

JUNIOR RANGER

CHANGE MAKER

ACTIVITY GUIDE



THIS BOOK BELONGS TO:



Get Ready to Drive Big Change in Your Community!

With this activity guide, you have all that you need to become a Jr. Ranger Community Changer. Every year, the U.S. Mint makes billions of coins – like the nickel, dime, quarter, and half dollar. This guide will teach you about key themes that are highlighted on the 2026 Mayflower Compact quarter that shows two Pilgrims as they behold the New World on the obverse and depicts the Mayflower ship on the reverse.

The Mayflower ship was used by the Pilgrims to carry goods, tools, animals, household goods and building materials for new homes. After settling, Pilgrims learned how to grow gardens by planting corn seeds in mounds in the ground and using fish to fertilize the soil. Pilgrims planted apple trees they brought from England to harvest fruit and produce cider. They learned the means of working with the environment and their community to manage a good quality of life.

Follow these steps to learn about sustainability and become a Junior Ranger Change Maker:



Complete each activity



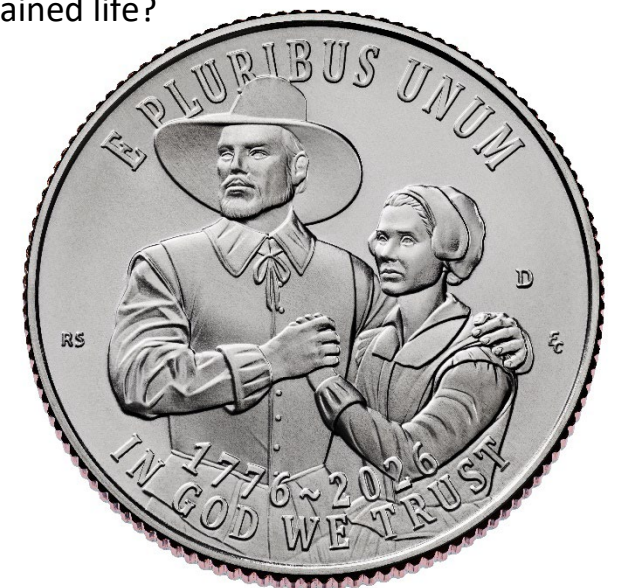
Review your work



Celebrate your success

Did you know that every coin in your pocket tells a story?

Can you give more details about how Pilgrims' sustained life?



Turn the page to find out!

1 Explore and More!

Go outside and explore your community and nature. Try out at least three activities below. Circle the ones you complete. **See page 14 for more space to write or draw.**

Inspector Collector: Find a sign of an animal, like a track, animal fur or feathers, or a partially eaten leaf. Draw it below. What animal do you think it is?

Human Nature: Use natural materials found outside (e.g., rocks, soil, sticks, leaves) to create a sculpture, birdhouse or other creative art.

“X” Marks the Spot: Draw a map of an outdoor area or local park and label ten things (e.g., landmarks or natural resources) that you see.

Fall Back in Time: Imagine that you went back in time to 250 years ago. Journal or sketch what you think your neighborhood looked like.

Small But Mighty: Estimate a 12x12 inch square on the ground. Investigate what types of plants and organisms are moving or growing in this square. Write a poem about the things you observe.

Picture Perfect: Take a photograph of your local community or landscape. Draw, sketch, or paint the photo.

As Far as the Eye Can See: With a friend or family member, play an “i-spy” game. Choose objects based on color, size, and other characteristics.

Nature Calls: Close your eyes for three minutes and listen carefully to the sounds around you. Write a song about what you heard and sing it.

Spring Forward: Imagine that you traveled 100+ years into the future. Journal or draw what you think your neighborhood will look like.

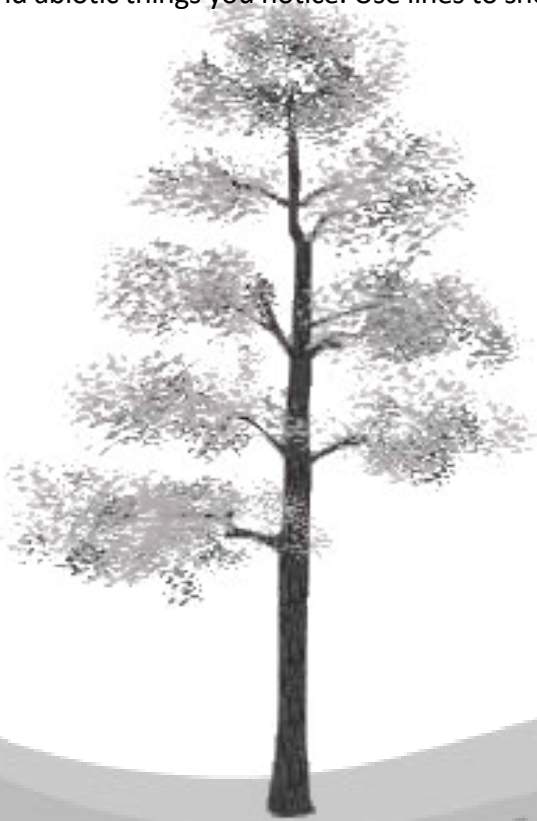
What was your favorite activity? Why?

2 Making Community Connections

Pilgrims made many contributions to agriculture including clearing trees for planting crops, using wood from trees to construct durable homes, and making tools for daily tasks. Trees play an important role in the environment, helping to connect the living (**biotic**) and the non-living (**abiotic**) in our environment.

For example, an oak tree takes in non-living substances (abiotic), such as sunlight, carbon dioxide, soil nutrients, and water and turn them into living (biotic) elements, such as acorns, leaves, and roots that animals (biotic, you guessed it!) eat. Trees also produce oxygen (abiotic) that most living (biotic) beings need to survive. In return, when living beings produce waste or die, they contribute to the soil, water, and atmospheric gases, such as oxygen and carbon dioxide.

An ecosystem is a community of living and nonliving things. Cities, for example, are vibrant ecosystems made up of communities of people, buildings, squirrels, soil, pigeons, air, trees, insects, and much more-- and they are all connected in one way or another. A diversity of connections makes our communities and ecosystems more resilient, meaning they are stronger and better able to adapt to change. Walk around your community and find a space near a tree. Observe the environment for a few minutes. How do the things you observe work together? Draw or write biotic and abiotic things you notice. Use lines to show the connections in your ecosystem.




What would happen if this tree was not here?

3 Getting Your Money's Worth with Trees

We cut down trees to make products we want, such as paper, furniture and houses. Yet, trees also provide for our essential needs when they continue to grow. In any ecosystem, trees play an important role. They produce the oxygen that we breathe and clean carbon dioxide (CO2) out of the air. When too much CO2 is in the air, the sun's heat gets trapped. This causes the ocean and Earth's temperatures to rise. Trees also help protect the environment by preventing soil from washing away and providing homes for animals. Trees provide energy savings and lead to an increase in property values.

On average, the benefits of trees are 3x greater than tree care costs. Do the exercise below to learn about the value of trees in your community.

A mature tree can absorb 48 pounds of CO2 per year and produce enough oxygen in a year to support two people.




_____ (number of trees you see)

x **2** (life-giving oxygen)

= _____ Total oxygen per year

100 trees remove 430 pounds of other air pollutants per year. This helps reduce medical bills related to asthma and other lung issues.




_____ (number of trees you see)

x **4** (pounds of air pollutants removed per year)

= _____ Total pounds of air pollutants removed per year

100 trees catch about 139,000 gallons of rainwater. The same amount of water as taking an 8-minute shower - **7,900 times!**

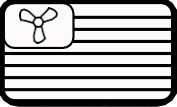




_____ (number of trees you see)

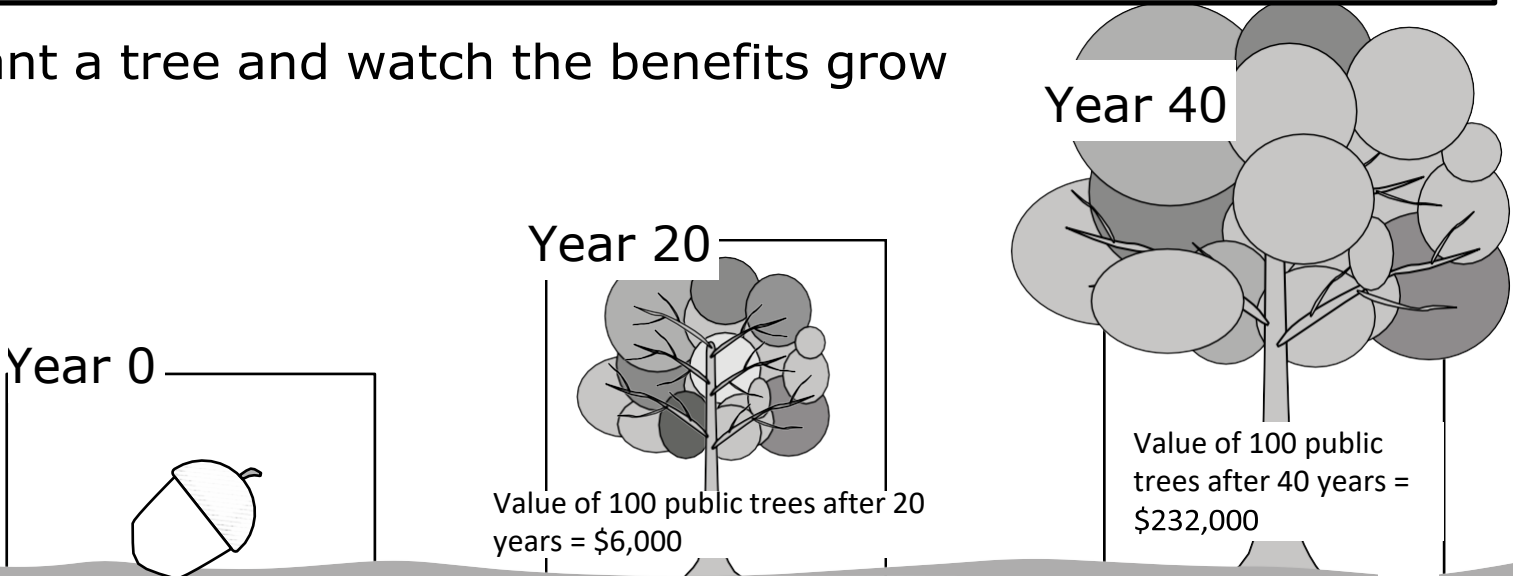
x **1,390** (gallons of rainwater saved per tree)

= _____ Total gallons of rainwater saved per year

Check out more ways trees can benefit you and your community in the chart below.

Quantity	Value	Equivalent
Strategically placed trees...	Save up to 56% on annual air-conditioning costs.	For an average household spending \$265 per year on air conditioning, this can save \$148 per year! 
Large specimen trees...	Can add 10% to property value.	"For a \$100,000 property, this is an extra \$10,000." 
Each large front yard tree...	Can add 1% to the house sales price.	"For a \$50,000 house, this is an extra \$500!" 

Plant a tree and watch the benefits grow



4 You Can Count on Trees

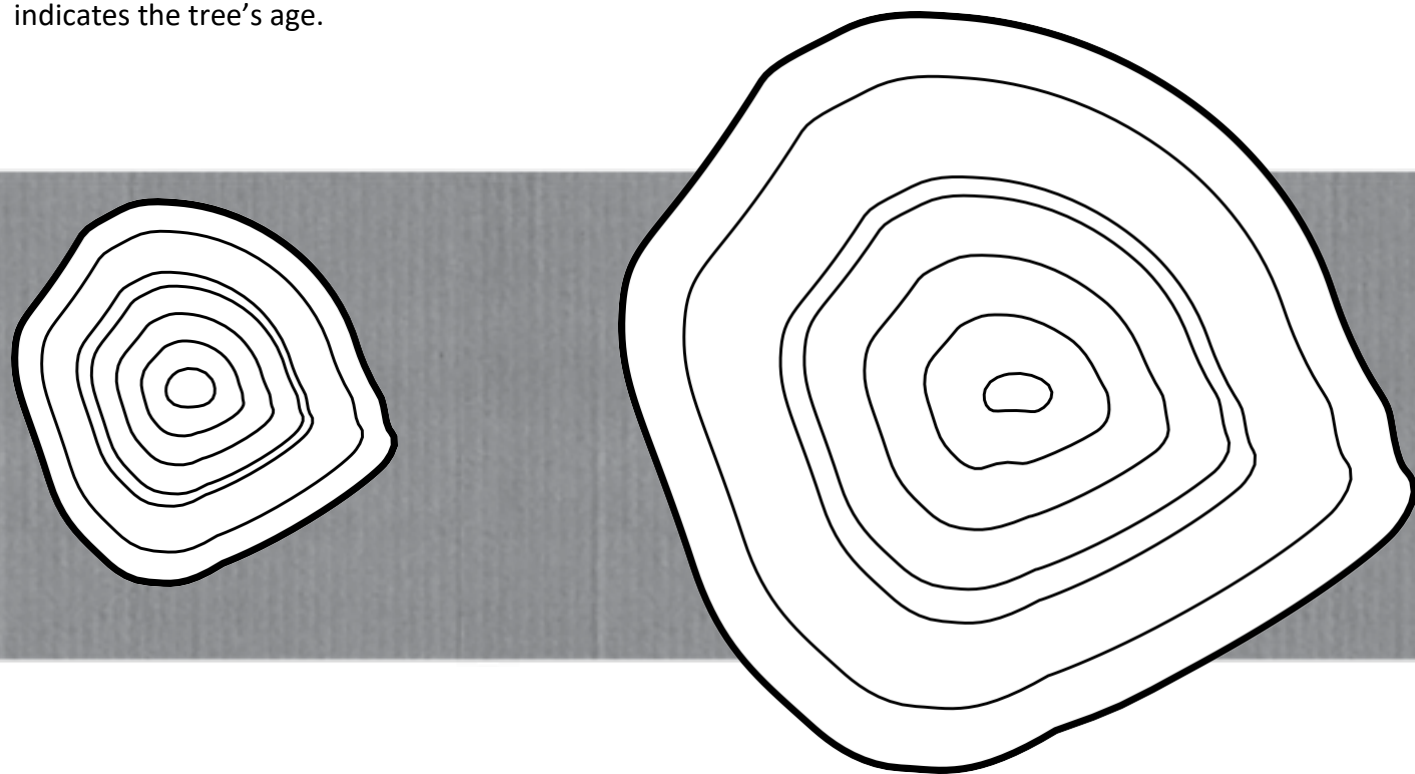
Without trees, the planet would experience disastrous flooding, severe drought, widespread erosion and a collapse of the ecosystem.

In 1864, George Perkins Marsh wrote a book called *Man and Nature* that discuss the role that humans play in taking care of our environment, so it will be in a healthy state for future generations. This echoes what the Pilgrims adopted in taking care of and improving the land from fertilization to intercropping. They also learned many practices from Native Americans that helped farms become more productive and sustainable.

Humans are a part of nature, not apart from it, so strong relationships between people and the places they live are vitally important. Many of the trees planted in the late 1800s and early 1900s still exist today—in fact, some trees have survived since the 1700s, before we became the United States.

Today, people take care of trees by mulching, pruning, monitoring them for pests and regularly providing water.

Fun Fact: Tree rings located in the tree's trunk represent one year of growth. The total number of rings indicates the tree's age.



Can you tell how old these trees are by counting their rings? Although they are different sizes, they are the same age. Some trees grow faster and have wider rings. The ring size also depends on how much sun, water and nutrients the tree was able to get that year to grow.

Explore the different stages of a tree's growth over the past 50 years and the historical events they have lived through. Pick three of the events from the list below and draw a line from each to the corresponding tree ring.

February 14, 2005

You-Tube, the online sharing platform is launched

December 18, 1620

The Mayflower anchors in Plymouth Harbor and the Pilgrims prepare for their first expedition

June 26, 1997

Harry Potter and the Philosopher's Stone is published in the United Kingdom

October 17, 2019

First all-woman spacewalk conducted on the International Space Station

May 25, 1977

Star Wars Episode IV – A New Hope is released in theaters

November 29, 1972

First video game, Pong, is released by Atari

Mark the tree ring to note the year that you were born.

Today 2002 1987 1620

5 Making Change

Sustainability is caring for and protecting our community, both now and in the future. This can include natural resources in the environment as well as the people around us and the places we live. This means using our resources from nature wisely so that we do not waste them and they are shared equitably? Every choice we make can impact ourselves, communities, and the world. Even small actions can make a big difference.

Learn about sustainability and how our choices affect the people, places, and things around us. **Follow the instructions on the board. The first player to reach the end wins!**

To Play: Use a small toy as your game piece and place it on START. With a partner, take turns flipping a coin to move your piece: heads you move one space, tails you move two spaces.

START

Community – You organize a clothing drive to donate clothes to a local shelter.
MOVE AHEAD 2 SPACES

Community - You have winter clothes that do not fit anymore, and they sit in your closet unused.
LOSE A TURN

Systems - You drink your beverages without a straw to make sure the plastic does not end up in our waterways, hurting wildlife.
MOVE AHEAD 2 SPACES

Systems - You pour harmful chemicals down the drain, which could contaminate water downstream.
LOSE A TURN

Diversity - You plant different types of trees and bushes by your home, providing more habitats for wildlife.
MOVE AHEAD 1 SPACE

Interdependence - You take more construction paper than you need for a project and when you need more, there's none left.
LOSE A TURN

Interdependence - You work with fellow students to reduce food waste in the cafeteria, saving the school money so they can buy more local fresh food for you.
MOVE AHEAD 2 SPACES

Cycles - You compost your food waste, letting it return to the earth and become soil again to grow food again.
MOVE AHEAD 1 SPACE

Limits - You drink from a reusable water bottle, limiting the amount of plastic water bottles in landfills.
MOVE AHEAD 2 SPACES

Limits - You forgot to water the community garden over the weekend, so its growth was limited.
MOVE BACK 1 SPACE

Fairness/Equity - You adjust the rules of a game to make it more fair to your friend in a wheelchair.
MOVE AHEAD 2 SPACES

Equilibrium - You have too much screen time, preventing you from engaging in other healthy activities.
MOVE BACK 1 SPACE

Long Term Effects - Instead of fruits and vegetables, you choose to eat unhealthy foods in the cafeteria, which might lead to long-term health problems.
MOVE BACK 1 SPACE

Long-Term Effects - You ask the bus driver to stop idling in front of the school, reducing the risk of asthma and air pollution in your community.
MOVE AHEAD 2 SPACES

Your bike has a flat and instead of trying to fix it you stop riding it.
LOSE A TURN.

Ability to Make a Difference - You want to ride your bike in your neighborhood, but cars drive too fast. You put up a "slow" sign on your street and successfully petition the city to lower the speed limit.
MOVE AHEAD 2 SPACES.

Place - You see a classmate being teased, making them feel out of place, but you don't say anything.
LOSE A TURN

Place- You plan a celebration of the different cultures in your community.
MOVE AHEAD 2 SPACES

END

6 Change that Makes Cents

Did you know that coins can last thousands of years? Every time you hold a coin, you are holding a piece of history. The subjects on our coins today will tell future generations about our culture and what we cared about. Each coin design means something different.

*Coin designs can also highlight places, like a national park or historic site. The 2020 Marsh-Billings-Rockefeller quarter was designed to show the importance of sustainability. Sustainability is important because it improves the quality of life for all, both now and for future generations. Sustainability can mean different things to different people. **Explore the 12 big ideas of sustainability on the next page. Think about what each idea means to you and your community.***



Many coin designs involve symbols, like Liberty. For more than 230 years, Liberty has appeared on U.S. coins to reflect the country's founding principle of liberty. This evokes the ideals of freedom, courage, and hope.

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12 Big Ideas of Sustainability

Recycle: Reduces pollution and energy consumption.

Reduce waste: Try to reduce waste.

Reusable bags: Eliminate plastic waste.

Cycles: Every organism and every system go through different stages.

Conserve energy: Maximize efficiency.

Compost: Provides plants with nutrition.

Repurpose: Use something old to build something new.

Eco-friendly: Reduces harm to the environment.

Reduce: prevents waste and conserves natural resources.

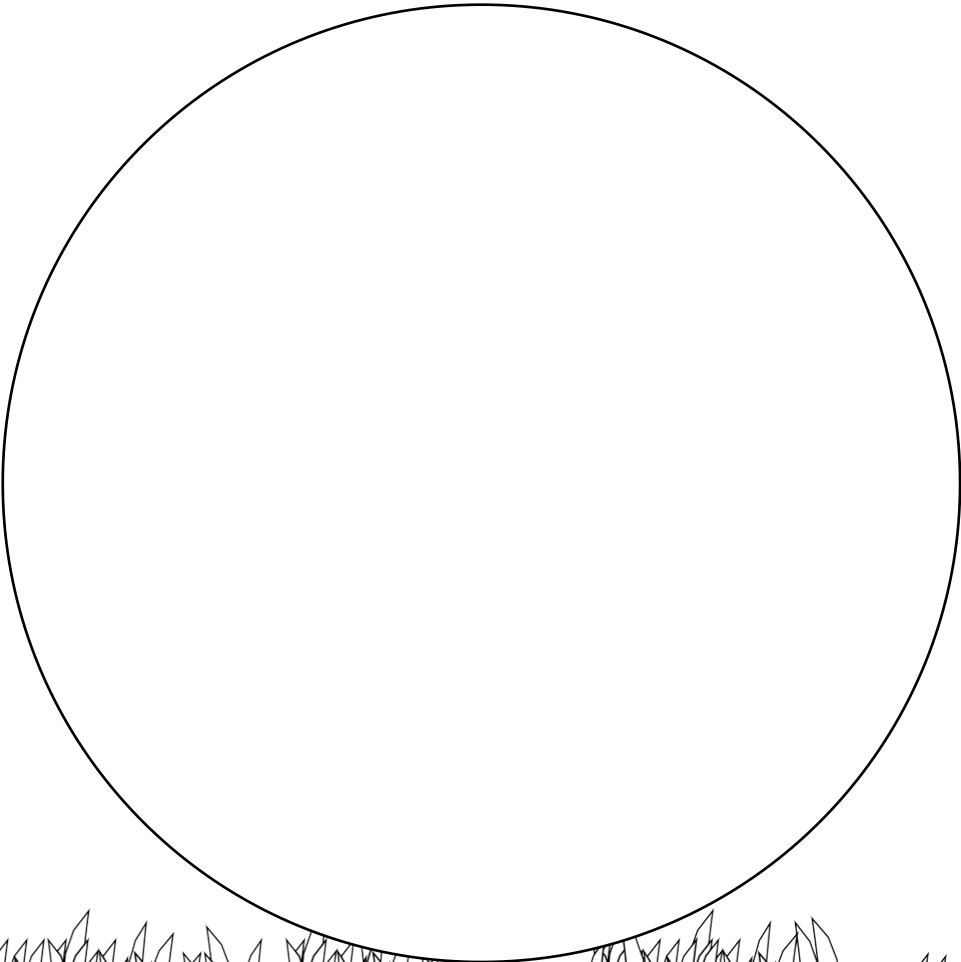
Sustainable: Solutions that are beneficial for the planet and people for years to come.

Water conservation: Water-saving practices protect the ecosystem.

Reuse: Helps to reduce waste and conserve natural resources.

What would you put on a coin?

Select one of the 12 big ideas listed on this page. Using the blank space below, design a coin that represents what that idea means to you and your community.



7 Be the Change!

Sustainability starts with you. There are many things you can do to care for your community and environment and help make sure the natural resources that you enjoy today are available for future generations.

Reduction and reuse are the most effective ways you can save natural resources, protect the environment and save money. This means treating your community, its resources, and each other with respect.

Learn more about ways that you can be more sustainable. **Circle 3 or more things that you and your family can do today to be more sustainable.**

Ride a bike instead of taking the bus or car	Start a clothing drive to donate clothes to a local shelter	Petition your principal for healthy, locally grown produce at your school
Plant a tree with enough sunlight to grow	Avoid using plastic straws when drinking beverages	Drink water from reusable containers instead of plastic bottles
Plant a community garden	Carry reusable grocery bags	Pick up trash that you see in your community

This is just the beginning! Read some examples of a pledge to commit to sustainability. Write your own using the space below.

Examples:

- I promise to be a friend to the environment and practice ways to protect nature and its resources.*
- I promise to teach others about the importance of sustainability and preserving the environment for future generations.*
- I will continue to explore different ways to be more environmentally friendly within my community.*


My Sustainability Pledge

I, _____ (name) promise to _____

Signed: _____ Date: _____

NOTES - Use these pages if you need space to draw or take notes on any observations you make.

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The Junior Ranger Community Changer activity guide was created through the partnership of the National Park Service (NPS), Marsh-Billings-Rockefeller National Historical Park, Shelburne Farms, and the United States Mint Education Outreach team.

More to Explore!

To learn more about the Marsh-Billings-Rockefeller National Historical Park, visit <https://www.nps.gov/mabi/>.

To learn more about Shelburne Farms, visit <https://shelburnefarms.org/>.

To learn more about the U.S. Mint, including free online games and activities, visit www.kids.usmint.gov or reach out to education.outreach@usmint.treas.gov to request resources.

