

Key Findings from Project Scientist, Summer 2017

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Overview of Findings

- Findings from surveys of girls attending Project Scientist
- Findings from Draw-a-Scientist Test



Survey Instrument

- Twelve questions overall
 - Series of questions from the Program in Education, After-Care, and Resiliency (PEAR) Common Instrument to measure science interest
 - Additional survey items specific to Project Scientist
 - Items to assess growth mindset
- 4-point scale: Strongly disagree (1), Disagree (2), Agree (3), and Strongly agree (4)







Survey of Project Scientist Campers

Project Scientist Survey: Summer 2017

This is a survey with no right or wrong answers. Please answer the following questions as honestly as you can. This survey will help us learn about students' interest in Science, Technology, Engineering and Math (STEM). Please indicate how much you DISAGREE or AGREE with the following statements.

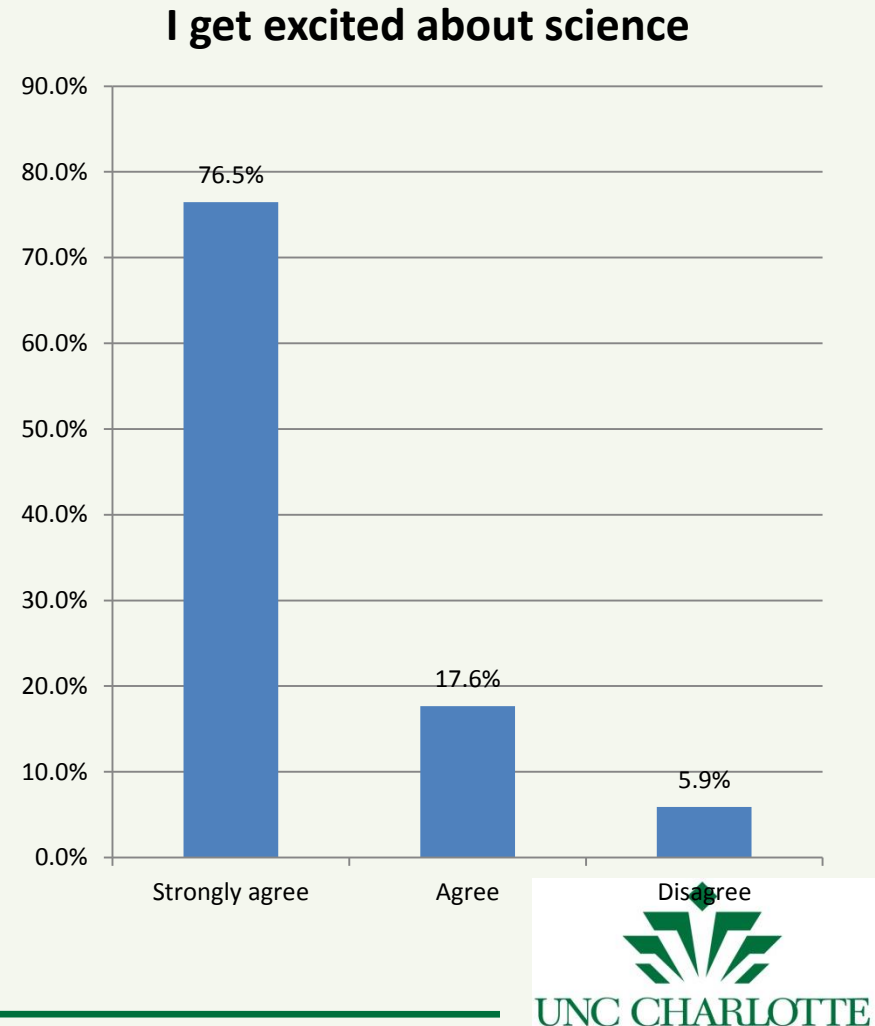
If you have any questions, please raise your hand and ask for help.

For each of the following statements, please circle the number that best describes what you think about the statement. Mark only one answer please!

				
	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I get excited about science.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I like to participate in science projects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I would like to have a STEM job in the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Science is fun.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

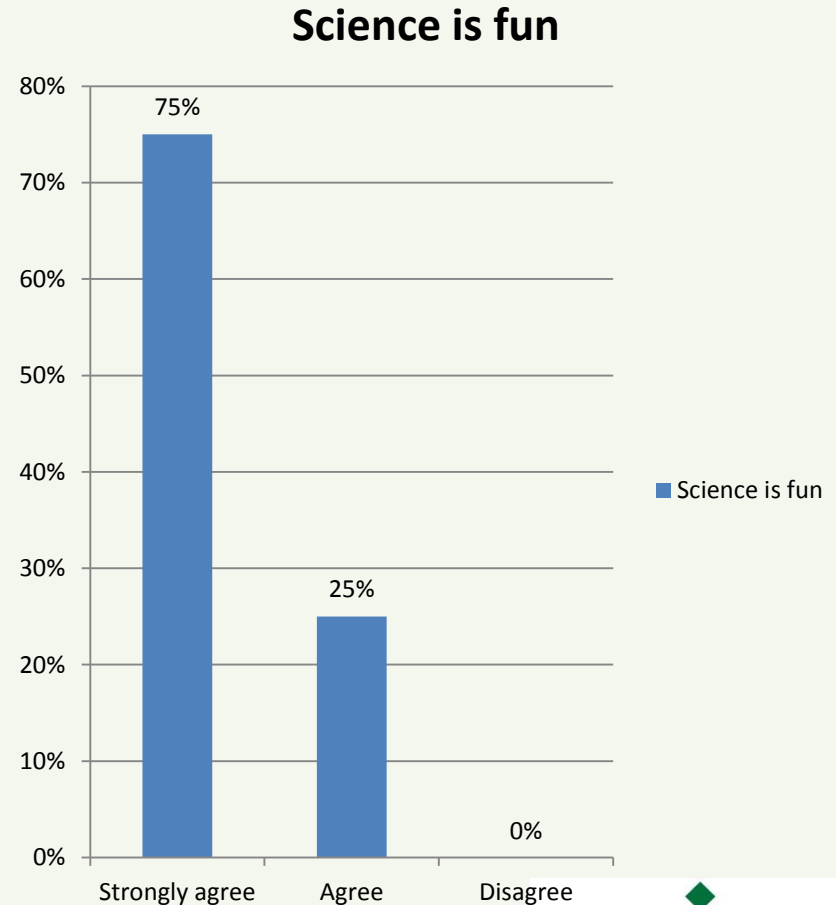
Survey Findings Overview

- Project Scientist continues to attract girls who have very positive attitudes toward science
 - Before the camp started, almost all girls agreed or strongly agreed that “I get excited about science”
 - N=17



Survey Findings Overview

- Girls who attend Project Scientist are very enthusiastic about science in general
- Before camp started, 75% strongly agreed that “science is fun”
- No girls disagreed that “science is fun”
- N=17

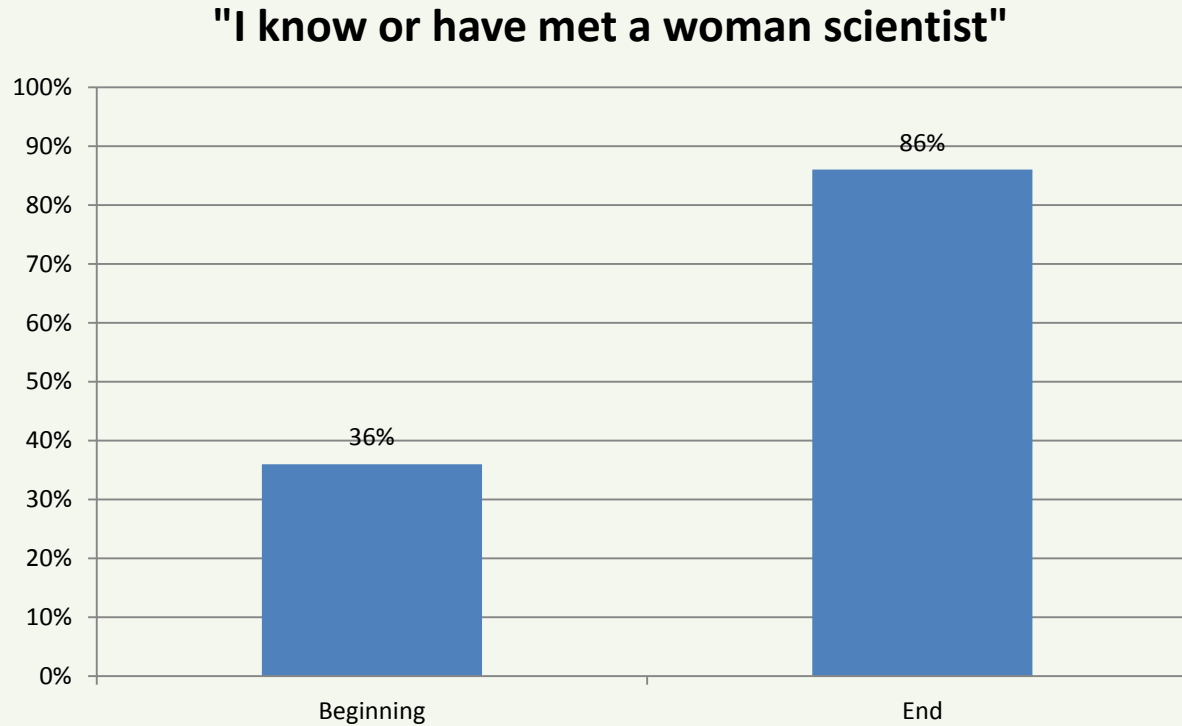


Changes in Science-Related Attitudes

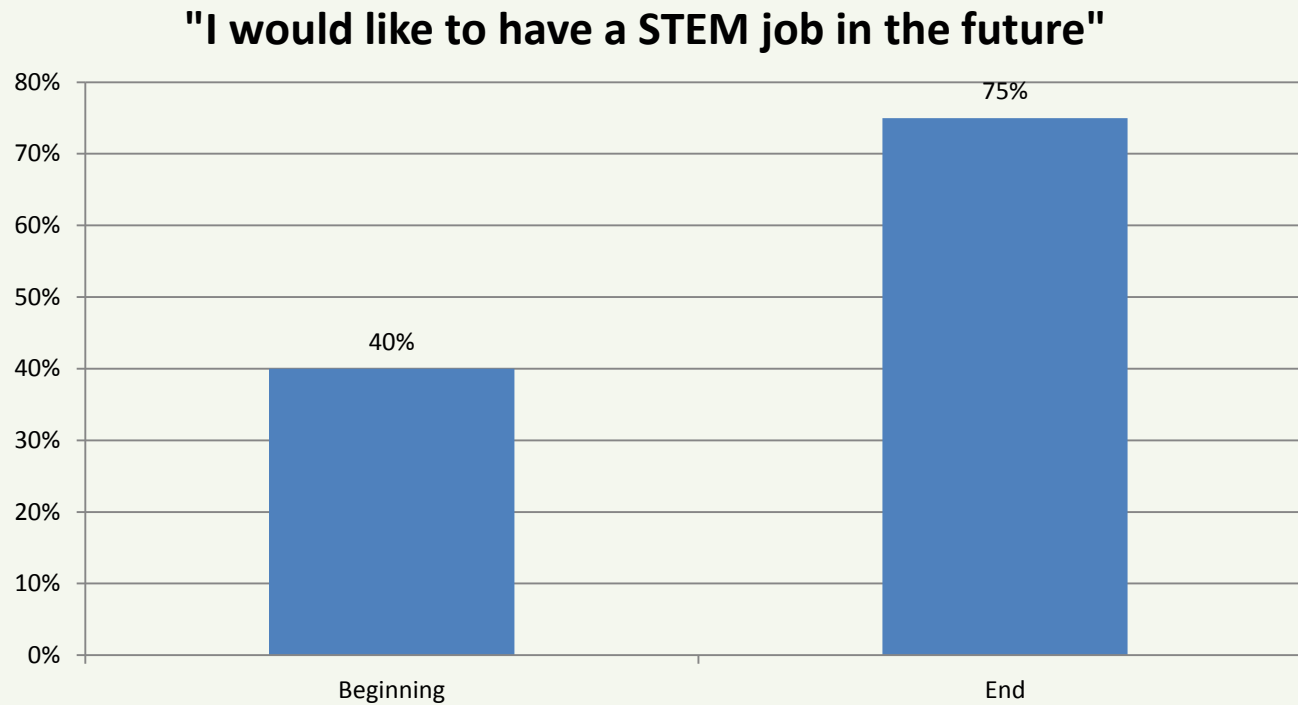
- Substantial change was seen in several areas from girls' first to last day at Project Scientist
 - Exposure to female scientists
 - Future STEM aspirations
- All change was in a positive direction
 - No science-related attitudes worsened during the program
- Comparisons were based on scholarship students who attended Project Scientist camp and answered questions at the beginning and end of their camp experiences (N=14)



Percent Strongly Agreeing that they Knew a Woman Scientist at Beginning and End of Project Scientist Program (n=14)

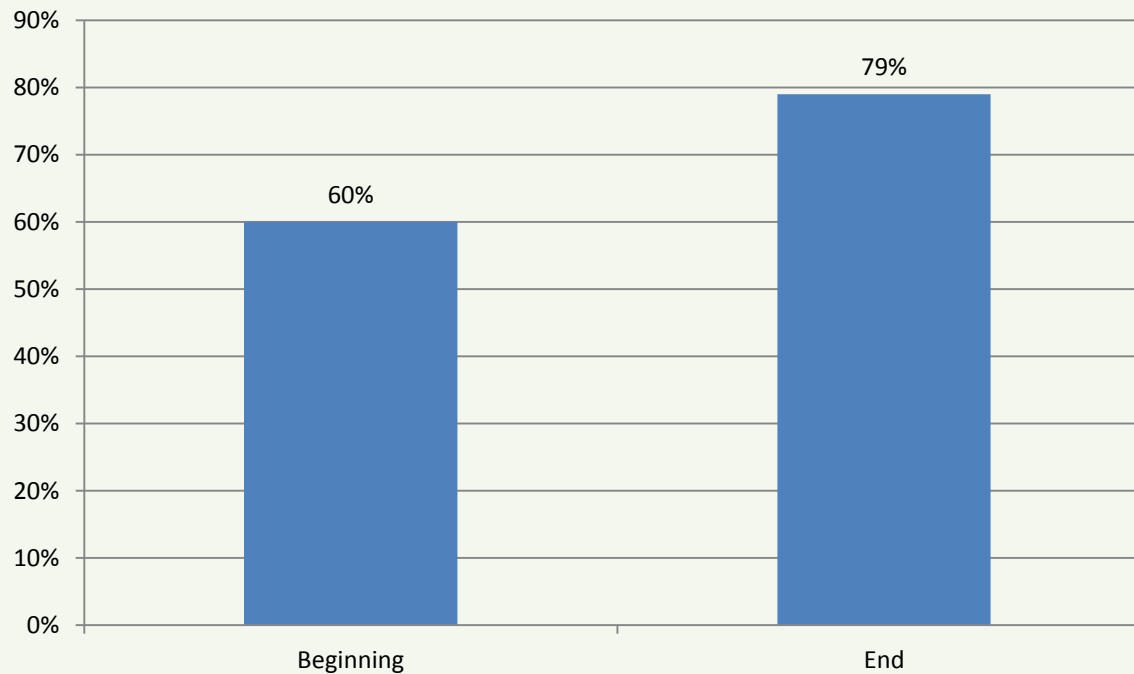


Percent Strongly Agreeing that “I would like to have a STEM job in the future” (N=14)



Percent Strongly Agreeing that “I could see myself as a scientist one day” (N=14)

“I could see myself as a scientist one day”



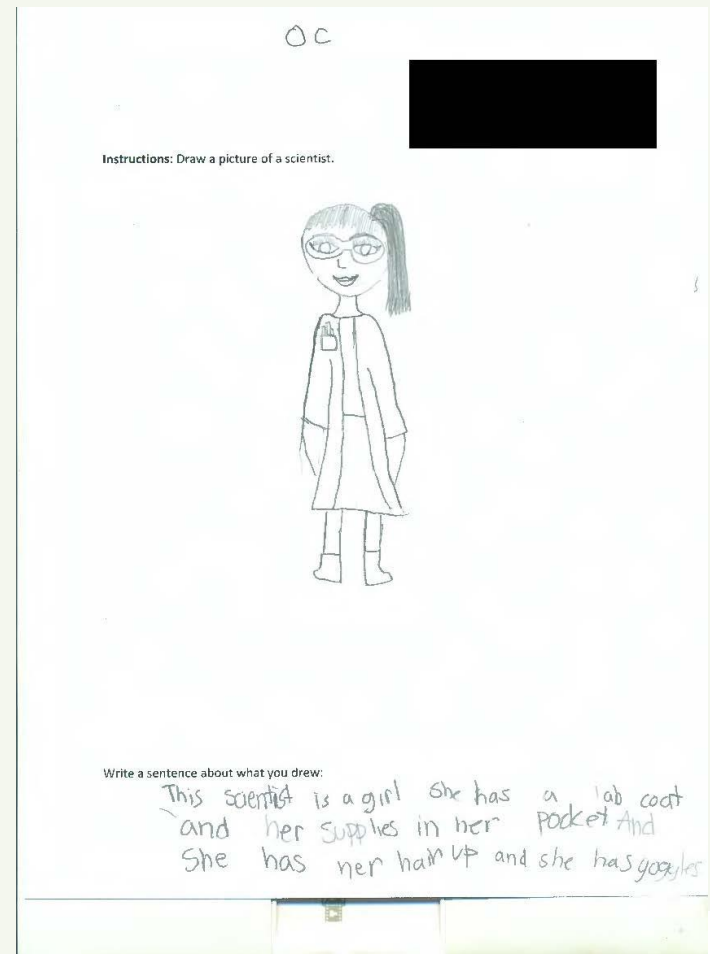
Findings from Draw-A-Scientist Test

- Girls are given a blank piece of paper with the prompt, “draw a picture of a scientist” at the beginning and end of their time at camp
- Each picture is coded using the DAST-C rubric, which assigns 1 point for each of 15 potential elements included in the picture
- The higher the DAST-C number, the more stereotypical the depiction of the “scientist”



Findings from DAST-C

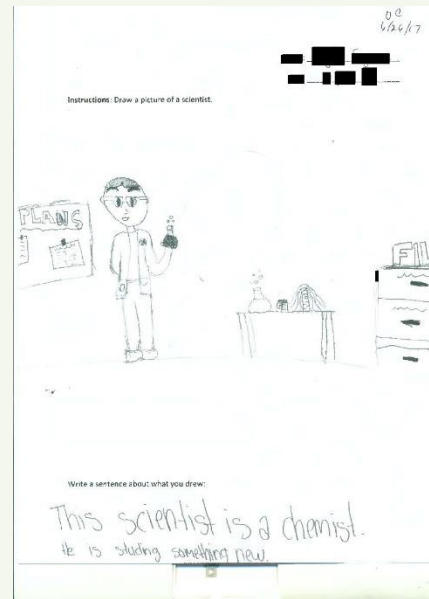
- Drawings at the end of camp depicted less stereotypical depictions of scientists than drawings at the beginning of camp



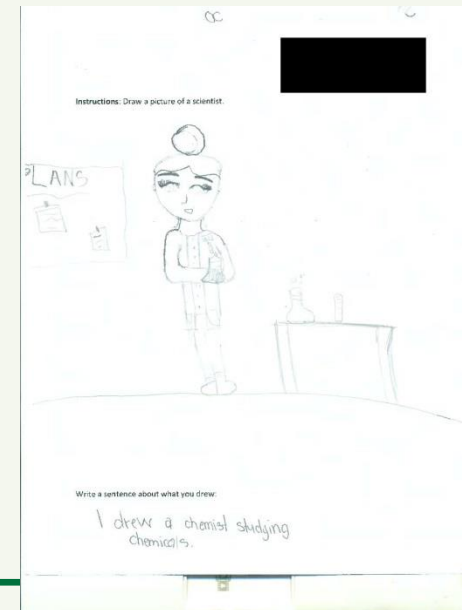
Findings from DAST-C

- At the beginning of camp, 29% of girls depicted a male scientist only
- At the end of camp, no girl drew a male scientist in their DAST

Pre-Camp



Post-Camp



Examples of DAST-C

OC

Instructions: Draw a picture of a scientist.




Write a sentence about what you drew:

She is a chemist and she is working on an experiment in her lab.

OC
6/26/17

Instructions: Draw a picture of a scientist.



Write a sentence about what you drew:

I drew a pic of a scientist waving. Her name is Nadia.

Bella

Summary of Survey Findings

- Project Scientist attracts girls who hold positive attitudes toward science before the program begins
- Girls are more likely to know or to have met a woman scientist at the conclusion of the program
- Girls' STEM aspirations improve over the summer
- Drawings of scientists reveal girls are more likely to think of scientists as being women at the end of the summer
- Attitudes toward science showed positive change for girls

