



**Campus Compact**

# COLLEGE POSITIVE VOLUNTEERISM FOR STEM PROGRAMS

## OVERVIEW

The information below on STEM Careers is pulled from [www.napequity.org](http://www.napequity.org). When training College Positive Volunteers with a STEM focus in their program, it is important to provide this context.

### **What are STEM Careers?**

Science, technology, engineering, and mathematics are commonly grouped and known as STEM for short. This acronym is meant to symbolize the relationship that each of these disciplines has with the other, is a grouping for initiatives in K-12 education, and serves as a designation for a group of careers that are in demand and a national focus in the United States. On this page, **LEARN** how STEM Careers are in demand, why these careers are super important, and how a career in STEM can be a great choice for you and **EXPLORE** STEM Career opportunities.

### **Why are STEM Careers important?**

- Did you know that jobs in STEM are essential to our health, happiness, and safety?
- Did you know that STEM professionals are creative and collaborative problem solvers?
- Did you know that jobs in STEM make a world of difference and shape our future?

### **Is a STEM Career right for me?**

- Do you like to solve interesting and challenging problems?
- Do you like to be creative and work with others?
- Do you like to work on projects that make a difference?
- Do you want to earn a good salary and enjoy job flexibility?
- Do you want to change the world?

### **Why are STEM careers in demand?**

The science and engineering (S&E) workforce has shown sustained growth for more than half a century. The number of workers in S&E occupations grew from about 182,000 in 1950 to 5.4 million in 2009. This represents an average annual growth rate of 5.9%, almost five times the 1.2% growth rate for the total workforce older than age 18 during this period. Workforce growth in S&E occupations from 2000 to 2009 was slower than in the preceding two decades. Nonetheless, at 1.4% growth annually, it exceeded the 0.2% growth rate for the general workforce. In addition, many workers outside S&E occupations have STEM training or use related knowledge and skills in their jobs. In fact, seven out of ten of the fastest growing occupations (requiring at least an associate degree) are in STEM fields.

## TOOLKIT ACTIVITIES

Many of the activities listed in the CPV toolkit can be easily adapted to meet the needs of a STEM-focused program. Here are a few examples.

### **Elementary School Students**

College Event Field Trip - Event-Based

Modification: Take students to a college event, i.e., XXX EXAMPLES HERE XXX, etc. Talk about college attendance at the event, how they can live on campus and be a part of the college community, and that they can get involved with anything that interests them while in college. Invite other college students to participate in younger student(s). Encourage the college students to talk to the elementary student(s) and ask college positive questions.

Good Habits Poster -

Modifications: Are there specific behaviors or traits that are helpful within STEM fields? Share your own personal habits that you have learned and developed to become successful in your field and in college in general. Take time to explain the steps on how you developed these skills and maintained them overtime.

Peer Discussion

Modification: Gather a small group or class for discussion on how to foster good study habits at home. Students can discuss obstacles that prevent them from studying or completing assignments, especially those focused on STEM, and assist each other in brainstorming solutions. To ensure a safe environment for struggling students, you might gather typical obstacles that students are facing from private discussions. You can then be the one to introduce these anonymously into the discussion. For example, you might mention that youXXXX EXAMPLE HERE XXX. That way, the student(s) with the sibling problem do not have to be singled out or have the courage to speak up, but can still hear possible solutions.

### **Middle School Students**

Role Model Study – Short Term

Modification: Have students study the life of a famous individual or a role model within a STEM field: What is the person's occupation? What training did he/she need for that occupation? What characteristics made that individual a success? Why did the student choose that particular individual? How can the student follow in the individual's footsteps?

Students Invite Speakers – Extended Term

Modification: Have students decide which STEM careers they are interested in and help them find and invite individuals in the field to come speak to their class. Before visiting with the students, be sure to notify the speaker of any crucial information or special needs regarding the students with which they will speak during their visit. The speaker can talk about his/her career, steps toward the career, as well as how to study, interview, show self-confidence, etc.

## High School Students

### Long-Term Mentor Connection – Extended Term

Modification: Connect the student to someone who might serve as a long-term mentor to offer ongoing personal, academic, and professional guidance. There are several mentorship programs that pair students with STEM professionals. Below are some examples:

- **STEM Equity for Role Models – Training Video**: Role models can attract students to Science, Technology, Engineering & Math (STEM) careers by sharing personal stories using positive messaging. This 30 minute training session aims to equip STEM professionals to speak to students about careers in STEM.
- **TechBridge Role Models Matter Toolkit**: The Role Models Matter Online Training Toolkit will help you develop skills to engage girls and underrepresented youth in STEM (science, technology, engineering, math) through readings, videos, questions, and more.
- **Engineering Equity into Education Resources for STEM Role Models**: Resource list for volunteer role models, and includes sample presentations.
- **Engineering Focus: Helping Girls Engineer Their Future**: Engineering Focus is designed to prepare readers to advocate for engineering to a variety of audiences, with the goal of increasing the number of students entering engineering.
- **Million Women Mentors Campaign**: Pledge to be a mentor!
- **Women@NASA**

### Read and Discuss Books – Extended Term

Modification: Read books with students about famous or everyday individuals within STEM fields (astronauts, physicists, citizen scientists, etc.) who have overcome obstacles, about what it takes to be successful in any field or area of life, or targeting reluctant readers. Discuss the books with the students at various intervals or after completion. Use the book as a springboard to establish a consistent form of communication with the student. Pay special attention to finding individuals that cover a wide variety of backgrounds and experiences, especially across gender, racial, religious, and geographic dimensions.

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## VOLUNTEER TRAINING ACTIVITIES

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The activities within the CPV Training Activities Packet can be modified to fit a STEM-focused program.

### **Activity 1: Road Map to College**

This activity can generally stay the same, but be framed within a STEM lens. For example, when volunteers answer the question about the people who influenced their path to college, they could also speak to who influenced their choice to pursue STEM.

### **Activity 2: Creating an Activity List**

This activity can also be framed within a STEM lens. For example, when volunteers list an activity and the reasons why this activity would be appropriate for their audience, they could also list how this helps further STEM goals within the program, or how the activity encourages youth to pursue STEM fields.

### **Activity 3: Developing a Plan of Action**

This activity can be altered to better address the assumptions students often make about the STEM field. For example, one scenario could address a male student mocking a female student because STEM is not traditionally accepted as a female space. During the training, volunteers could practice how they would address this situation, perhaps by providing female STEM role models as examples of women within the field.

### **Activity 4: Paying for College**

This activity could expand upon the scholarship opportunities for prospective students pursuing a STEM-related degree. See below for more information.

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## PAYING FOR COLLEGE

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The STEM field offers a variety of scholarships and funding opportunities to incoming students often not found within other disciplines. Support students as they search for funding opportunities to support their STEM careers. Some examples of places to look include:

- [Fast Web STEM Field Scholarships & Internships](#)
- [NSHSS Foundation STEM Scholarships](#)
- [STEM Study Scholarship Opportunities for Prospective Students](#)
- [Affordable Colleges Online Women in STEM](#)