



Program Date:  
July 13 - 31, 2020

revised draft 9/21/2020

## A bold pilot, interdisciplinary program built especially for girls ages 13-16

In a first-of-its-kind collaboration, the World Science Foundation (WSF), National Girls Collaborative Project (NGCP), and The Hello Studios jointly piloted a high-quality STEM-centered program for Girls.



"The program was intelligently and beautifully designed. It was quite enjoyable and educating. It was an amazing experience."

- A program lead / educator comment

989

Unique FlipGrid Posts/Videos by  
Brite Girls over the 3-Weeks

19,272

FlipGrid Views over the 3-Weeks

470

Unique Discussion Responses by  
Brite Girls over the 3-Weeks

57%

3-Week Module Completion Rate by  
Brite Girls who Began each Week

## Purpose

A combination of COVID-19, the summer slide, and lack of equity across the science field for females created an urgent need to fill the vacuum of programs, which could not be held in person.

## BRITE Core Goals

- fostering STEM agency: decision-making about STEM
- fostering STEM identity: a belief in self, image, and ability
- engagement in collaborative learning
- building a community of girl learners and a support network among them
- sparking curiosity and creativity

## Evaluation Methodology

Tracking changes in self-esteem by Brite girls' responses for the degree by which they agree with varying statements about themselves and science.

Analysis of weekly questions embedded into the World Science U platform as 'Exercise' modules.

Coding of posts and discussion comments (trending topics and sentiments) on the World Science U and FlipGrid platforms.

Analysis of program lead / educator responses to the post-Brite survey.

Eight  
Participating  
Programs

175  
Registered  
Girls

- Be-Ruth Foundation
- Girl Scouts of Eastern Missouri
- Girl Scouts of Historic Georgia, Inc.
- Girl Up
- Milwaukee School of Engineering
- Morrison Mentors
- SUNY Schenectady County Community College
- University of South Florida College of Marine Science



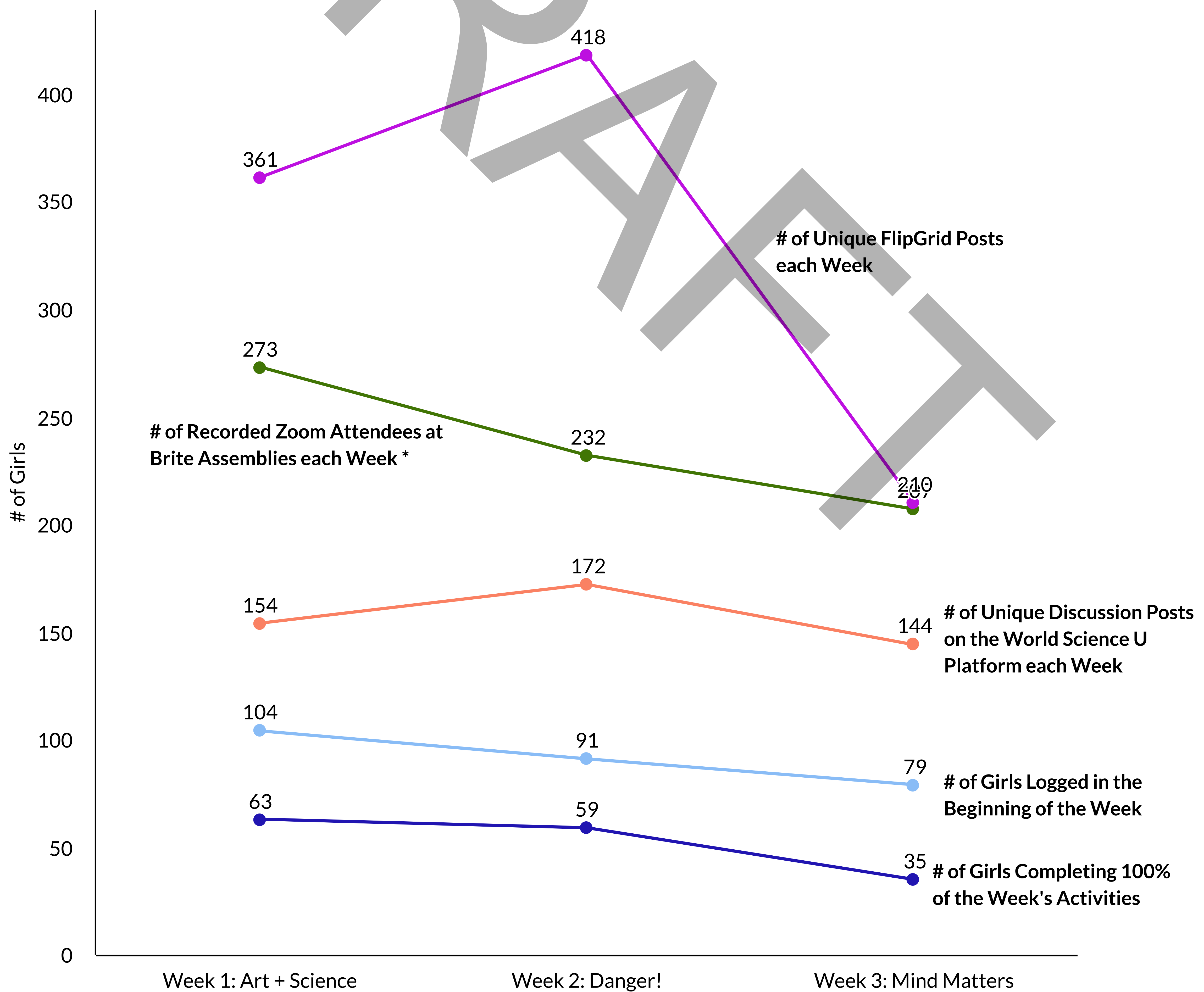
## Weekly Participation and Completion

### Weekly Participation and Completion

Across the three weeks, Brite girls engaged the most in FlipGrid activities and discussion prompts in week 2 (Danger).

- 57% of the Brite girls who logged in at the beginning of each week completed all weekly activities.
- 32 individual girls completed all three weeks and were marked as 100% in the World Science U platform.
- Week 3 (Mind Matters) had the lowest participation and completion levels.

\* The recorded number of Zoom attendees noted in this report include Brite girls, program leads, and Brite admin team members for 3 assemblies each week. The totals do not reflect the girls involved in Brite activities offline or who did not log into the World Science U platform.

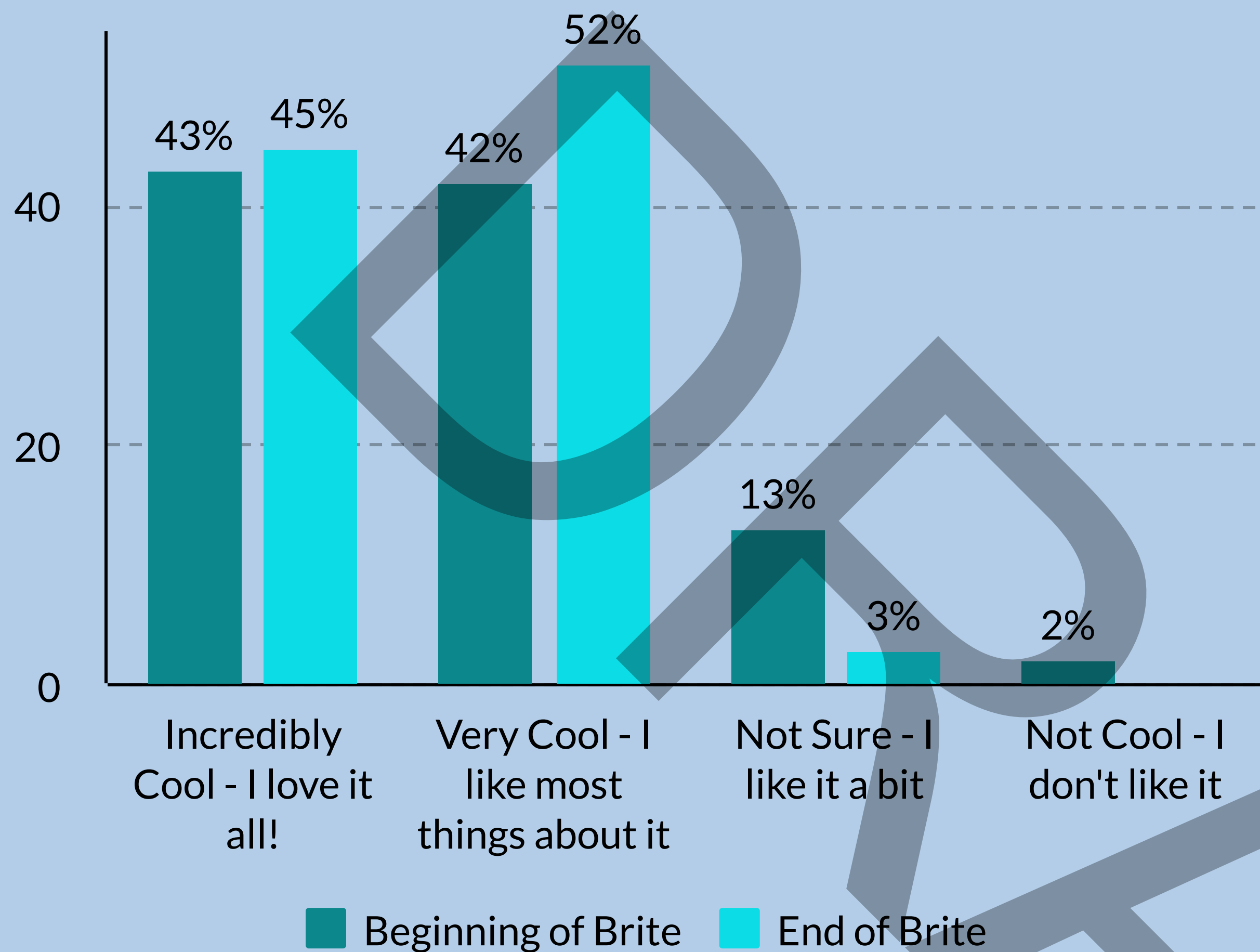






## Coolness Rating of STEM

Brite girls rated how "cool" science, technology, engineering, and math was to them at the beginning and end of Brite. Here is what they said.



- All of the girls who submitted feedback on the Friday of week 3 (29 girls) reported liking STEM!
- By the end of Brite, there was a **77% decrease** in the number of Brite girls reporting feeling unsure about liking STEM subjects.
- There was a **14% increase** in the number of girls who **love** or **like** most things about STEM by the end of the program.

The figures in this chart reflect responses from 128 girls at the beginning of Brite and 29 at the conclusion of week 3.

When asked to upload an emoji that best captured the way they felt at the end of each week, Brite girls shared the following.\*

- 9% of the emoji submitted included one of each of the following:

Cold



Mind Blown



Silly Face



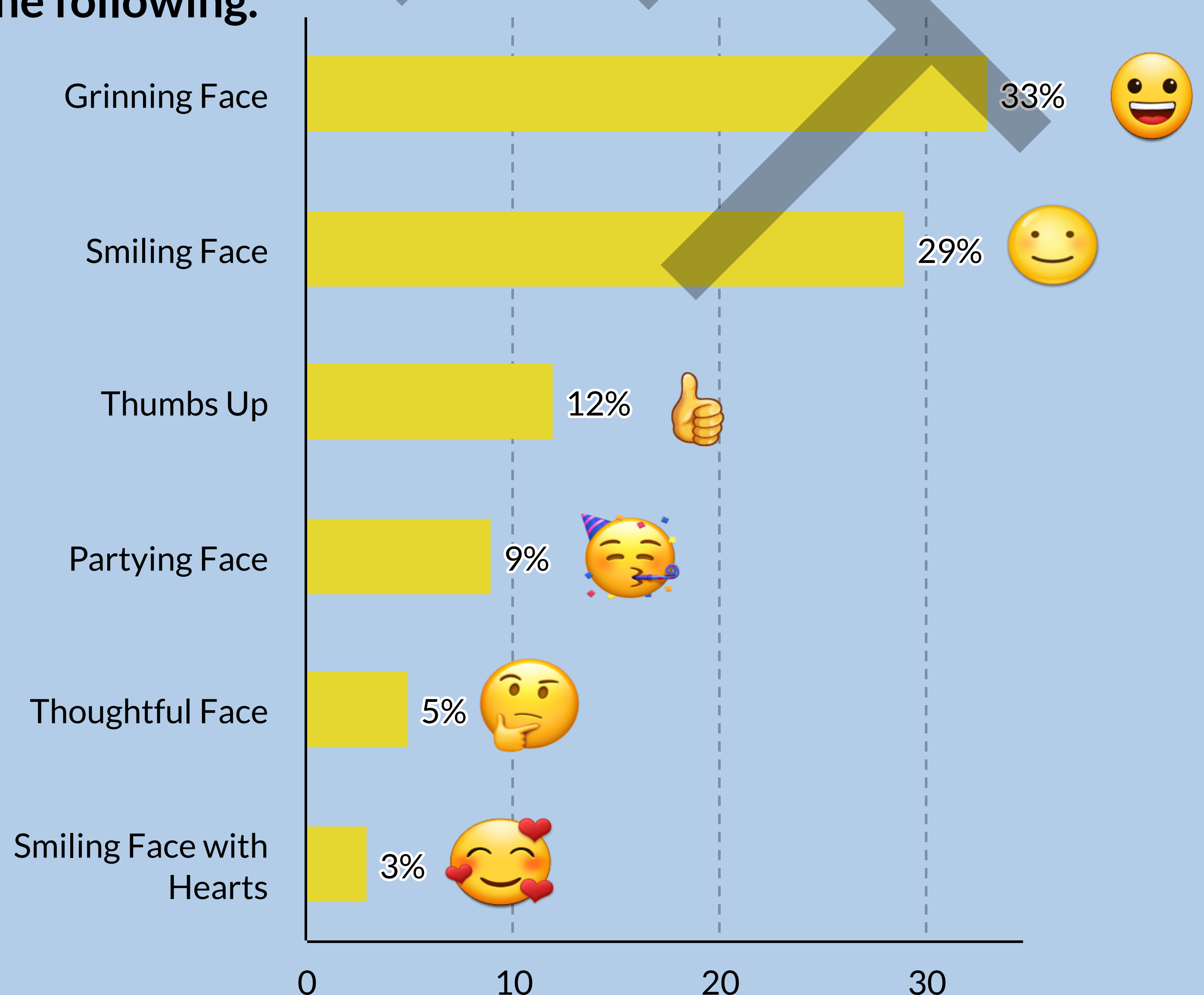
Sleepy Face



Surprised Face



58 emoji were uploaded over the three weeks.



\* this question was not required



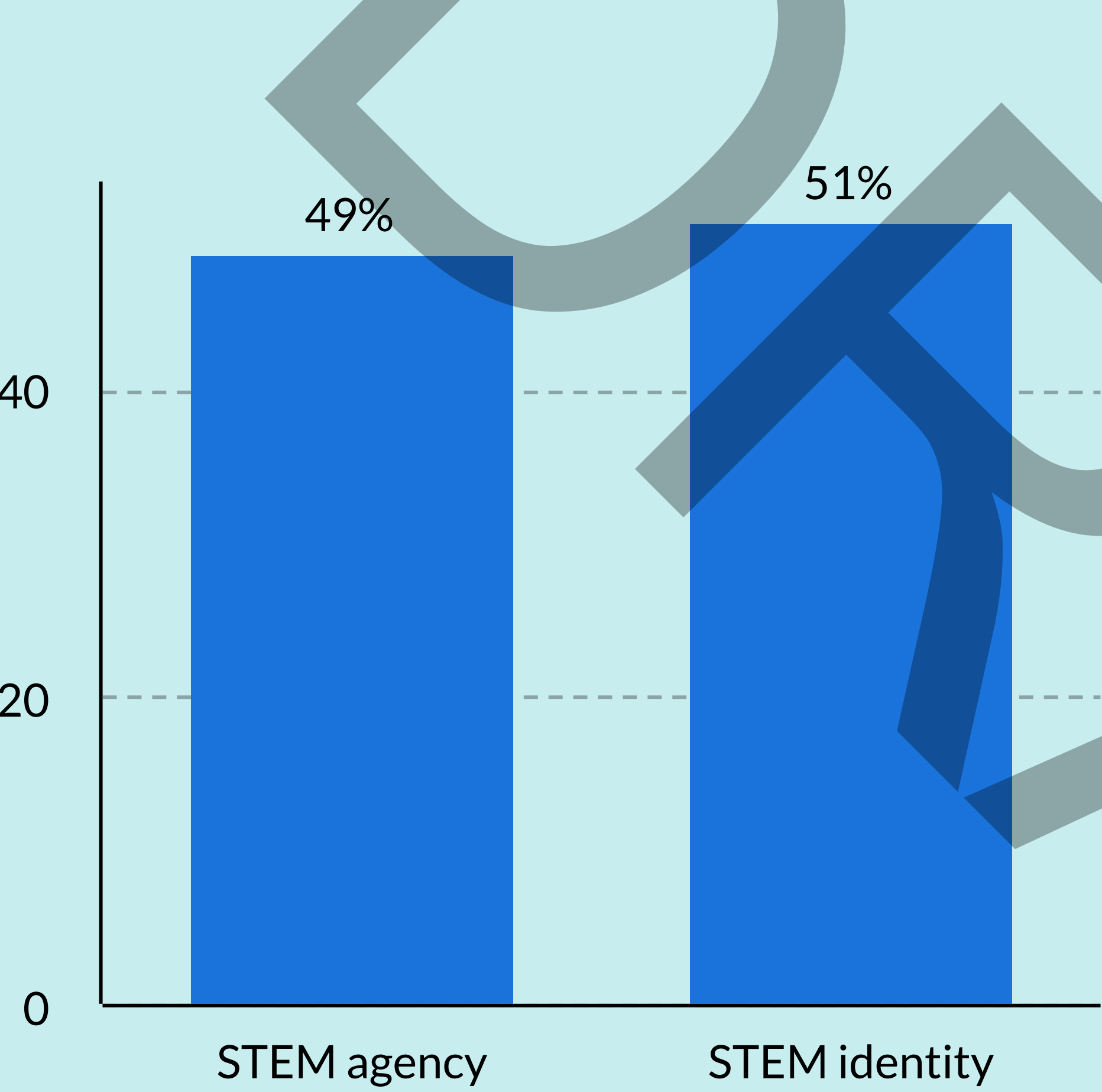
# Goal Achievement (Goals 1 and 2)

## Brite Goal Achievement Findings

88% of open-ended responses to weekly feedback questions were positive!

### GOALS 1 and 2: Fostering STEM agency and STEM identity.

Brite girls referenced their STEM identity and belief in themselves in **77%** of the weekly responses to feedback question.



Of the comments referencing increases in their sense of STEM agency (decision-making about STEM):

- 56% focused on their increased awareness of choices available to them for pursuing STEM interests and career,
- 37% focused on heightened interests in using STEM to problem solving, and
- 7% noted myriad opportunities that STEM offers in identifying pros and cons and analyzing situations.

Of the comments referencing increases in their sense of STEM identity (belief in self, image, and ability in STEM):

- 61% identified at least one characteristic and individual interest in the theme of the week or a specific activity topic,
- 25% described feeling recognized and validated regarding their STEM interests, and
- 14% reflected on finding others with similar interests.

### Select Brite girl comments:

- "Your own instincts are more valuable than your peers [sic] who may doubt you."
- "[I] am leaning [sic] to be open minded and learn about new things everyday."
- " we learned that we can make mistakes, be weird, and unique and that is all good!"

### Most significant Changes in Pre- / Post Self-Esteem Test for Full Brite Girl Cohort

Prompt given to each Brite Girl	I feel I am good at science.	Overall, I am satisfied with my skills in science.	At times I think I am <u>not</u> good at science.	I am often <u>not</u> proud of my performance in science activities.
Aggregated percent change for full cohort	↑ <u>535%</u> Increase in agreement	↑ <u>50%</u> Increase in agreement	↓ <u>Total</u> Decrease in agreement	↑ <u>135%</u> Increase in disagreement
Pre-test and post-test response totals	From 8% Strongly Agree (Pre-Test) to <u>50% (Post-Test)</u> .	From 26% Strongly Agree (Pre-Test) to <u>39% (Post-Test)</u> .	From 9% Strongly Agree (Pre-Test) to <u>0% (Post-Test)</u> .	From 14% Strongly Disagree (Pre-Test) to <u>33% (Post-Test)</u> .





## Goal Achievement (Goals 3 and 4)

### GOAL 3: Engagement in Collaborative Learning.

25% of the weekly feedback responses shared by Brite girls referenced the collaborative experience of the program (in addition to the number of FlipGrid posts and views, unique discussion posts to daily prompts, and activity completion rates (see page 1)) .

#### Select Brite girl comments:

- *"Brite fest was fun and it was good to hear about everyone's projects."*
- *"...we can directly see who other girls are and see their process and thoughts [of the topic or activity]."*
- *"I liked the whole thing and I really liked getting to see how everyone interpreted the risk and reward project."*
- *"I really appreciate how interactive BriteFest is!"*

### GOAL 4: Building a community of girl learners and a support network among them.

Brite girls specifically referenced excitement for interacting with others with like interests and supporting one another in **14%** of responses to feedback questions.

- "Building community among the girls" was most frequently referenced by program leads and educators as the most fun element of the Brite program.
- Program leads and educators reported that it was fun to see the girls work and share with, and support, each other.

(more program lead and educator feedback on pages 8-10)

#### Select Brite girl comments:

- *"My favorite part of britefest was seeing al [sic] the girls projects and answering Amanda's questions."*
- *"Being able to interact with people who have made achievements and worked hard."*
- *"Meeting everybody and making new friends and connections all connected to STEAM is inspiring!"*



## Goal Achievement (Goal 5) and Most Memorable Program Elements

### GOAL 5: Sparking curiosity and creativity.

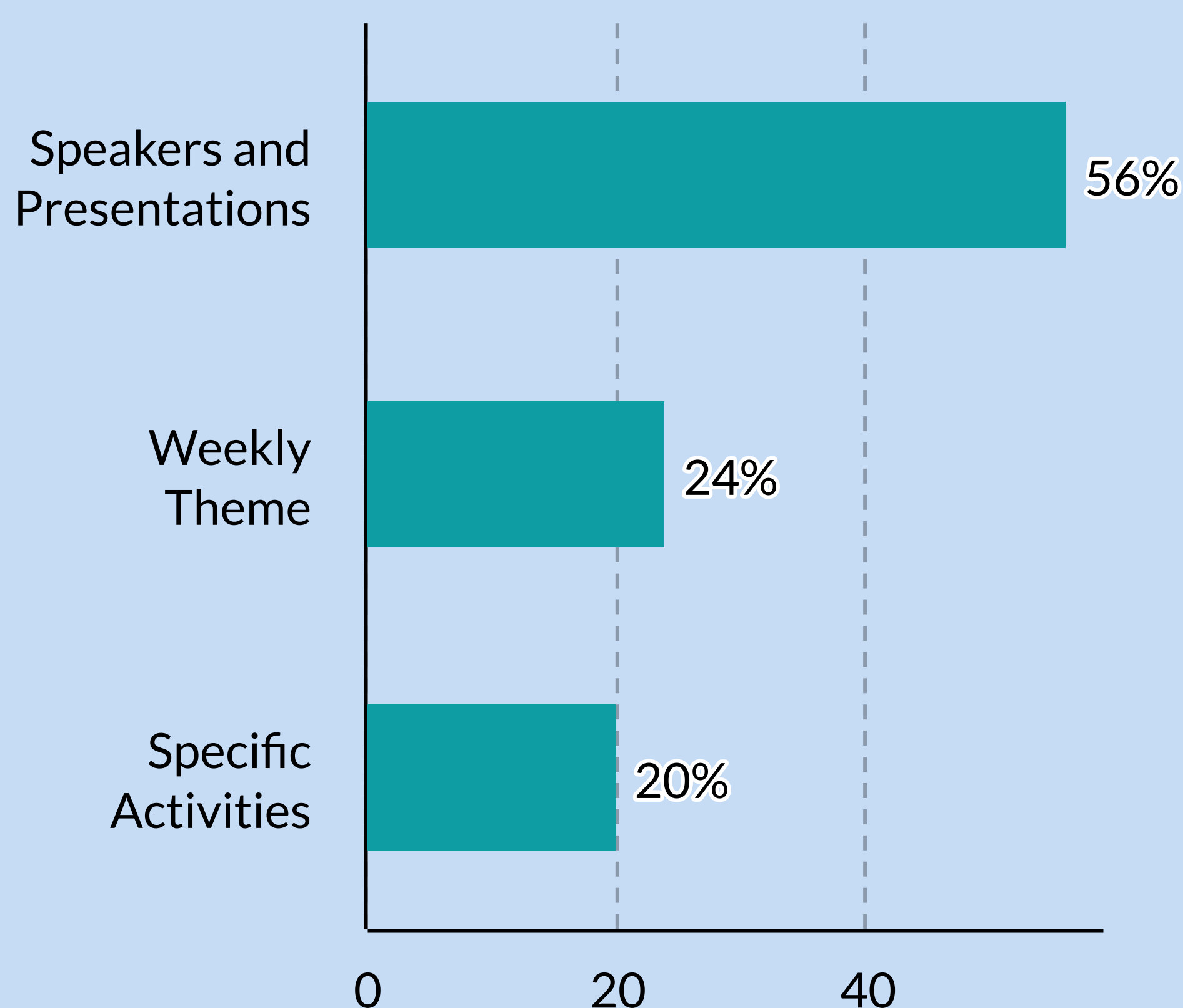
35% of the weekly responses submitted by Brite girls referenced increased curiosity about STEM, lessons learned during the week, interesting surprises, and how creativity is a key element in science.

#### Select Brite girl comments:

- "Art and science play a big role in my life, as I know science is everywhere, but art makes it [more understandable] I can use it to express my creativity."
- "I enjoyed seeing the other girls' creativity."
- "Amy Sterling taught me that when something seems impossible, it just might take a little creativity to get it done."
- "[I] learned that its more common than [I] thought it was to be a storm chaser."
- "I think the next thing scientists should focus on is seeing the signs of mental illnesses earlier in life."
- "I think scientists should focus on why we have dreams. We still don't know why we experience dreams."
- "We should focus on how are [sic] brain work [sic] when we are in a subconscious state."

When asked what was most memorable from the Brite weeks and what they are still thinking about, Brite girls responded:

#### Speakers and Presentations were most memorable.



#### After the Brite weeks, the girls still thought about:

- earth and marine sciences
- combining art and science
- sharks
- photography
- combining music and science
- combining fashion and science
- medicine and chemistry
- coding
- archaeology
- space science

Topics listed above in descending order of mentions in weekly feedback.





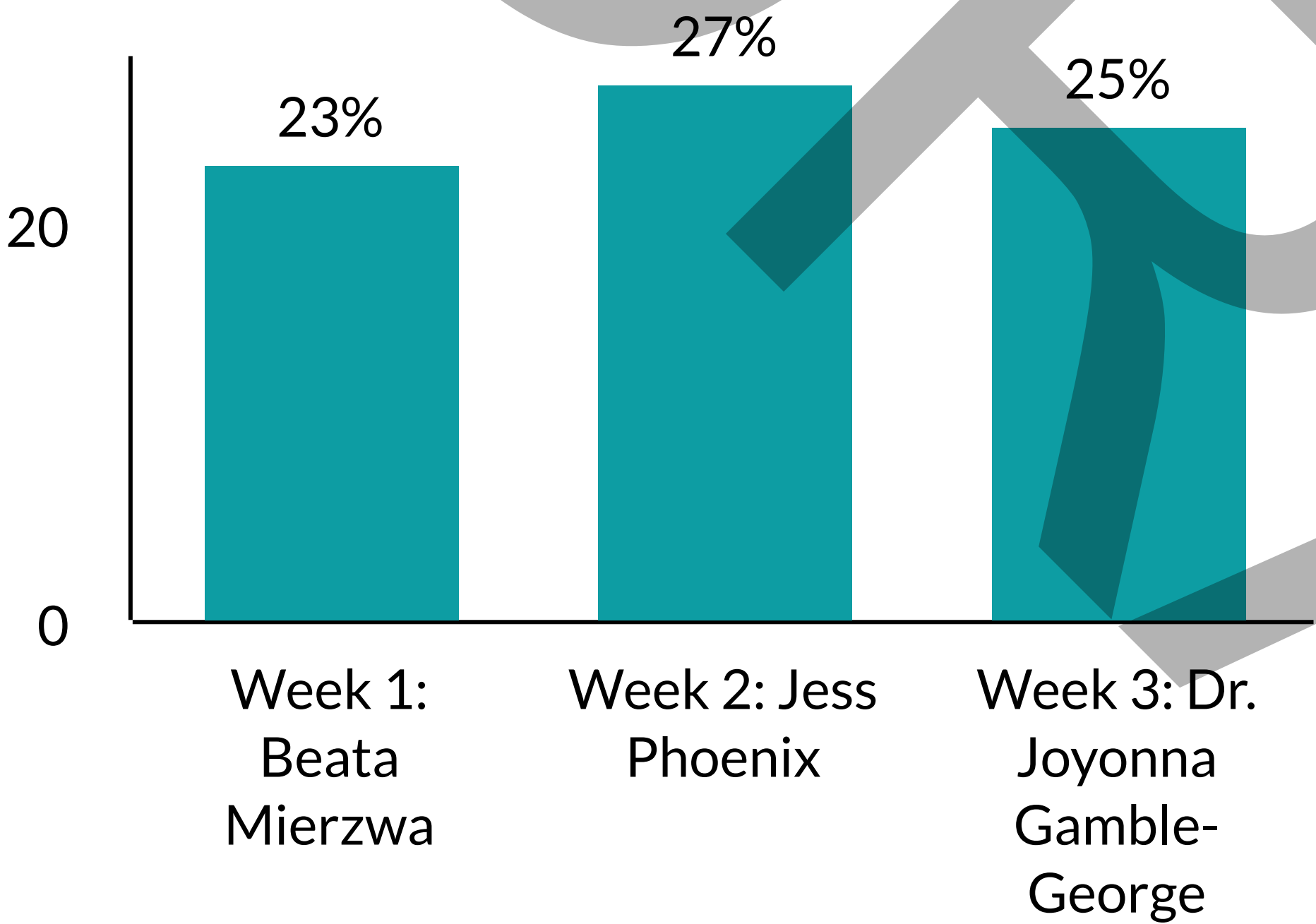
# Weekly Speaker / Presenter Feedback

The below two charts indicate the same presenters selected most often as **most interesting** presentation and from whom the girls **learned something new**.

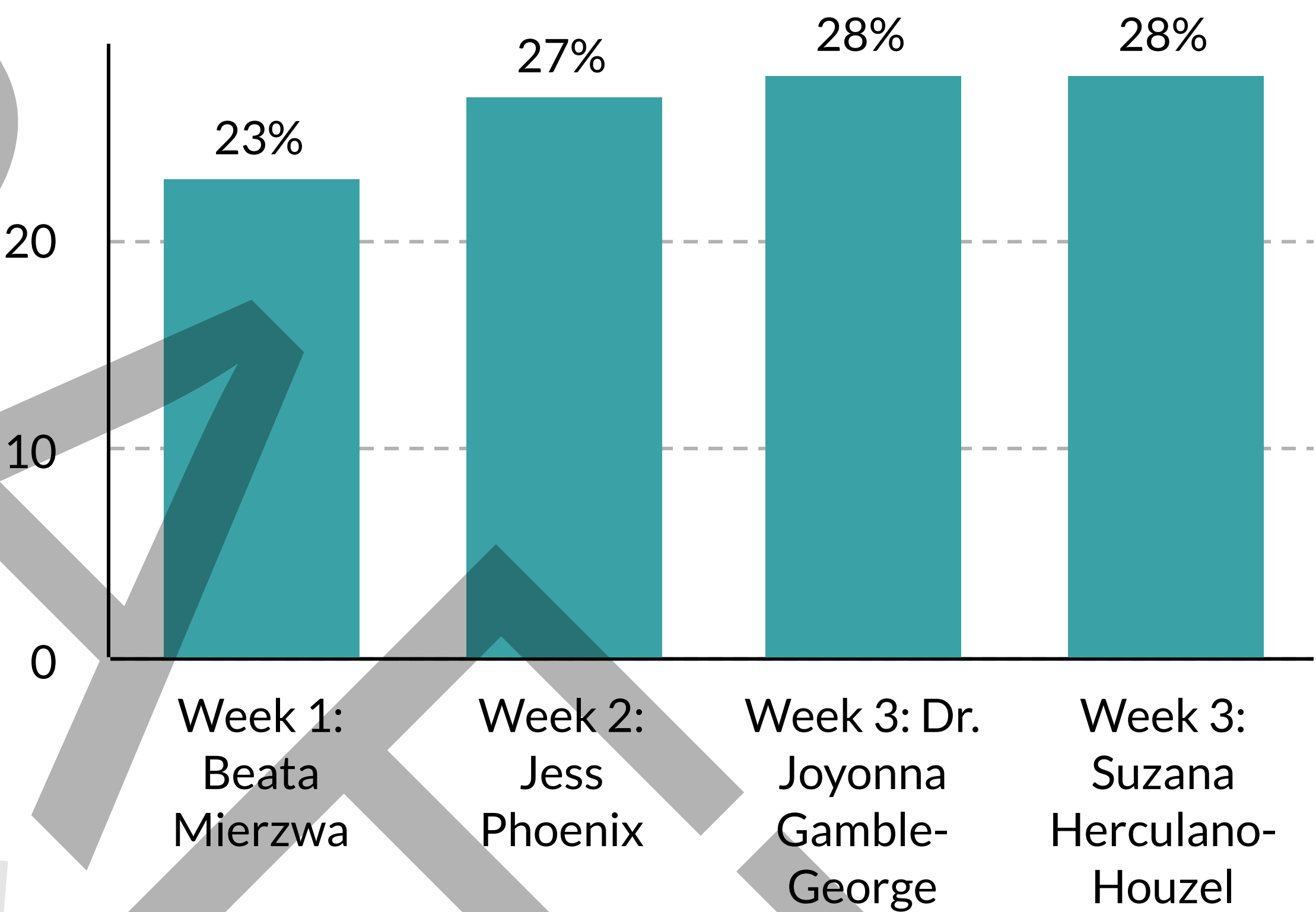
While styles were not unique to these three presenters, common presentation techniques included:

- focus on a teenage audience,
- sharing their STEM journey,
- offering advice, and
- engaging girls.

### Most Interesting Presentation Each Week



### Learned the Most "Something New" from the Presenter



Brite girls wanted to know more about:

Week 1: Yamilee Toussaint Beach

Week 2: Amani Webber-Schulz

Week 3: Suzana Herculano-Houzel

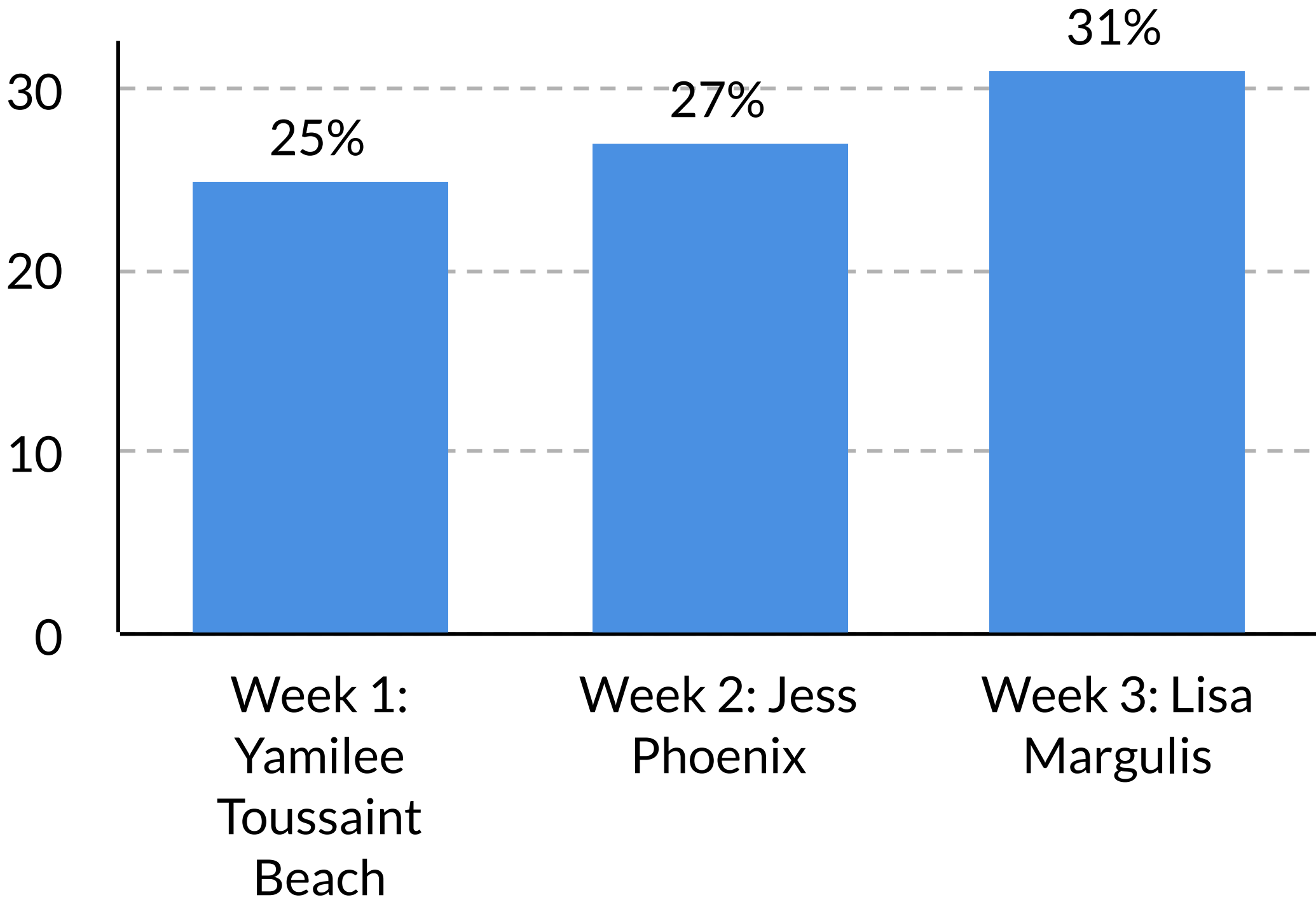
Brite girls reported they did not remember as much about presenters on the first day of each week, including:

Week 1: Dajae "Moe" Williams

Week 2: Becca Piexotto

Week 3: Kaitlyn Hova

### Wednesday Presenters Inspired the Brite Girls the Most to Look for New Ways to be Involved in STEM Activities





# Program Lead / Educator Feedback

Findings reflect responses from program leads / educators from 7 of the 8 participating programs (10 unique respondents).

100% of program leads / educators reported they had enough information to confidently lead their group through each of the three weeks.

100% of program leads / educators were satisfied with the amount of communication with the Brite admin team

- 70% Very satisfied
- 30% Satisfied

90% of program leads / educators rated the overall Brite experience as excellent or outstanding

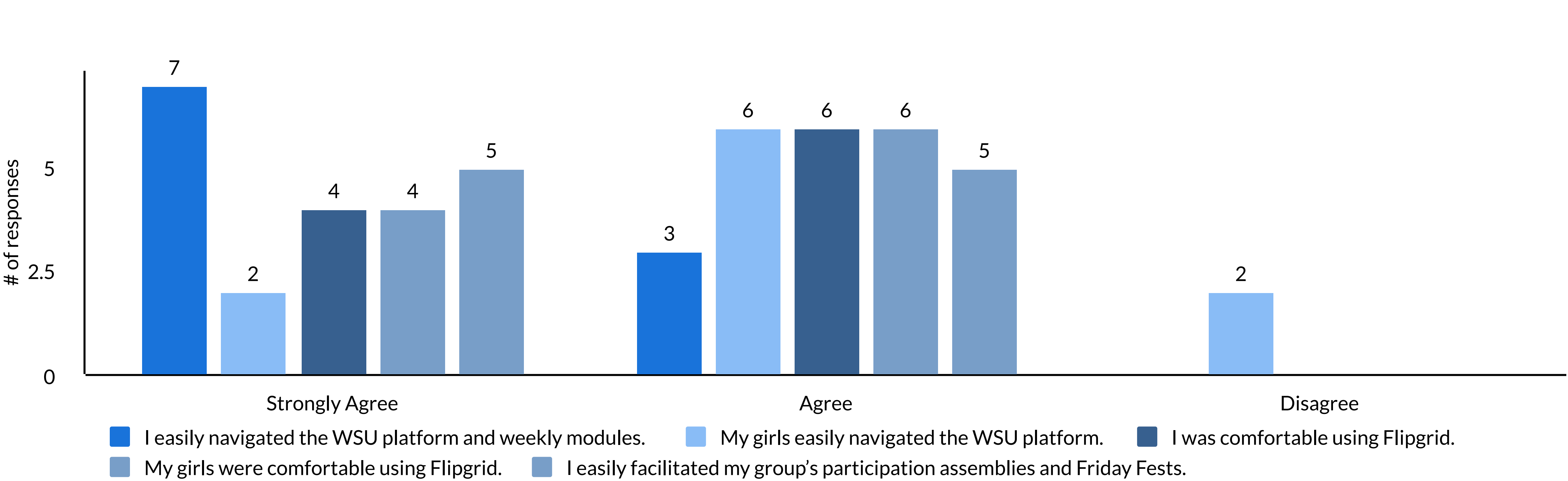
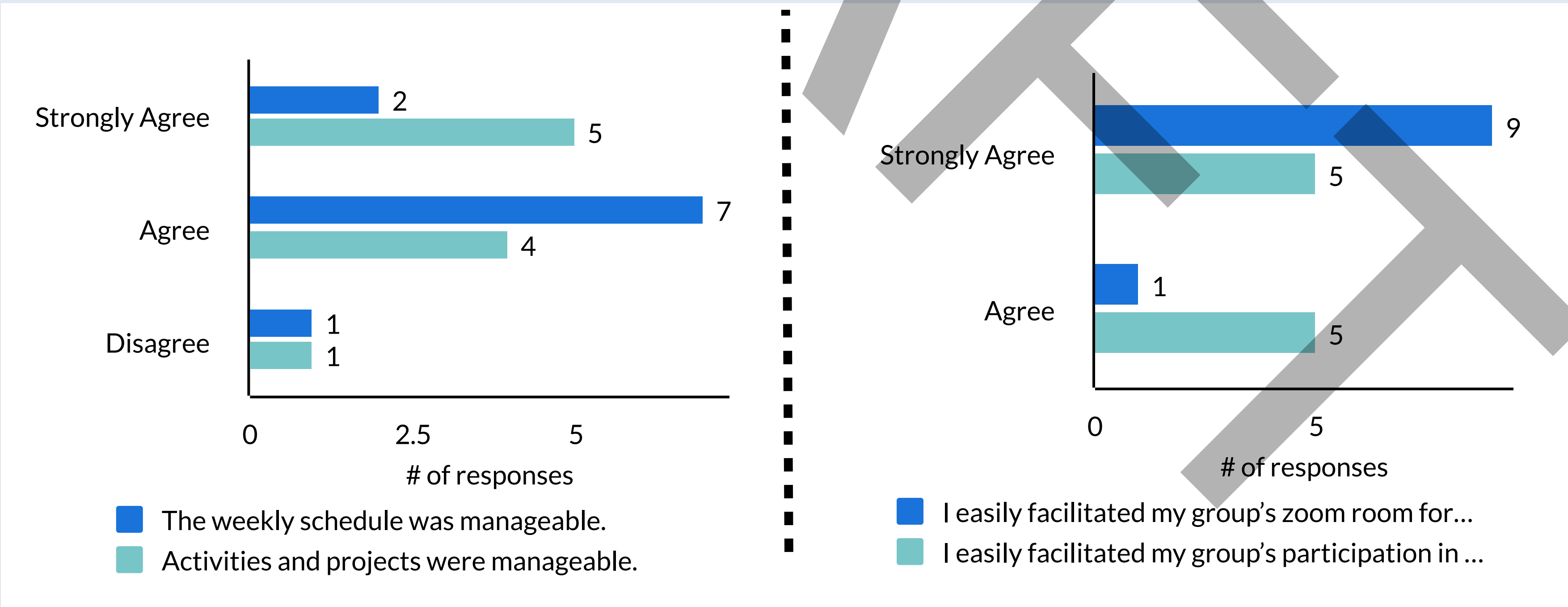
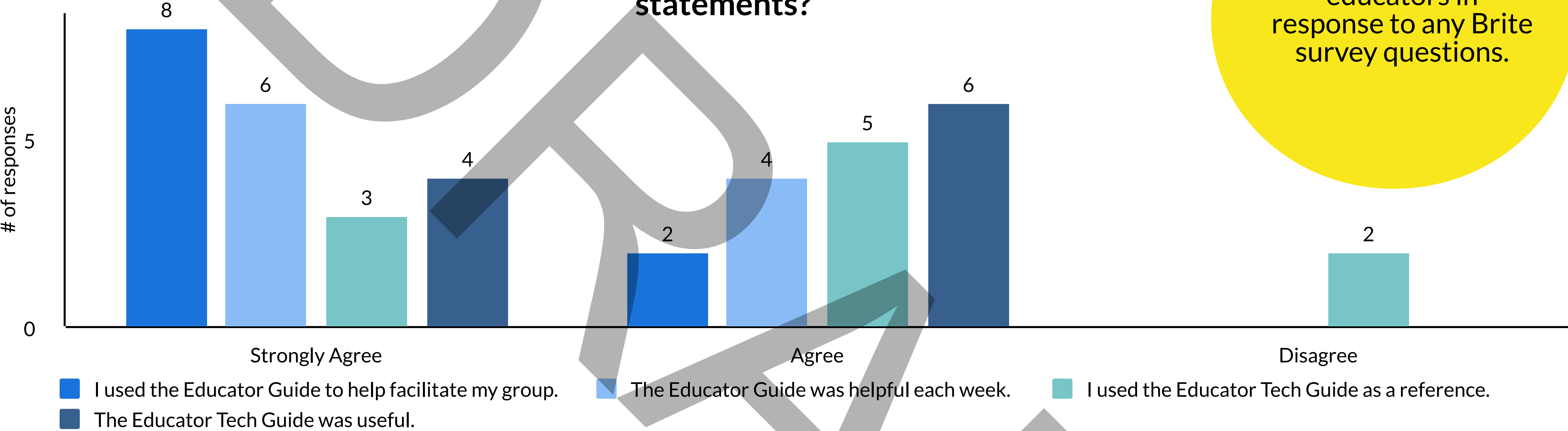
- 10% rated as Good

## Program lead / educator comment:

"I know this was a pilot and so there was no cost for girls to join in. But we know from experience that when something is free, people don't value it as much. Though we had a full list of students who signed up to participate, only about half of them actually showed up to do it, which was a shame, because we initially had to turn some people away who probably would have enjoyed it."

'Strongly Disagree' was never selected by program leads / educators in response to any Brite survey questions.

## To what degree do you agree with the following statements?







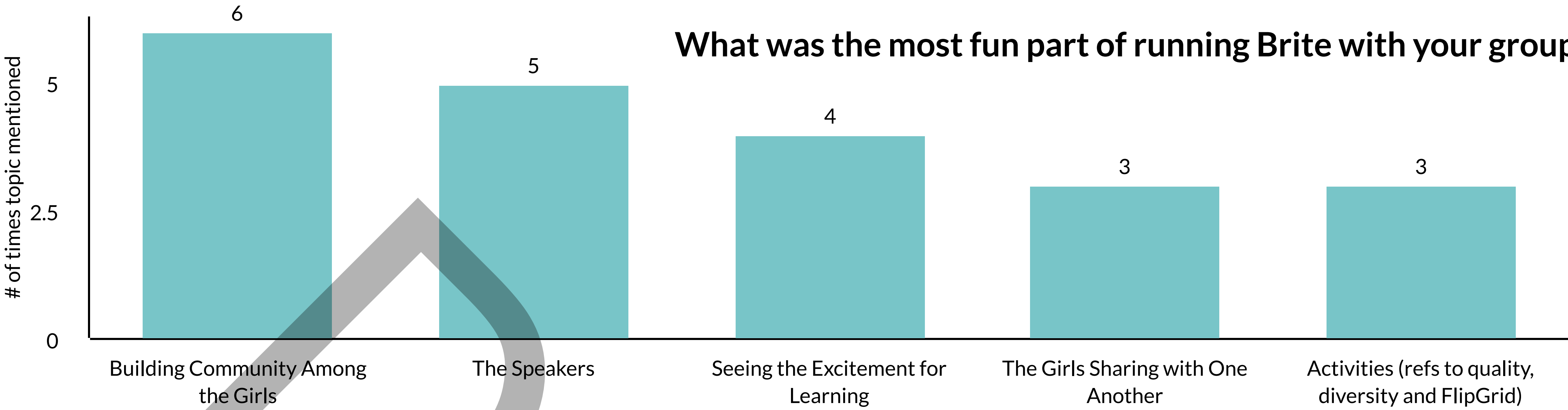
# Program Lead / Educator Feedback

## Cont.

Findings reflect responses from program leads / educators from 7 of the 8 participating programs (10 unique respondents).

### Top trending topics in responses to:

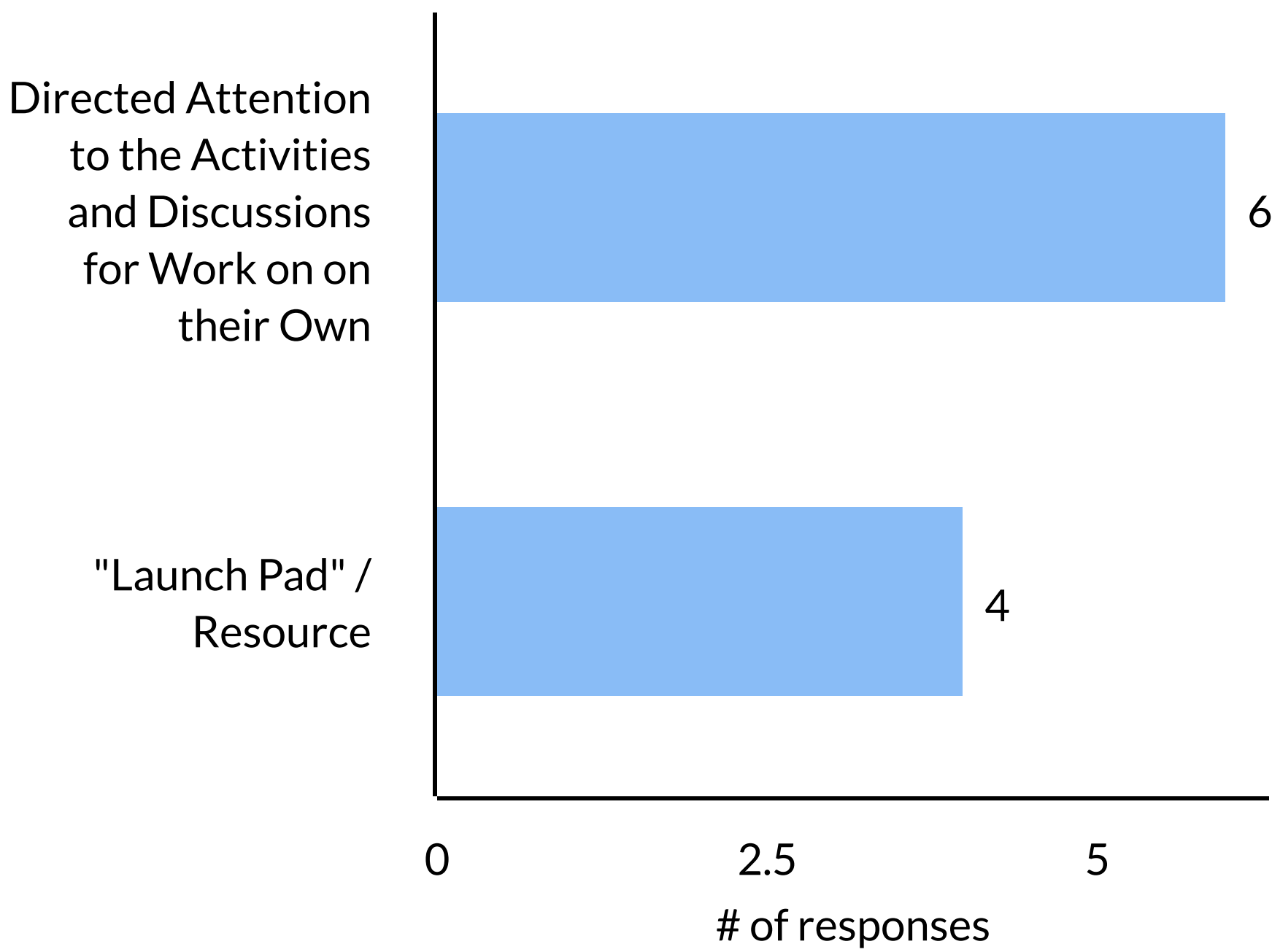
#### What was the most fun part of running Brite with your group?



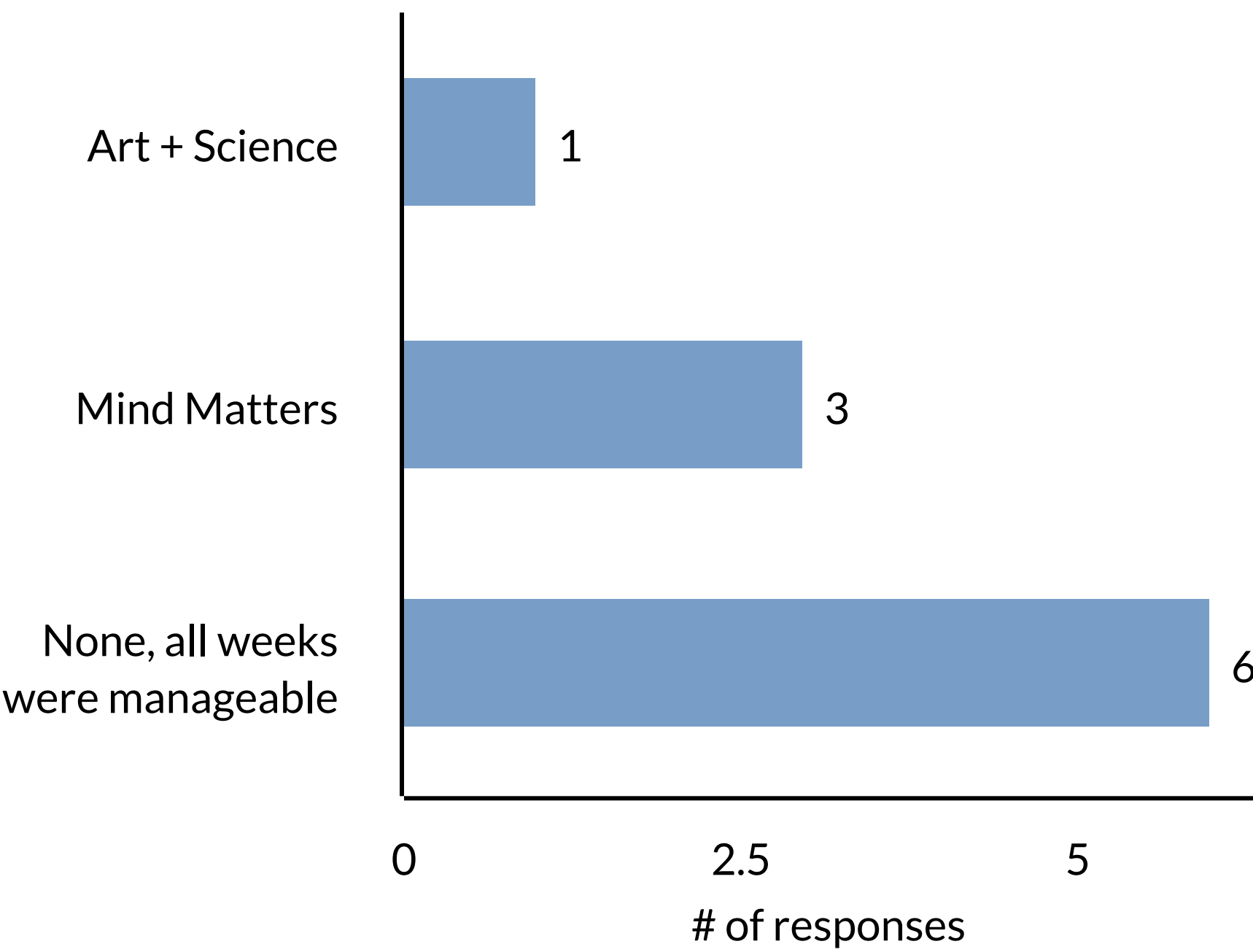
#### What was the most challenging part of running Brite with your group?

Initially, we followed the educator guide the first day and realized it was too many zoom meetings and not allowing them time to work on the activities. We also had a few logistics issues in the beginning, but once I identified what works for the girls, it was manageable.
The amount of time that was dedicated to the program. We ended up not doing the third meeting most days because it was too much with my other job duties, and I felt it didn't add much to the experience.
Getting up and running was a challenge. There was much more time required to host it than was originally knowable from the description of the opportunity.
Explaining the some of the activities (i.e. how to upload pictures onto flipgrid instead of video)
The first few days were the most challenging. The girls had a hard time navigating the World Science U at first and some girls had a hard time figuring out how to allow flipgrid to use their camera. Things were much more manageable once they developed a routine.
The most challenging part of running Brite with our group was getting the girls to complete all of the activities within the designated time frame. It was also difficult keeping them interested and engaged after the assembly. Also, some of the projects were a bit too difficult for them to fully understand and complete within the short amount of time provided (ie. Eye wire).
Signing them up to the platform, because many of them did not want the persist to continue asking questions and left it as it was okay not to have access. Broke my heart, but there is not much we can do after. I will stay in touch with those girls and hopefully they will develop that persistency attitude.
Trying to make sure everyone came each day.
Uncompensated time commitment

#### How did you use the World Science U Brite platform with your group?



#### Was any particular week less manageable than the others?





# Program Lead / Educator Feedback

Cont.

Findings reflect responses from program leads / educators from 7 of the 8 participating programs (10 unique respondents).

## Select program lead / educator comments:

"Each day, I provided the girls a detail layout of what to expect for the day along with wrap-up and a peek sneak for the next day. During our daily kick-off call, we did the icebreaker and I used the additional resources and/or research intro videos about the speaker for the day to help the girls generate questions for the Live zoom. In our daily kick-off call at noon, we also did a recap of the previous day, review the activities for the day and discuss the wrap-up. The girls and I would attend the live call and the afternoon was left for them to complete all the activities. At the end of the day, the girls would receive an email from me with a layout of the next day, etc. I also sent an email to the girls every morning with words of encouragement and a reminder of our kick-off call."

"..during the application process it seemed like the lead would not be responsible for the day to day facilitation. This time commitment for me was sometimes a struggle since I hadn't planned on it."

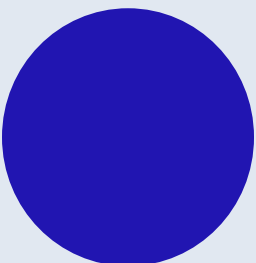
"The Brite schedule got a bit repetitive but it was good for routine. Maybe switch up some of the routines and have a better way of communicating between the girls."

## What information would you recommend the Brite admin team provide group leaders during future Brite programming?

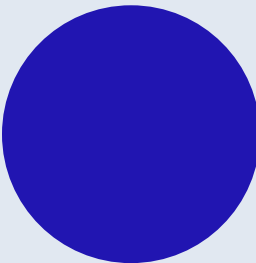


Top recommendation: Receive the educator guides earlier in the process

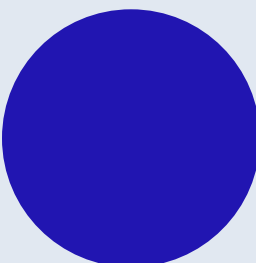
### For Program Leads/Educators



Kick-off meeting for program leads/educators

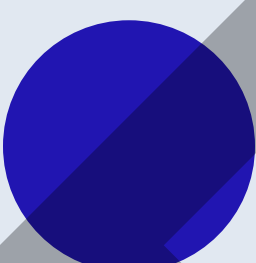


More clarity for the amount of learning time

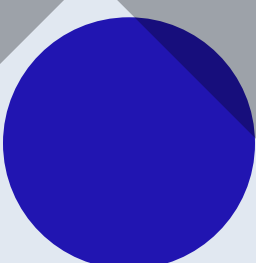


Provide evaluation forms to track girls' progress and knowledge acquisition

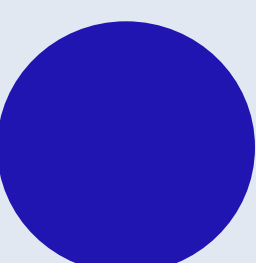
### For Brite Girls



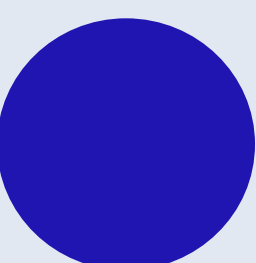
Kick-off for girls on first day with screen shares to teach them how to navigate each platform



Daily Wrap-Up meetings to recap for the next day



Post example videos for FlipGrid for the girls



Have a schedule for the girls for each day

## How likely are you to recommend a Brite program like this to a colleague or friend?

Promoters (10-9)	Passive (8-7)	Detractors (6-0)
7	3	0
% promoters (70%) - % detractors (0%)		
= Net promoter Score 70%		

Likelihood to recommend on a scale of 0-10.

100% of program leaders / educators would participate in a Brite program like this again.