



# STEM Volunteer Training: Crafting your STEM Message

November 12, 2015

techbridge  
Inspire a girl to change the world

MINORITIES IN ENERGY INITIATIVE  
U.S. DEPARTMENT OF ENERGY

National Girls Collaborative Project

MSI  
museum of science+industry  
chicago

#WomenInSTEM  
#STEMCafes

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# Training Agenda

Welcome and Introduction (DOE)  
Sharing Successful STEM Interaction Stories (MSI)  
Importance of STEM Role Models and Stories (MSI)  
Mad Libs: Crafting Your STEM Story (Techbridge)  
Practicing Your STEM Story (Techbridge)  
Questions & Answers (DOE)  
Next Trainings

Find this training and future on our website at:

<http://www.energy.gov/diversity/services/stem-education>

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# Welcome and Introduction

- **Vision:** To engage diverse students in conversations around STEM and introduce them to STEM professionals.
- **Strategy:** To help achieve the goal of involving Federal STEM Volunteers in 1,000,000 hours of volunteer STEM service.
- **Need:** To facilitate STEM Volunteer training and resources for professionals that want to contribute to a mentoring effort
- **Result:** Establish Quarterly STEM Volunteer Virtual Training Series





# Out-of-school time STEM Learning - Key Opportunities

- ❑ Students spend <15% of time per year in school
- ❑ OST experiences can be more successful for learning in female and minority youth\*
- ❑ Participation in an OST experience correlates strongly with success in STEM\*\*
- ❑ Importance of STEM Ecosystems\*\*\*



## References

\*Tan and Calabrese Barton, 2012

\*\* Tai et al, 2006

\*\*\* Traphagen and Traill, 2014









# Practice Your STEM Story

## Instructions:

Spend 5 minutes revising your STEM Story personal introduction, including:

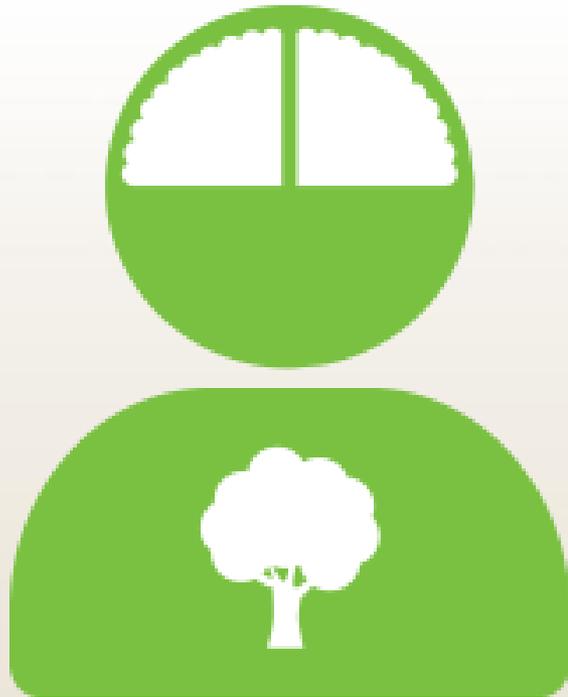
- Explain what you do. To what could you compare your job that relates to everyday life? Avoid abbreviations and acronyms.
- Explain how your profession affects the audience's lives and communities.
- Background on your academic and career journey. What did you want to be when you were your audience's age?
- 3 Fun Facts about yourself/your hobbies/family & friends.
- Why you like working at \_\_\_ / your field of work.

# Role Model Introductions: The Good, Bad and the Ugly

**“As a chemical engineer, I work to develop adiabatic processes for boilers in our NGPO business unit. I work in Sunnyvale and have been at my company for 5 years. It’s a lot of work but I’ve had some great opportunities there.”**

**“I’m a chemical engineer, which means that I work with really small molecules, which are the things that make up everything that exists on Earth. Some products I’ve worked on include the gas that goes in your car and the cleaning solutions the custodian at your school uses to keep it safe and healthy for you. Outside of work, I like to hike with my Labradoodle Corky, play Scrabble, and spend time with my nieces and nephews.”**

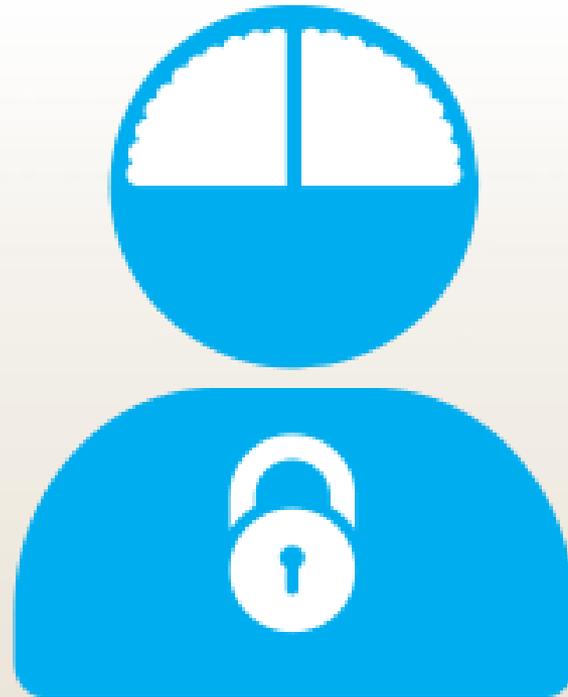
# Growth Mindset



## Growth Mindset

Believe that they can learn anything if they put in the work, practice, and effort to learn it.

VS



## Fixed Mindset

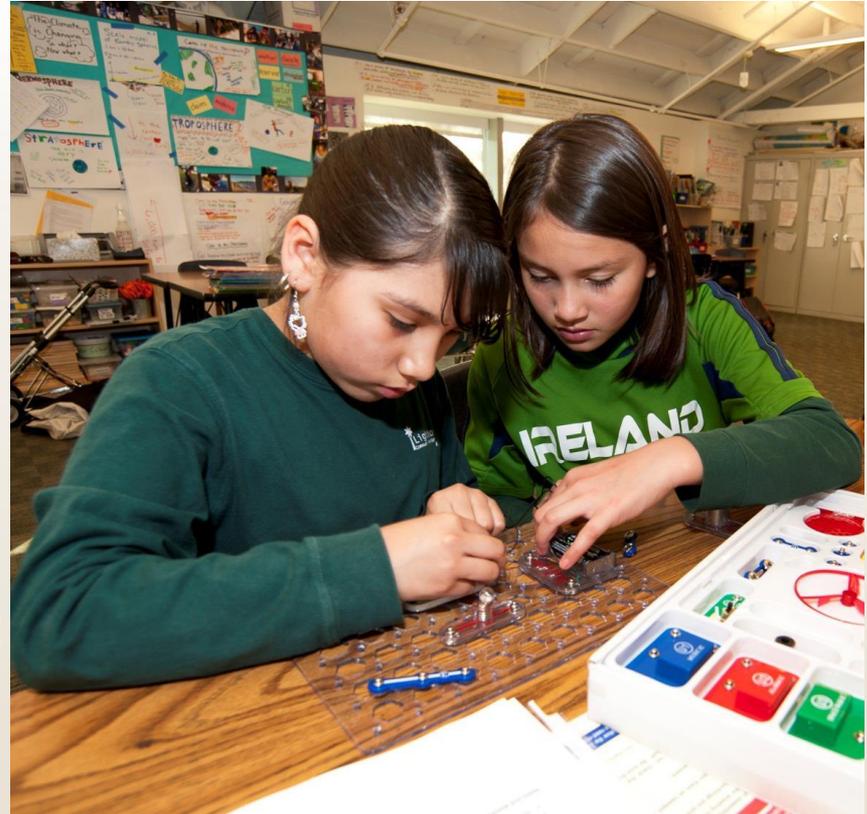
Think that they cannot increase their skill and knowledge in a particular area.

# Facilitating a Hands-On Activity

## Save the Date: January 28, 2016

When selecting your activity, consider:

- Scientific concepts relevant to activity
- Connection between activity and your job, the Engineering Design Process, and/or the youth's community
- Encourage perseverance + creativity





# Next Trainings

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January 28, 2016 at 3 pm ET

Engaging in STEM with Hands-on Activities

Register: <https://attendee.gotowebinar.com/register/8205690832916521218>

April 14, 2016 at 3 pm ET

Types of Volunteering and Where to Find Opportunities

Register: <https://attendee.gotowebinar.com/register/4142611638726715906>

Find this training and presentation on our website at:

<http://www.energy.gov/diversity/services/stem-education>