

21st Century Women STEM Innovators

Women, whose work in philosophy, science, and politics is often neglected or marginalized in history textbooks and curriculum framework, made change-producing discoveries and advances during the Enlightenment and in every era since. However, still in today's digital age, the most well-known figures are men: Steve Jobs, Elon Musk, and Mark Zuckerberg.

Rarely do elementary, middle, or high school students learn about women like [Margaret Hamilton](#) who wrote the software for the 1969 Apollo Landing and invented the term "software engineer," [Annie Easley](#), a Black rocket scientist whose work set the stage for space shuttle launches, [Radia Perlman](#), the "mother of the Internet" who invented an algorithm for organizing and moving data, and many more women technology trailblazers.



Watch on YouTube <https://edtechbooks.org/-geEZ>

In these activities, you will explore the accomplishments of 21st century women innovators in the media and think about how to encourage more girls to pursue careers in science, technology, engineering and math (STEM).

Activity 1: Locate Women in STEM in the Media

- Search online and in print media for stories about women STEM innovators, then answer the following questions in a video, podcast, or paper:
 - How easy or difficult is it to find examples of women's accomplishments in STEM fields?
 - How are women STEM innovators portrayed in the media? How does this compare to the way male STEM innovators are portrayed in the media?
 - Why do you think many young girls choose not to pursue careers in science, technology, engineering, or math?
 - What life would be like today without the [13 Famous Women Who Changed Tech History Forever?](#)



Photo by [Christina @ wocintechchat.com](#) on [Unsplash](#), free to use

Activity 2: Increase the Participation of Girls in STEM

- Write a proposal for how your school can increase opportunities for success for girls in STEM.
 - Include changes in curriculum and courses that are needed to support girls in STEM
 - Include changes in school culture and climate that are needed to support girls in STEM.
- **Create a social media campaign** to spread awareness about your proposal.
 - The social media campaign should include at least 2 videos (e.g., YouTube, Snapchat, TikTok), 5 example posts, and 3 images (e.g., memes, graphics, infographics) designed by you.
 - Here is a [social media campaign example](#) created by Justin Lo, Daniel Mulno, and David

Warde and here is a [Twitter campaign example](#) by Sara Shea.

- Consider using the [Made to Stick principles](#) or [TED Talk presentation techniques](#) to increase the appeal of your social media campaign.

Activity 3: Analyze the Portrayal of Women in Science and Politics Then and Now

- Conduct Internet research to examine how women Enlightenment thinkers are currently presented on websites and in various media (e.g., YouTube videos, TikToks).
 - How easy or difficult is it to find examples of women Enlightenment thinkers? What does this say about how women Enlightenment thinkers were perceived at the time?
- Next, explore how influential women in science and politics are presented in the media and online today. What are the similarities and differences between the portrayal of women Enlightenment thinkers and women in science and politics today?
- To wrap up, **create a TikTok dance** about a women Enlightenment thinker to educate viewers about their impact on present day society.

Additional Resources

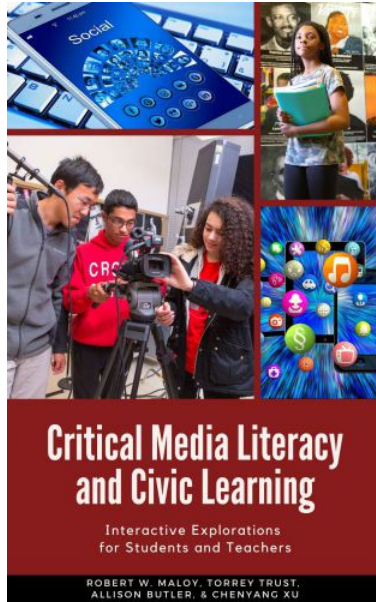
- [Code Acts in Education](#) - Prof. Ben Williams' blog about the influence of software on education
- [The 10 Most Influential Women in Tech Right Now](#)
- [15 unsung women in tech you should know about](#)
- [What Early French Female Press Can Tell Us About a Key Period for Women in Public Life](#)

Connecting to the eBook

[*Building Democracy for All: Enlightenment Thinkers and Democratic Government*](#)

Connecting to the Standards

- [Massachusetts Civics & Government Standards](#)
 - *Explain the influence of Enlightenment thinkers on the American Revolution and the framework of American government* (Massachusetts Curriculum Framework for History and Social Studies) [8.T1.3]
- [ISTE Standards](#)
 - Knowledge Constructor
 - 3a: Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
 - 3b: Students evaluate the accuracy, perspective, credibility and relevance of information, media, data, or other resources.
 - 3d: Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.
 - Creative Communicator
 - 6b: Students create original works or responsibly repurpose or remix digital resources into new creations.
 - 6d: Students publish or present content that customizes the message and medium for the intended audiences.
- [DLCS Standards](#)
 - Interpersonal and Societal Impact (CAS.c)
 - Digital Tools (DTC.a)
 - Collaboration and Communication (DTC.b)
 - Research (DTC.c)
- [English Language Arts > History/Social Studies Common Core Standards](#)
 - CCSS.ELA-LITERACY.RH.6-8.6
 - CCSS.ELA-LITERACY.RH.6-8.7
 - CCSS.ELA-LITERACY.RH.9-10.6
 - CCSS.ELA-LITERACY.RH.9-10.9
 - CCSS.ELA-LITERACY.RH.11-12.6
 - CCSS.ELA-LITERACY.RH.11-12.7
 - CCSS.ELA-LITERACY.RH.11-12.8
- [English/Language Arts Common Core Standards](#)



Maloy, R. W., Trust, T., , & Xu, C. (2021). *Critical Media Literacy and Civic Learning*. EdTech Books. <https://edtechbooks.org/mediaandciviclearning>