

Reading *Maria's Comet*

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SUMMARY

During this activity, you and your child will actively read *Maria's Comet*, using the suggested reading questions.

FOCUS

Through this activity, your child will have fun while learning about a young woman who became a famous American astronomer. In the process, your child will build reading skills, including the ability to compare and contrast, and to make connections between characters in stories and real people.

TIME

- 30 minutes or more

RECOMMENDED AGE GROUP

This activity will work best for children in kindergarten through 4th grade.

CHALLENGE WORDS

- **astronomy:** the science of the stars, planets, sun, moon, and sky
- **atlas:** book of maps, sometimes including pictures and other information
- **comet:** a ball of frozen gases, frozen water, and dust
- **constellation:** a pattern of stars, like connect-the-dot pictures
- **luminous:** giving off light; glowing
- **otter:** an animal that lives in or around water and eats fish
- **scanning:** looking by checking from point to point
- **telescope:** a tool for viewing far-off objects
- **treasure trove:** a valuable discovery or collection
- **to and fro:** back and forth
- **whaling:** catching whales to sell products such as whale bone and oil

YOU NEED

- This Reading Guide
- [Step Back in Time](#) sheet (*attached*)
- *Maria's (ma-RYE-ahs) Comet* book, written by Deborah Hopkinson and illustrated by Deborah Lanino

More information at <http://americanhistory.si.edu/ourstory/activities/telescope/>.

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PARENT PREPARATION

- If you have time, read the story yourself before sharing it with your child. Also read the [Step Back in Time](#) sheet and the notes on the last two pages of the book.
- If you have time, preview some of the reading suggestions below. Pick just a few suggestions that look interesting and fun for you.

BEFORE READING

- Looking at a few pictures in the book, talk about where and when this story took place. Does it look like this story happened in the past, present, or future? What clues can you use from the picture to guess? For example, try looking at the clothes and some of the things in Maria's house for hints.

DURING READING

- Try using different voices for the different characters in the book, or have your child read out loud all of the things that Maria says out loud.
- The author, Deborah Hopkinson, uses similes to help readers understand the story. She uses many similes, which are expressions that describe something by comparing it with something else. Similes use the words “like” or “as” to make the comparison between things. Some examples are “my needle sometimes feels as heavy as the anchor of my uncle’s whaling boat,” and “the Milky Way spreads before me like a crazy, luminous quilt.” Look for similes as you read together.

AFTER READING

- Compare the illustrations (the pictures in the book) to the photographs of objects on the [Step Back in Time](#) sheet. Can you find objects in the books that look like the ones on the [Step Back in Time](#) sheet? How are the objects the same or different?
- There are several words used in the story in ways that may not be familiar to your child. To help explain the meaning of these words, use the context of the sentence (the meaning of the other words in the sentence) or the pictures in the book for hints. What meaning do you already know for this word? What does the word mean in this sentence? Here are some words and sentences to take a look at:
 - “As darkness falls, Papa goes up to the roof to **sweep** the sky.”

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- “Then we open Grandpa Coleman’s sea chest . . . and spin **yarns** about the fierce storms we braved to bring our treasures home.”
- “I am afraid they will say no, afraid they will say a girl should only look through the **eye** of a sewing needle.”

Tip Try to find a way to connect the new meaning to your child’s life. Do you have a needle (with an eye) in your house? Or do you have a favorite family yarn to share? Real-life connections help make these new meanings a part of your child’s vocabulary.

- Talk about jobs together!
 - What job does Maria want to have when she grows up? Look at the **Step Back in Time** sheet or author’s notes to see if she got her wish.
 - What job does your child want to have when she grows up? Why?
 - What job do you (the adult) have now? What things do you do at work?
 - As a child, did you (the adult) dream about having a specific kind of job?
 - Did your father’s or your mother’s job influence your career choice?

For more activities and information about *Maria's Comet* and astronomy in American history, visit <http://americanhistory.si.edu/ourstory/activities/telescope/>.

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Step Back in Time

For more information, visit the National Museum of American History Web site <http://americanhistory.si.edu/ourstory/activities/telescope/>.

One night in October 1847, Maria (ma-RYE-ah) Mitchell saw a comet that no one else had ever seen. She quickly told her father about the discovery and asked him to check with other astronomers to make sure it really was a new comet. Her discovery won her awards, including a gold medal from the King of Denmark, a new telescope, and a prize of one hundred dollars from the Smithsonian Institution!

Maria Mitchell was America's first woman professional astronomer. She was the first American woman to discover a new comet.



a globe from around 1835



a tellurion from the mid-1800s, used to model the movements of the sun, moon, and earth

After Maria became famous she continued to work as an astronomer, and also taught astronomy to younger women at Vassar College. She used a telescope that is now part of the collection of the National Museum of American History. Maria not only helped her students at Vassar College, but brought attention to other American scientists, schools for girls, and the women's rights movement.

astronomer: scientist who studies the stars, planets, sun, moon and sky

astronomy: the science of learning about the stars, planets, sun, moon, and sky

comet: a ball of frozen gases, frozen water, and dust

telescope: a tool for viewing far-off objects

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Read the “Reading Guide” sheets for step-by-step instructions.

OBJECTIVES

Students will be better able to:

- Read for understanding.
- Answer questions using written and pictorial resources.

STUDENT PERFORMANCE CRITERIA

- Discussion exhibits understanding of story and historical details.
- Discussion exhibits understanding of vocabulary in the context of the story.

STANDARDS

NCHS History Standards

K-4 Historical Thinking Standards

2H: Draw upon the visual data presented in photographs, paintings, cartoons, and architectural drawings.

3F: Analyze illustrations in historical stories.

4B: Obtain historical data.

K-4 Historical Content Standards

8A: The student understands the development of technological innovations, the major scientists and inventors associated with them and their social and economic effects.

21st-Century Skills

Learning and Innovation Skills

- Critical Thinking and Problem Solving

Information, Media, and Technology Skills

- Information Literacy
- Media Literacy

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IRA/NCTE Language Arts Standards

1. Students read a wide range of print and non-print texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.
3. Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).
6. Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.
7. Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

Benchmarks for Science Literacy

Grades K-2

- 1-C-1: Everybody can do science and invent things and ideas.
- 4-A-1: There are more stars in the sky than anyone can easily count, but they are not scattered evenly, and they are not all the same in brightness or color.

Grades 3-5

- 1-C-3: Doing science involves many different kinds of work and engages men and women of all ages and backgrounds.
- 4-A-1: The patterns of stars in the sky stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons.
- 4-A-2: Telescopes magnify the appearance of some distant objects in the sky, including the moon and the planets.