

Activity #2 Extension

Women in STEM [Adult]



1. Introduction

In this activity, you will explore career opportunities in science, technology, engineering, and math (STEM).

2. Science Objectives

- 2.1. Explore Part I challenges Cadettes' stereotypical perceptions of scientists and encourages them to discuss their biases. When asked to draw a scientist, children as young as five years old will produce pictures that are not kindergartners like themselves.
- 2.2. Explore Part II guides Cadettes in an investigation that provides profiles of successful women in STEM careers.

3. Materials

For each Cadette.

- Laptops, desktop computer, or tablets with access to the internet — can be shared
- [2] sheets of plain white paper
- *Draw a Scientist Check Sheet* of characteristics ([page 3](#))
- Box of colored pencils or crayons (one per group of 3 or 4 Cadettes)
- Roll of tape to post Cadette drawings on wall for discussion

4. Get Ready

What does a scientist look like?

Ask the Cadettes if they can come up with a few observations about what they think scientists look like. At this time just listen and make no effort to be inclusive about gender or ethnic groups.

5. Explore Part I

- 5.1. Hand out a sheet of plain white paper to each Cadette.
- 5.2. Direct the Cadettes to close their eyes and imagine a scientist at work and to draw what they see. If time permits, they can also write a brief description of their scientist. Provide crayons or colored pencils as needed.
- 5.3. Allow about 20 minutes for descriptions and drawings.
- 5.4. After the Cadettes have finished their drawings, hand each one a copy of the *Draw a Scientist Check Sheet* ([page 3](#)). Allow 5 minutes for the Cadettes to evaluate their drawing using the check sheet.
The check sheet will show many common features such as old, white male, frizzy hair, glasses, lab coat, weird, explosive chemicals, solitary, working with test tubes, machines, wild writing.
- 5.5. Ask the Cadettes to compare their pictures' features using their check sheet. Do you see some common features checked on many of the lists? List some of those features.
- 5.6. Have the Cadettes look around the room at their friends' drawings. Does the scientist you drew look like your fellow Cadettes'?

- 5.7. Ask the Cadettes to post their pictures on the wall with tape.
- 5.8. Show video: [Girl Scouts: What does a scientist look like? \(Girl Scouts\): http://seti.org/ggtm](http://seti.org/ggtm)

6. Explore Part II: Women in STEM and in the Fields of Planetary Science and Astronomy

- 6.1. Ask the Cadettes to review the [Women@ NASA website, http://women.nasa.gov/](http://women.nasa.gov/) and to select one Woman in STEM to investigate. Investigate by reading the short bio and personal story, and viewing the video available for each woman by clicking on the image.
- 6.2. Using the second sheet of paper, Cadettes collect STEM career details such as related job titles, job description, areas of expertise/abilities, personal interests/story, school subjects/courses, education, and training needed. In small groups, share what they have learned about Women in STEM, and draw pictures of their selected Woman in STEM.
- 6.3. Replace the first drawings with new drawings. Look around the room again at your friends' pictures. Do the Women in STEM look like your fellow Cadettes'?

7. Connection to the Leadership Journey *Breathe. It's Your Planet — Love It!*

Identify two experts that can guide you to greater air awareness. Women at NASA can be contacted via their email addresses in the [NASA Directory; https://people.nasa.gov/](https://people.nasa.gov/). See page 103 in *Breathe. It's Your Planet — Love It!*

Activity #2 Extension: Draw a Scientist Check Sheet

Directions: Use this Check Sheet to score your drawing of a scientist.

Please put a ✓ mark by the words that are true for your scientist.

Characteristic	Description				
Personality	scary	friendly	nerdy	quiet	can't tell
Hair	long	short	frizzy-wild	spiky	can't tell
Gender	male	female			can't tell
Appearance	wears lab coat	pens/pencils in pocket	wears dress/skirt	wears eyeglasses	facial hair
Location	indoors	lab	outdoors		can't tell
Equipment	using test tubes	near a computer	using charts	near chalk board	books & filing cabinet
Experiments	near plants	near animals	with explosions	using numbers	near other people
Words on Drawing	"mad"	"weird"	symbols for: bubbles & gases	symbols for: noises!!!	write in your own:

Write a ONE-sentence brief summary of your drawing of a scientist from the characteristics summarized above:
