EMPIRE KVCR 💮 PBS





Grades: 4-5

SciGirls Stories, "Real Women, Real Jobs"

Inspiring real-life stories for all ages featuring successful women in STEM careers (Science, Technology, Engineering and Math). These are the innovators, problemsolvers and dreamers who are passionate about their work, hobbies, families and helping to make the world a better place. They motivate girls to pursue all kinds of interests and career paths.

After watching this episode, choose from the following questions and/or tasks to extend your learning

Question Box 1

- Cite evidence from the video that demonstrates features/characteristics of the successful women in STEM careers.
- What did you learn after watching this program?
- What is the program's purpose? How do you know?
- What are the key details in SciGirls Stories: Real Women, Real Jobs?
- What is a process engineer?
- What does Victoria mean when she says, ``You have to combine an analytical mind and a creative mind" to do process engineering?
- How does asking questions help in process engineering?
- What is a mentor?
- How does science technology and mathematics help in a firefighting career?
- What is a software engineer?
- Why is it important to think about the users or audience when building software for others?
- What is a design engineer? How does creativity help in this career?
- What does a chemist do in product engineering?
- How is chemistry in everything we do?
- What is metal fabrication? What type of protective wear is required to do this job?

Question Box 2

- How much did you know about the subject before the show started?
- How do you feel about "SciGirls Stories: Real Women, Real Jobs"?
- What do you think are the advantages and disadvantages of growing up multicultural?
- If you could be a mentor, what expertise would you offer to others?
- In this episode, all the women spoke about the opportunity to work collaboratively.

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What projects have you worked on collaboratively with others? Do you think it is beneficial? Why or why not?

• From the careers presented in this episode which one is of most interest to you?

<u>Box 3 (Tasks)</u>

- Make a connection between the women featured in this episode.
 - 1. Attributes
 - 2. Motivation
 - 3. Education
 - 4. Childhood
 - 5. Family Support
 - 6. Challenges

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- 7. What advice would they give to others?
- Research a STEM job described in this video and the education it takes to get the job.
- Describe Critical Thinking and how that is connected to STEM fields.

Box 4 (Enrichment)

- Research aerodynamic bikes Power vs aerodynamics: how to get the balance right
- Watch the video: <u>How to draw a bike</u>.
- Make a list of mathematical tools needed to draw a bike.
- Using the necessary tools, design and draw your own bike. Draw your blueprint to scale.
- Think of your dream job and describe how studying Science, Technology, Math and Engineering would help you in that job.
- Current research suggests that today's high school graduate will have at least 10-15 careers in their lifetime. Discuss how STEM education could help transition from job to job.

Box 5 (Extend/Real-Life)

 Explore the limitless possibilities of STEM careers by completing the Career Exploration Activity found at this link: <u>https://t.co/j6l3DdeDH7?amp=1</u>