Motivating Girls to "Lean In" to Pursue Passion-Driven Careers in CS and STEM

Hello from the SouthWest

Naomi Harm
Location: Cave Creek, AZ
CS for All Teachers Community Ambassador
How are you motivating girls and young women students to pursue passion-driven careers in STEM?

What types of learning activities are taking place in your classroom or school district that are effective?
Loss of Interest in STEM

Why, when, and how do girls lose interest in STEM?
Factors of **WHY** girls lose interest in STEM

- Negative stereotypes about intellectual abilities and being "nerdy"
- Lack of female role models and mentors

**STEM Growth Mindset**

**Limited STEM Experiences and Opportunities**

Classrooms and workplaces that undervalue female opinions

It’s all about the DIY, coding, robotics and STEM learning experiences!

Think like a social entrepreneur and produce like a child Youtube star.

Alexa and AI technologies are there go to for questions, music and activities.
Their interests lay in computer coding projects that are personalized to them.

Choice and voice activities relating to the world around them.

A social cause with purpose of how they too can contribute to world of good to make a positive change in their world.
● Less likely to express interest in STEM or CS field at times due to social and academic pressures.

● Associated names of “Tech Geeks” and “Computer Science Nerds” are perceived as not cool in their world.
Young women students do not have enough access and equity to positive hands-on STEM and CS experiences in and out of the classroom.

There is a lack of female role models as mentors in their learning world.

High School Years

[Links to Girls and Stem Support Article]
Without mentorship opportunities, girls and young women lose more interest in STEM and CS related career fields.

Evidence-based Mentoring
Critical Thinking Questions

What are you truly passionate about learning that reflects your inner calling beyond your work day?

Where do you seek out and pursue new learning opportunities and why?

How do you share and mentor others with your new learning discoveries?
The things you are passionate about are not random, they are your true calling in life to find your purpose.

@NAOMIHARM
What is your passion?

What do you geek out about? What do you do in your free time?

What is your **passion**?

Be as specific as you can and only provide one answer for each prompt.

1. I am a fan of...
2. I like to spend my time...
3. I am good at...
4. I want to learn more about...

[Resource Link](#)
Wonder of the Day #2784

What Is Chromatography?

This Wonder of the Day will have you reaching for your microscope and lab coat!

CATEGORY:
SCIENCE – Physical Science

TAGS:
Science, Physical Science, Chemistry, Chemist, Chromatography, Mobile Phase,
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Girls and young women must be provided more collaborative leadership opportunities, where they are supported to ask more questions and learn from diverse perspectives.
Critical Thinking Questions

What do your visual thinking routines look and feel like to support equitable questioning and discussion techniques?

How do you cultivate engaging open ended questions into your classroom discussions with students?

Are your collaborative discussion culturally relevant and inclusive to your students diverse learning world?
CS for All Teachers is a virtual community of practice, welcoming all teachers from PreK through high school who are interested in teaching computer science.

SIGN UP OR LOG IN

HERE'S WHAT YOU'LL FIND

GROUPS
RESOURCES
EVENTS
HELP SQUAD

#CSEDWEEK2019PHOTOS CHALLENGE IS HERE!

Between December 9-15, celebrate CS Ed Week by sharing how you are bringing CS to life in your classroom!

READ MORE...
Her-Story Global Collaboration Project

https://sites.google.com/naomiharm.org/her-story-global-project
SciGirls

http://www.scigirlsconnect.org

ARCHITECTURAL
ESTIMATOR: BRENNETTA HARRIS

ROLE MODEL PROFILES

Meet Brennetta Harris, an architectural estimator at CMI Architectural Products.

ARCHAEOLOGIST: ISABEL RIVERA COLLAZO

ROLE MODEL PROFILES

Isabel es una arqueóloga ambiental.

BAT BIOLOGIST: ERIN GILLAM

ROLE MODEL PROFILES

Erin Gillam is a biologist who uses bat sounds to control insect pests on farms.
National Girls Collaborative Project

https://ngcproject.org
Leadership is about making others better as a result of your presence and making sure that impact lasts in your absence.

— Sheryl Sandberg
COO of Facebook
Critical Thinking Questions

What current resources, learning experiences, or role modeling strategies are you providing to support leadership conversations to mentor young girls and young women in the STEM and CS fields?
Women, and the people around them in the workplace, need to actively separate their gender from their role.
2030 Student Job Task Cards

- 3D Design Engineer
- Artificial Intelligence (AI) Architect
- Augmented Reality (AR) Journey Builder
- Avatar Relationship Manager
- Building Engineer
- Career & Life Coach
Global Engineering and CS Challenges

https://sites.google.com/naomiharm.org/3doodler-global-collaboration-
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<thead>
<tr>
<th>Role</th>
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<tr>
<td>Assembly Line Productions Manager</td>
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<td>Underbody Framework Engineer</td>
<td><img src="https://via.placeholder.com/150" alt="Image" /></td>
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<td>Side Panel - High Impact Collision Architect</td>
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<td>Hood, Roof and Trunk Architect</td>
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<td>Electrical &amp; Artificial Intelligence Scientist</td>
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<td>Bling Designer: (Mirrors, License Plate, Rims, etc.)</td>
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<td>Instructional Facilitator</td>
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<td>Crash Test Safety Engineer</td>
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<tr>
<td>Storytelling</td>
<td>In Storytelling, students use computer science to tell fun and interactive stories. Storytelling emphasizes creativity by encouraging club members to tell a unique story each day.</td>
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<td>Friends</td>
<td>In Friends, students are encouraged to sign up with a friend or make a new friend in the club. Friends emphasizes teamwork by allowing club members to tell the story of how their friendship started and imagine a company together.</td>
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<tr>
<td>Fashion &amp; Design</td>
<td>In Fashion &amp; Design, students learn how computer science and technology are used in the fashion industry while building fashion-themed programs, like a fashion walk, a stylist tool, and a pattern maker.</td>
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<td>Art</td>
<td>In Art, students create animations, interactive artwork, photograph filters, and more.</td>
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<tr>
<td>Social Media</td>
<td>In Social Media, students create fun social media style applications and games while learning about the computer science concepts that enable these programs to work.</td>
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Google CS First

https://www.cs-first.com

Sports
In Sports, students use computer science to simulate extreme sports, make their own fitness gadget commercial, and create commentary for a big sporting event.

Try Now  View Lesson Plans

Music & Sound
In Music & Sound, students use the computer to play musical notes, create a music video, and build an interactive music display while learning how programming is used to create music.

Try Now  View Lesson Plans

Game Design
In Game Design, students learn basic video game coding concepts by making art and more!

Try Now  View Lesson Plans

Animation [BETA Advanced]
Students create fun and complex animated projects. This is an advanced curriculum recommended for students who have already participated in at least two other C!

Try Now  View Lesson Plans
A hands-on platform for kids to build, collaborate, and tell stories through video game creation.

http://www.bloxelsbuilder.com
The possibilities are endless to cultivate and inspire female creative mindsets with STEM and CS learning opportunities!
Naomi Harm

Location:
Cave Creek, AZ

CS for All Teachers Community
Ambassador


"No matter where you are in life, inspire and empower the women around you. Success is never reached alone. And, wisdom and wealth are sweeter shared."

- AUTHOR UNKNOWN -
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