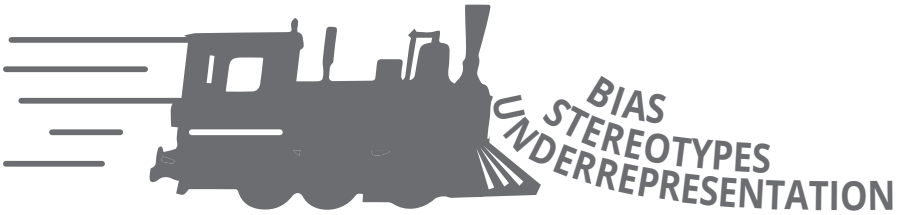


CHAPTER 13 DRAFT BLUEPRINT: STEAM CLEANING

It is important to explore why what you do is important, to consider the context around what it is that you do and how that might inspire others. Suggestions for STEAM cleaning elements from a multitude of sources are also summarized below.



REFLECT ON WHETHER THERE WERE ANY ROLE MODELS IN STEM THAT INFLUENCED YOU.

- How did they influence you?
- What specifically influenced you?

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- What do you think are some ways advocates can help shatter stereotypes in STEM fields to inspire young girls?

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There are many ways you can encourage young girls and inspire them to pursue STEM education:

- **Showcasing Diverse Role Models:** *Share their stories and achievements to demonstrate that anyone, regardless of gender or background, can succeed in STEM. A great example of this is our 3M docuseries Not the Science Type.*

- **Celebrate Achievements:** Acknowledge and celebrate the achievements of young girls in STEM through awards, scholarships, and recognition programs to boost their confidence and motivation. One of the events that I fondly recall is the Girls Scouts Women of Distinction program that recognizes contributions of girls and women in STEM.
- **Support STEM Clubs:** Support and encourage STEM clubs in schools, particularly those that provide a supportive environment where girls can explore their interests. 3M is a sponsor of an all-girls' FIRST Robotics Competition team, and we brought them to 3M Center to visit our robotics facility to provide exposure.

REFLECT ON WHAT INSPIRED YOU TO GO INTO STEM.

- Was there a specific topic or context that made you interested in STEM?
- What do you believe are the best ways you can tell the wholesome story about science to motivate young girls, given that girls are typically more inspired by the context?

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By telling a wholesome story about science that connects with the context of girls' lives and interests, you can ignite their passion for learning and inspire them to explore the wonders of the STEM world. Some examples:

- **Narrative-Based Learning:** Frame scientific concepts within engaging narratives or stories. This helps girls connect with the subject matter and see its real-world relevance.
- **Science in Art and Literature:** Explore the intersection of science with art and literature. Encourage girls to express their scientific interests through creative projects, such as writing stories or creating artwork.
- **Global and Environmental Perspective:** Showcase the global impact of science, including its role in addressing climate change, conservation efforts, and solving global challenges.

- **Biographies of Women Scientists:** Share the stories of female scientists who have made significant contributions to their fields, highlighting their journeys and not just achievements.

REFLECT ON WHO PROVIDED YOU WITH EARLY EXPOSURE AND ENCOURAGEMENT.

- How did early exposure and encouragement impact you and your STEM pursuit?
 - What are ways you would like to encourage young girls to pursue STEM?
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Providing exposure and creating encouraging environments involves a multifaceted approach. Some effective ways to achieve this:

- **Early Exposure:** Introduce STEM concepts and activities at an early age, even in preschool and elementary school, to foster curiosity and familiarity.
- **Family Engagement:** Engage parents and guardians by hosting STEM family nights, workshops, and informational sessions to encourage support at home.
- **Career Awareness:** Organize career days or STEM career panels to expose girls to a variety of STEM professions and help them envision future possibilities.
- **Field Trips:** Arrange visits to science museums, research institutions, tech companies, and universities to provide exposure to STEM in action.
- **STEM Clubs and Camps:** Establish or support STEM clubs and summer camps tailored for girls. These programs provide a supportive environment for exploration.

By implementing these strategies, you can provide the exposure and nurturing environment needed to encourage young girls to explore and pursue STEM fields with confidence and enthusiasm.

Science advocates can play a pivotal role in shattering stereotypes in STEM fields to inspire young girls.

- Did you have any men who were allies along your educational or career journey? How did they help you?
- What is the best way that you believe men can be allies and advocates to women in STEM?

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Being allies and advocates for women in STEM is crucial for creating a more equitable and inclusive environment. Below are some ways for men to support and champion women in STEM:

- **Listen Actively:** *Be an empathetic listener to understand perspective when women in STEM share their experiences, challenges, and concerns.*
- **Amplify Voices:** *Encourage and amplify the voices of women colleagues in meetings and discussions to ensure that their ideas and contributions are heard and credited.*
- **Advocate for Equal Opportunities:** *Advocate for equal opportunities in hiring, promotions, and project assignment and support initiatives that promote gender diversity in STEM.*
- **Challenge Bias and Stereotypes:** *Speak up when they witness bias, stereotypes, or discriminatory behavior and address these issues respectfully and tactfully.*

These allyship strategies can help men contribute to a more inclusive and equitable STEM community that benefits everyone and advances the field as a whole.

REFLECT UPON YOUR ORGANIZATION’S METRICS AND MEASURES AROUND DIVERSITY.

- Do you know what they are?
- What kind of progress is being made?
- What metrics and measures could you envision being implemented to ensure the success of women in STEM in your organization?

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Clear metrics, measures, and monitoring are very important to ensure the progress of gender diversity within an organization. Here are some best practice examples of key metrics and measures to consider:

REPRESENTATION

- **Gender Diversity Ratio:** Track the percentage of women in STEM roles compared to men and set specific targets for improvement.
- **Gender Breakdown by Level:** Analyze the distribution of women across different levels of the organization, from entry-level positions to leadership roles, and facilitate discussions regarding goals.

RECRUITMENT AND HIRING

- **Gender-Neutral Job Descriptions:** Ensure that job descriptions use inclusive language and do not contain gender bias.
- **Diversity in Candidate Pools:** Monitor the diversity of applicant pools and interview panels to ensure a variety of perspectives in the hiring process.
- **Hiring Ratios:** Track the percentage of women hired in STEM positions compared to the total number of applicants.

RETENTION

- **Attrition Rates:** Measure the turnover rates for women in STEM roles compared to men and identify reasons for departure.
- **Promotion Rates:** Analyze the rates at which women are promoted within STEM careers and identify any disparities.

PAY EQUITY

- **Gender Pay Gap:** Calculate and monitor the gender pay gap within STEM roles to ensure equal pay for equal work.
- **Pay Equity Reviews:** Conduct regular pay equity reviews to identify and address disparities.

EMPLOYEE SATISFACTION

- **Surveys and Feedback:** Use employee surveys and feedback mechanisms to gauge the workplace satisfaction of women in STEM roles.
- **Exit Interviews:** Conduct exit interviews to gather insights from departing women employees and identify areas for improvement.

It's essential to regularly analyze metrics and measures, set specific targets for improvement, and adjust diversity and inclusion strategies accordingly. Successful diversity and inclusion efforts require ongoing commitment and evaluation to ensure that women in STEM roles have the support and opportunities they need to thrive.

Effective means can move the needle and impact change. From bottom to top.