WOMEN'S HISTORY MONTH LESSONS

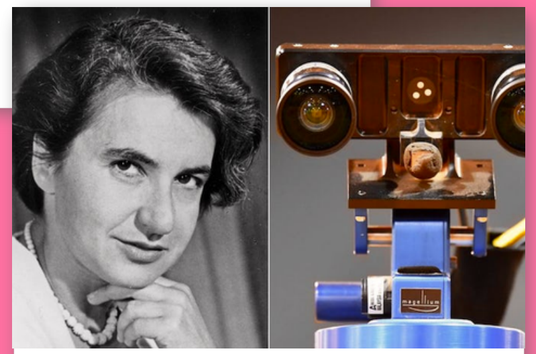
CELEBRATING WOMEN'S HISTORY MONTH

Innovative women



SCIENCE

First all-female spacewalking team makes history



SCIENCE

Europe's first Mars rover named for DNA researcher Rosalind Franklin



SCIENCE

June Almeida discovered the first coronavirus and she's finally getting recognition

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Resources overview

Our mission is to provide rigorous, engaging and joyful lessons for learners to explore the roles and experiences of diverse women throughout American history. We will provide a variety of readings, resources, and activities for different topics in women's history each week, to push learners to investigate the trials and triumphs of women in America (and sometimes, outside America).

Please note that resources, which may include Newsela articles, videos from various content providers, or external activities will be hyperlinked in the activities.

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This week's focus

A man may have first walked on the moon, but computers programmed by women got him there. Women have been involved in furthering the fields of science and technology for centuries—even if their groundbreaking achievements aren't always recognized until much later. In these lessons, you'll study some of the contributions women have made to scientific advancements, including things as practical as an electric refrigerator, as vital as coronavirus research, and as fascinating as our understanding of outer-space. You'll consider why these women may not have gotten the recognition they deserve, and how their lives' work has influenced the world you live in.

Lesson 1: Discoveries and inventions

1 Introduce

Think about one discovery or invention that you feel has made a big impact on your life. This could be antibiotics to treat illnesses, the internet to look up information or chat with friends, the microwave to easily heat up your leftovers, or the many different uses of coconut oil.

Write down what your life might be like without that discovery or invention. Then, reflect: why do we need people to continue seeking out new discoveries, or generating new inventions?

2 Read and learn

Read any of the articles in this lesson: June Almeida discovered the first coronavirus, The Royal Society's lost women scientists, The medical practitioner who paved the way, Ynes Mexia, late-blooming botanist, Barrier-breaking female physicist, Meet Valerie Thomas, inventor and scientist.

In one color, highlight information about the impact the woman or women in the article had in their field. In a second color, highlight any information about the role their gender played in their lives and their work. Use the annotation tool to make any personal connections to the work or experiences of the women in the articles.

3 Discuss

Class Discussion: Watch the interactive video about Rosalind Franklin, a scientist who did not receive recognition for her work with DNA. Consider the concept of "recognition" before answering the following:

Why might female inventors or scientists not receive fair recognition for their work? Why is recognition is important?

Lesson 1: Discoveries and inventions (cont'd.)

4 Create

Select one of the following inventions or discoveries by women to research:

- Inventions: computer code, aquarium, ice cream maker, fire escape, Wi-Fi, coffee filter, caller ID, word processor, humane cattle restraints, globes, car heater, one-handed medical syringe, electric refrigerator, non-reflective glass, disposable diapers, chocolate chip cookies.
- Discoveries: radioactivity, stem cells, DNA double helix, sex chromosomes, bullet-proof fiber, dark matter, the composition of stars, kinetic energy, nuclear fission, Earth's inner core, HIV, Vitamin E.



Look up the woman who made the invention or discovery, and research the story of how they did so, as well as, the impact it had on society. To teach your classmates about the invention or discovery, create a presentation (a video presentation or google slide presentation) on the woman, invention or discovery, and the impact. Be sure to include any fun facts you find in your research, and to connect it back to the modern-day world!

Lesson 2: Women and space

1 Introduce

Watch this trailer [2:38] for the 2016 film Hidden Figures. Then, watch this VICE News clip [4:02] of an interview with one of those women before answering the following:

What stands out to you about the clips? What do you want to learn more about?

2 Read and learn

Read 2-3 of the articles for this lesson: Scientists with NASA, First all-female spacewalking team makes history, Ellen Ochoa, the first latina in space and a former director of the Johnson Space Center, Nicole Aunapu Mann to make history as first Indigenous woman in space, Meet Annie Easley: mathematician who helped NASA explore the solar system.

Highlight details that explain the role that each woman has played in enabling humans to explore and understand space.

3 Discuss

Partner Discussion: Meet with a partner to discuss the following:

What impact have women had on space exploration?

4 Create

Think back to the trailer you watched for Hidden Figures, and the clip that gave some of the real backstory. Now, imagine that you get to create a movie on the story of women and NASA. You could retell the story of Katherine Johnson, or you could focus on female astronauts or other space researchers. Search for more articles on Newsela and elsewhere to research and gain inspiration for your film! Then, create a storyboard for the film you want to produce.

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Name: _____

Class: _____ Date: _____

Storyboard

Scene:	Scene:	Scene:

Scene:	Scene:	Scene:

Elementary lesson 1: Discoveries and inventions

1 Introduce

Think about one discovery or invention that you feel has made a big impact on your life. This could be medicine to treat illnesses, the internet to look up information or chat with friends, the microwave to easily heat up your leftovers, or the many different uses of coconut oil. Take a few minutes to write down what your life might be like without that discovery or invention.

Why do we need people to continue making new discoveries, or creating new inventions?

2 Read and learn

Choose to read either Meet the African-American woman who helped make GPS or Europe's first Mars rover named for DNA researcher Rosalind Franklin.

As you read, highlight details about the discovery or invention the woman in your article has made.

3 Discuss

Small Group: In a small group, discuss the following question before sharing with your class:

Gladys West was given an award for her work on the GPS, but Rosalind Franklin's work was not recognized. Instead, other scientists took credit for her work or pretended it was theirs. Why do you think it is important for women to be recognized for their inventions or discoveries?

4 Create

Create Something New!: Think about a problem in the world that you would like to solve. It could be a way to keep your game system remote from running out of battery or even a way to easily collect trash from the beach. On a sheet of paper, design a new invention or use a discovery to solve the problem you're thinking of. Be sure to draw a photo and explain your creation in detail!

Elementary lesson 2: Women and space

1 Introduce

Watch this video [2:28] about the first Black woman in space, Mae C. Jemison. Then, respond to the following questions in a class discussion:

What are some of the amazing things Mae has done in her life? What questions do you have about other women and their work in space?

2 Read and learn

Choose one article to read: Astronaut Nicole Mann: First Indigenous woman in space awed by Mother Earth, Meet Annie Easley: mathematician who helped NASA explore the solar system, or NASA astronaut Jessica Watkins becomes first Black woman to join space station crew.

As you read, highlight details about the woman in the article's work with space.

3 Discuss

Think-Pair-Share: Think about the following question before finding a partner to share your thinking:

What impact or positive effect did the woman you read about have on science and space?

4 Create

Blog Post: Many people are familiar with Neil Armstrong or Edwin "Buzz" Aldrin for their important work in space, but have a hard time naming women who have impacted space exploration.

Create a blog post for one of the women you've learned about today. You can use the Blog Post Planner to help organize your thoughts before writing.

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Name: _____

Class: _____ Date: _____

Blog Post Planner

Use this document to help plan out your blog post. It is important to include all of the components to make sure you have everything you need for a strong post.

Title of your blog post:	
Introduce yourself:	
What do you want to share with readers?	
What is another thing you want to share with readers?	
Conclusion:	

Social-Emotional Learning connection

CASEL Competency Alignment: Self-Awareness, Social Awareness
SEE Learning Alignment: Personal Awareness, Personal Compassion, Social Awareness, Social Compassion

Class discussion:

June Almeida discovered the first human coronavirus in 1964. Her work was essential for the scientists working to fight the COVID-19 pandemic today. Engage in a class discussion using the following questions to guide your thoughts about Almeida's contributions:

- How does Almeida's work connect to the present-day?
- How has Almeida's work impacted you?
- How has Almeida's work impacted your community?
- If you could say one thing to Almeida about her work, what would it be? Why?
- Why is innovation so important?