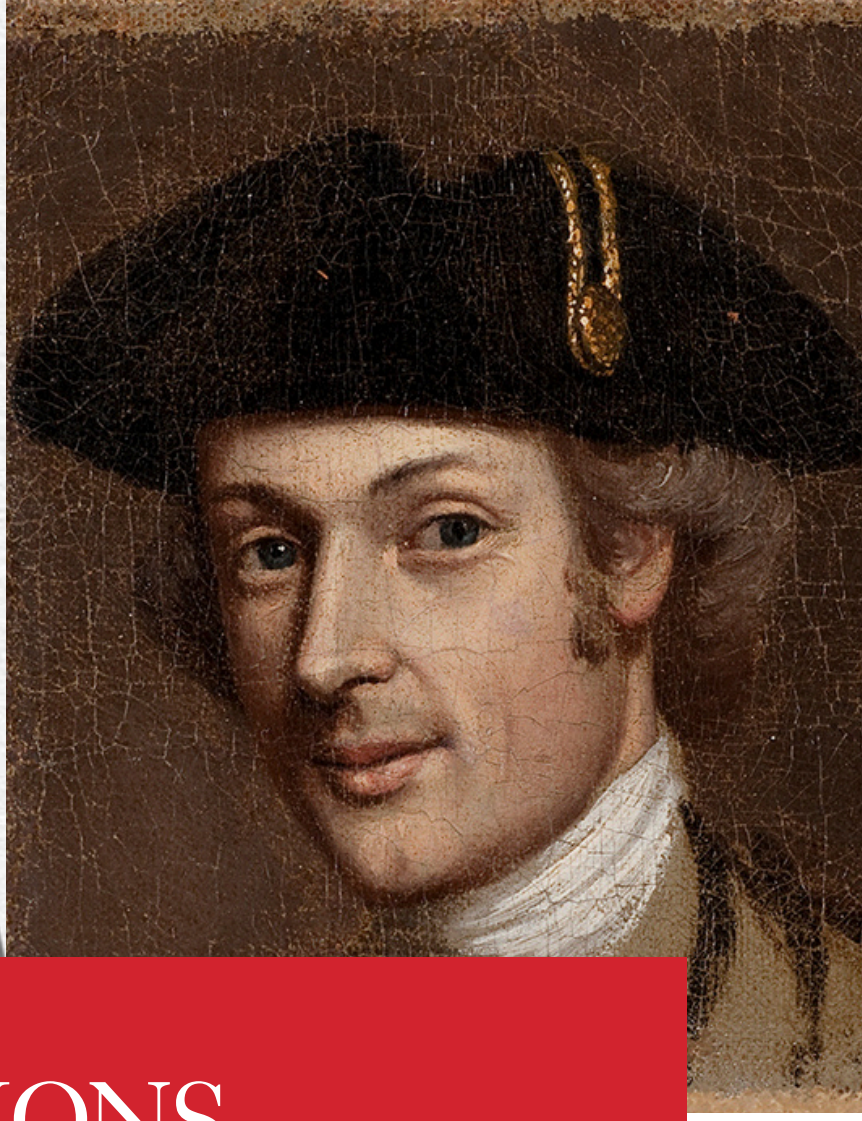
# LEARNING ACTIVITY CONTENTS

# LEARNING OBJECTIVES

- Students will understand the difference between an observation and an inference.
- Students will make their own observations and inferences.
- Students will be able to distinguish between a carnivore, omnivore, or herbivore.

# SKILL OBJECTIVES

- Students will engage in critical thinking.
- Students will analyze drawings.
- Students will be able to compare analystically.



# INSTRUCTIONS

- Watch the educational film “Charles Willson Peale: Artist of the Revolution.”
- Do the three learning activities in order.
- Once finished return back to the video and see if students can spot a mistake in it.

Watch Film

https://youtu.be/v4k-4B3q1GA?si=nrNsMGUjhmZySZ77

# INSTRUCTIONS ACTIVITY 1

- Watch the educational film "Charles Willson Peale: Artist of the Revolution."
- Discuss with students the difference between an observation and an inference.
- Have students look at the three fossil drawings—'mammoth tooth', 'mastodon tooth', and 'tooth, fossil'—and note observations and inferences.
- Use the questions below for discussion.

## Discussion Questions

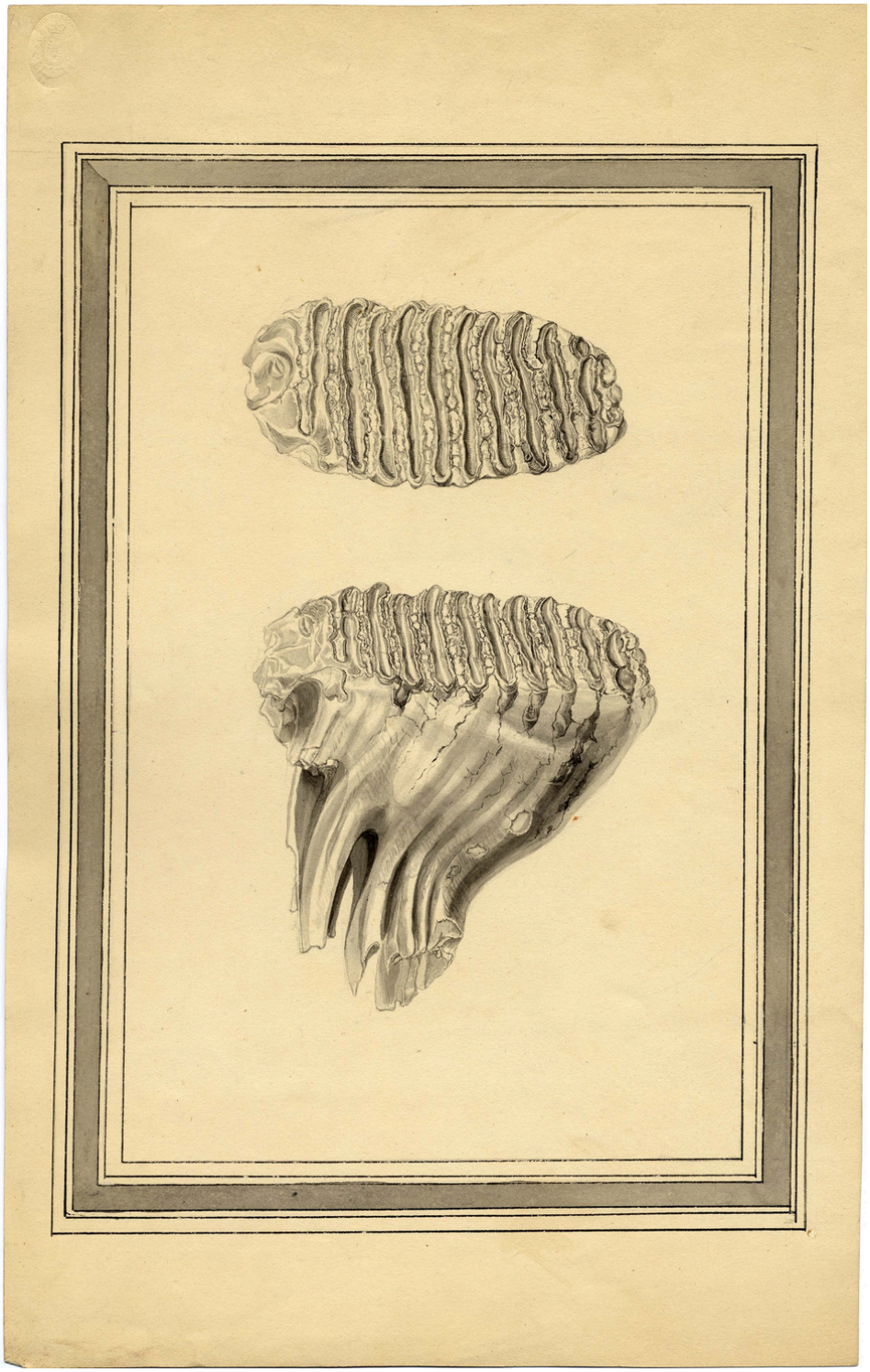
- Why would it be important to be both an artist and scientist?
- Why is it important to have accurate observations?
- Why are accurate inferences important?

## Vocabulary

- **Observation:** basic information that you glean from your five senses: sight, sound, smell, taste, and touch.
  - Ex. The ground looks wet
- **Inference:** a statement you make based on your own observations.
  - Ex. (to above) It must have either rained or is raining
- **Fossil:** the preserved remains of an organism (ex. plant or animal) that lived a long time ago.

# ORIGINAL DOCUMENT

*Mammoth tooth*, Benjamin Smith Barton, undated. APS.



https://diglib.amphilsoc.org/islandora/object/text%3A302196

# ORIGINAL DOCUMENT

*Mastodon tooth*, Benjamin Smith Barton, undated. APS.

https://diglib.amphilsoc.org/islandora/object/text%3A302196

# ORIGINAL DOCUMENT

*Tooth, fossil*, Benjamin Smith Barton, undated. APS.

https://diglib.amphilsoc.org/islandora/object/text%3A302196

# INSTRUCTIONS ACTIVITY 2

- Discuss with students the difference between an herbivore, omnivore, and carnivore.
- Using their observations and inferences identify which fossils (mammoth pg 7, mastodon pg 8, and shark pg 9) belong to an herbivore or carnivore.
- Use the questions below for discussion.

## Discussion Questions

- Why are people drawing these fossil images?
- How does art play an important part in history?

## Vocabulary

- **Herbivore:** an organism that eats only plants.
- **Omnivore:** an organism that eats both plants and meat.
- **Carnivore:** an organism that eats meat.

# INSTRUCTIONS ACTIVITY 3

- Have students discuss why they chose if a fossil was an herbivore or carnivore.
- Pass out the description cards (page 12-13).
- Have students read the description cards and match them with the fossils.
- Use the questions below for discussion.
- Go back to the Peale video and have students use their observation skills to spot a mistake.
    - Hint:  It's at 1:39 of the Peale video. They say it's a mastodon skeleton but it's actually an elephant.

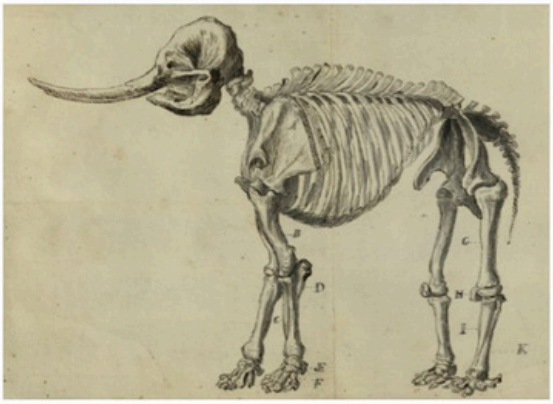
## Discussion Questions

- Who are these fossil images for?
- What are the uses for fossil illustrations like these for people in the 19th century? What about today?

## Vocabulary

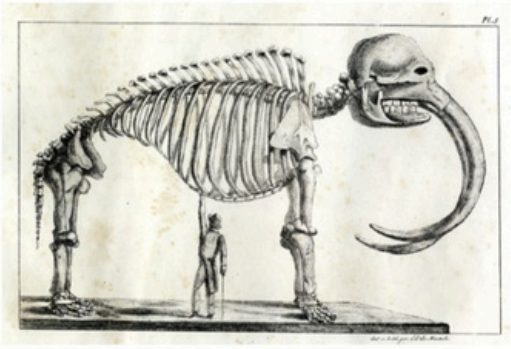
- **Comparative Anatomy:** comparing the similarities and differences between the anatomy of species.

# Description Cards



The mammoth has ridge molars (or teeth). These are kind of like the bottom of your sneakers.

They are flat so they can chew on leaves and are very similar to elephants today, (see elephant skeleton to the left.)



Mastodon teeth are cone-like, roundish teeth.

They use these to grind and crush plants, branches and vegetation.

# Description Cards


Florida Museum photo by Kurt Auffenberg

This tooth belongs to a type of shark. It's pointy and big.

This tooth would have been to tear and eat meat.


# DISCUSSION QUESTIONS

- Why would it be important to be both an artist and scientist?
- How does art play an important part in history?
- Why is it important to have accurate observations? Why are accurate inferences important?
- Why are people drawing these images?
- What are the uses for illustrations like these fossils for people in the 19th century? What about today?
- Who are these fossil images for? How are they still useful today?

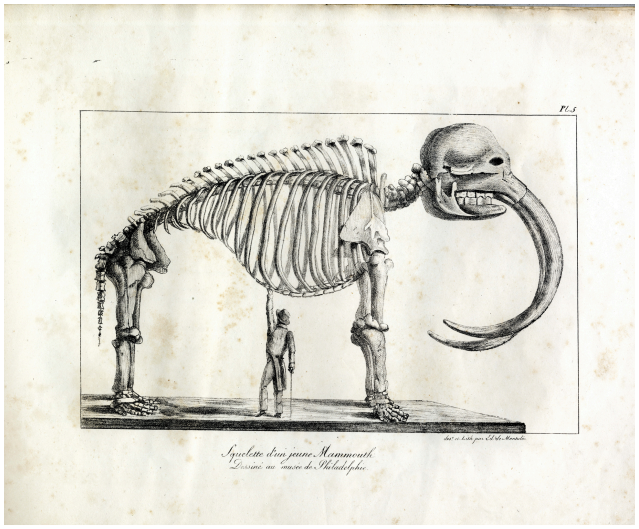
# HISTORICAL CONTEXT

## Who was Charles Willon Peale?

- Charles Willson Peale was born on April 15, 1741 in Queen Anne's County, Maryland to Charles Peale and his wife Margaret Triggs.
- Charles Willson Peale's father died while he was a child. To help support his mother and siblings, Charles was apprenticed to a saddle maker. He would go on to be an American portrait painter, soldier, inventor, politician, and naturalist.
- During the American Revolution, Peale joined the Pennsylvania militia group called the Associators. He fought in the battles of Trenton and Princeton in the winter of 1776-1777.
- Peale is known for painting many portraits of founding fathers. He would have these paintings on display for the public to view in his Museum. He hoped the public would view these figures and emulate their virtues.
- In 1786, Peale founded The Philadelphia Museum, in his family's home at Third and Lombard. This was the first successful public museum in Philadelphia. It would later move to the American Philosophical Society in Philosophical Hall from 1794-1811 and after that it would move to Independence Hall.

# HISTORICAL CONTEXT

## What did scientist do to identify these and other fossils?



- In 1801, with partial funding from the American Philosophical Society, Charles Willson Peale and his family excavated an almost complete skeleton of a mastodon in Newburgh, NY.

- To help identify this fossil, the Peales used comparative anatomy. They compared the bones they found with bones from another animal and saw if they could find connections.

- The mastodon fossils helped provide further evidence to support the idea of extinction. Extinction is when animals die out and disappear entirely over time due to a variety of reasons like: overhunting, destruction of habitat, competition over resources, etc.

- When Peale and his family put it together they had the tusks faced downward. One theory is that the Peales did not know how these bones all fit together, so they did their best trying to see what fit where best. In this regard, imagine trying to put a puzzle together without knowing what the picture looked like. Another possible idea was that they were comparing the tusks to a walrus at one point. They thought they went downwards to dig up shellfish.

- Another theory is that they put the tusks down to make the mastodon more ferocious. This was due to French naturalist Comte de Buffon's theory of American degeneration. This theory (an incorrect one) stated that all American animals were devolved versions of European species because of the cold, wet, generally bad climate of North America. This could have been a way to show European scientists that America had ferocious and big animals.

# ADDITIONAL DOCUMENT HIGHLIGHTS

The American Philosophical Society holds The Peale-Sellers Family Papers. This is considered the world's largest collection of Peale family archival materials. Some of the collection is available in the digital library: https://diglib.amphilsoc.org/islandora/object/text%3AMss.B.R894

In thinking about Peale and his Museum, take a look at this broadside possibly used to advertise for the Peale Museum. Peale used the phrase, "Amusement here with science is combin'd, to please, improve, and cultivate the mind" as a center point for his Museum advertisement. In a time when print was one of the main forms of communication, this advertisement had to appeal and gain the interest of a diverse population. Take a look at the image and consider the questions below:
Does this broadside remind you of anything in advertisement today?
What does the phrase, used on the broadside mean to you?
What does the imagery of the broadside add to the advertisement?
What was Peale's purpose in using this phrase in advertising the Museum?

- Amusement here with science is combin'd, to please, improve, and cultivate the mind
- https://diglib.amphilsoc.org/islandora/object/text%3A302202

The film mentions Peale fought on the American side of the Revolutionary War. Take a look at his journal here. Besides talking about daily life, as an artist Peale also includes drawings, from landscapes to founding fathers.

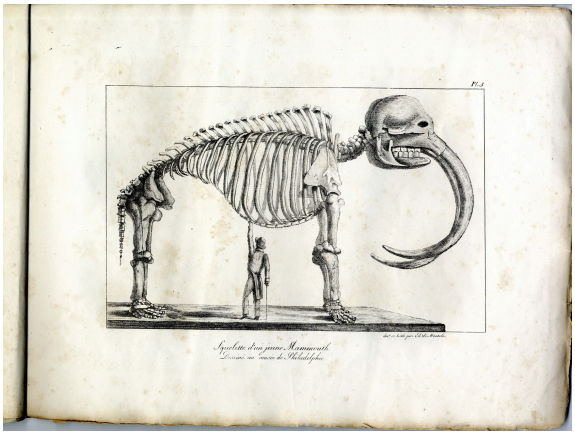
- Peale, Charles Willson diary, 1777-1778: https://diglib.amphilsoc.org/islandora/object/apsrevcity%3A16605

Learn more about the mastodon and when some fossils are not a mastodon from this blog post:
https://www.amphilsoc.org/blog/when-mastodon-not-1

# IMAGE CREDITS

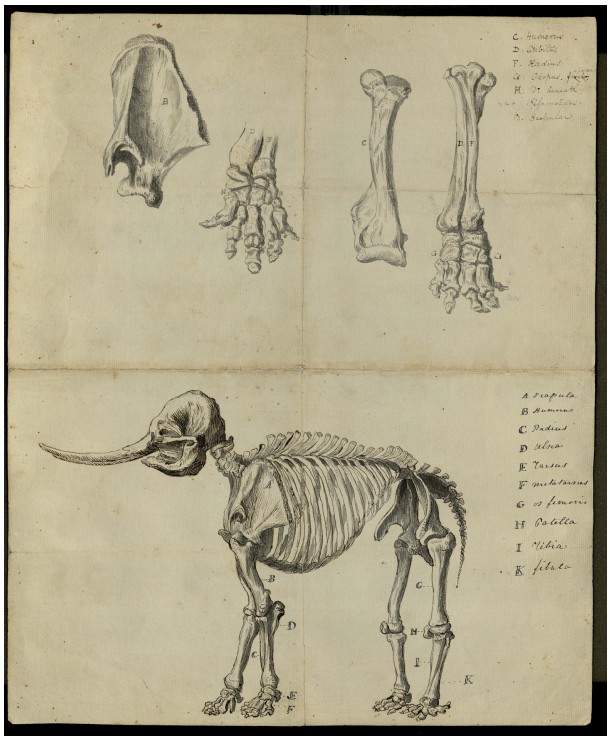
*Self-Portrait*
Painted by Charles Willson Peale, 1777-1778
American Philosophical Society

*Paint Palletes*
Made by Rembrandt Peale, 1833-55
American Philosophical Society



*Voyage en Amerique en Sicile et en Egypte*
Drawn by Edouard de Montule, 1821
American Philosophical Society

# IMAGE CREDITS



*Elephant Skeleton*
Drawn by Rembrandt Peale, 1801
American Philosophical Society


*Megalodon Tooth*
Photo by Kurt Auffenberg
Florida Museum

AMERICAN PHILOSOPHICAL SOCIETY

The American Philosophical Society, the oldest learned society in the United States, was founded in 1743 by Benjamin Franklin for the purpose of "promoting useful knowledge." In the 21st century we sustain this mission in three principal ways. We honor and engage leading scholars, scientists, and professionals through elected membership and opportunities for interdisciplinary, intellectual fellowship, particularly in our semi-annual Meetings. We support research and discovery through grants and fellowships, lectures, publications, prizes, exhibitions, and public education. We serve scholars through a research library of manuscripts and other collections internationally recognized for their enduring historic value. The American Philosophical Society's current activities reflect the founder's spirit of inquiry, provide a forum for the free exchange of ideas, and convey our conviction that intellectual inquiry and critical thought are inherently in the best interest of the public.

For more learning resources from the APS visit:
https://www.amphilsoc.org/education-resources