

# Discussion Guide

## Discussion Guide for Module 23 Math Stereotypes

**Module run time:** 15 minutes

**Estimated time to complete the module with discussion guide:** 45-60 minutes

Below are recommended stopping points and suggested questions to use in your group's discussion. Please feel free to follow your group's lead and discuss topics and questions that are of greatest value to the group!

### Key points:

- In the United States and other countries, adults and children have the stereotype that math is for certain groups of people but not for others.
- Children develop math stereotypes from a young age, but we can change these stereotypes.
- Active engagement can increase girls' achievement and interest in math.

### Module synopsis:

Page 1: *Title Page – Math Stereotypes*

Page 2: *Acknowledgments*

Page 3: *Stereotypes About Math*

Page 4: *Children Learn from Their Environment*

### ✦ Recommended stopping point

- On page 3, you were prompted to picture someone who is good at math. Who did you picture? Was it a male or a female? Why do you think that is?
- Why do you think math-gender stereotypes continue to persist in the United States?
- We provided a few examples of how children learn math-gender stereotypes from their environment. Where else have you seen messages - either explicit or subtle - that math is for boys?

Page 5: *When Do Early Stereotypes About Math Form?*

Page 6: *Self-Concept Linked to Math Performance*

### ✦ Recommended stopping point

- Stereotypes influence everything from our interests to academic performance. Were you surprised by how early children demonstrate math-gender stereotypes? Have you seen examples of this with the children in your care?
- Stereotypes are not innate, but they also can't be changed overnight. Describe some immediate changes you can make to support the idea that math is for everyone, either at home or in the classroom.
- Some children may feel that they are not a math person or math is not for them. Over time, this negative self-concept about math can influence their math performance. As a result, children may no longer want to participate in math-related activities. How do you

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think we can encourage more girls' interest in math from an early age? How can we keep their interest as they get older and encounter math-gender stereotypes?

Page 7: *Engagement and Achievement in Math*

Page 8: *Charging Up Math Experiences*

## ✦ Recommended stopping point

- Research shows that children are more interested and engaged in math when they feel like they are part of a group. Why do you think that is? Try to answer this question in a way that doesn't invoke more gender stereotypes.
- How else do math-gender stereotypes influence children beyond academics?
- When teachers see children playing with blocks, they might ask boys "math" questions such as, "How tall is it? or "Which tower is bigger?" But they are more likely to ask girls conceptual questions like, "Are you building a house?" Studies have shown that young girls and boys are equally good at, and engaged with block playing. What if we encouraged this from a young age, and continued that encouragement throughout their schooling? What types of change would we see?

Page 9: *Math and Me: Stereotypes*

Page 10: *Change How You Think and Talk About Math*

## ✦ Final discussion points

- Talk about a time you experienced the stereotype "math is for boys, but not for girls" while growing up. Do you remember feeling that "math isn't for me" (girls) or "math is for me" (boys) because of this stereotype?
- On the last page, we shared some ideas about how to change stereotypes about math in our society. Think of other ways you can model the belief that math is for everyone. How can you encourage colleagues, friends, or families to do the same?

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To learn more about the development of stereotypes around math and ways to encourage girls' success in STEM fields, take a look at these resources:

[Black Girls Code](#)

[Engendering Success in STEM | Project CLIMB](#)

[FabFems | Female STEM Role Models](#)

[GEMS | Girls Excelling in Math and Science](#)

[Girls Who Code](#)

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[National Center for Women & Information Technology](#)

[National Girls Collaborative Project | Encouraging Girls to Pursue STEM Careers](#)

[Purdue University Global | Resources for Women in Computer Technology](#)

[Let Toys Be Toys](#)

We are constantly working to improve our materials. Do you have suggestions about topics to add to this guide? Did your group discuss something we didn't suggest? We'd love to hear from you! Please email your thoughts to us at [ilabsout@uw.edu](mailto:ilabsout@uw.edu).

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