

# Community Partnership Can Drive Continuous STEM Exposure for Female-Identifying and Non-Binary Youth

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## BACKGROUND

- ❖ The most engaging science, technology, engineering, and mathematics (STEM) outreach events are often those that are planned, integrated, and executed by community partners and stakeholders.
- ❖ When creating STEM outreach opportunities for middle school youth organizations, it is necessary to showcase STEM skills that translate to real careers all while providing a STEM experience with a STEM professional.
- ❖ The Museum of Science and Industry (MSI), Chicago is one of the largest science museums in the world and home to more than 400,000 square feet of hands-on exhibits designed to spark scientific inquiry and creativity.
- ❖ Building Bridges, Inc., a non-profit organization (EIN: 82-5445077), was born out of a desire to empower young Black girls by exposing them to STEM education and self-awareness strategies.
- ❖ Both STEM-based organizations partnered together to deliver the 1st Annual Youth Summit at MSI on Saturday, October 8th for middle school female-identifying and non-binary youth.

## PURPOSE

- ❖ This conference-style event was curated to engage middle school-aged youth in interactive, hands-on activities centered around subjects such as nature-based science, gaming, and health & wellness with STEM professionals.

## METHODS

- ❖ Building Bridges, Inc. led five sessions titled “Love the Skin You’re In”
- ❖ Youth were exposed to the biology of skin, skin structure, importance of skin care, and innovation by making their very own sugar scrub to take home.
- ❖ Youth were exposed to career paths and self-affirmations.
- ❖ Surveys were conducted after each session.

## MATERIALS

Figure 1. Session Content

**Love the Skin You're In**

**Melanin is produced by melanocytes, responsible for creating skin color, & a protector from the sun's UV rays.**

**Importance of Skin Care**

- Soaps & sugar scrubs are used to reduce build up of excess impurities, dirt, & oil on the skin.
- Washing your hands with soap allows soap to bind to water & oil thus rinsing way germs.
- Germes stick to the oils & grease on our hands
- Soaps are hydrophilic and water loving
- Soaps are hydrophobic and oil loving

**3 Main Ingredients for Sugar Scrub**

- Sugar: Exfoliant, Removes dirt & dead skin
- Oil/Fat: Moisturizer, Bacterial & fungal protection
- Fragrance/Color: Essences, Provide pleasant smells

**Skin Is...**

- the largest organ in the body.
- classified as an organ.
- a flexible barrier that protects.
- also called integument.

Figure 2. Youth Participating During Session



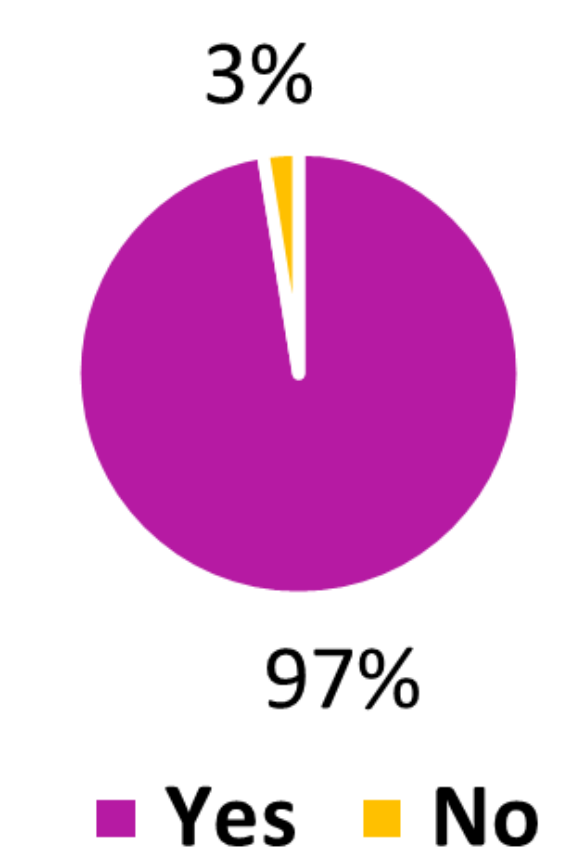
## RESULTS

Table 1. Conference Details

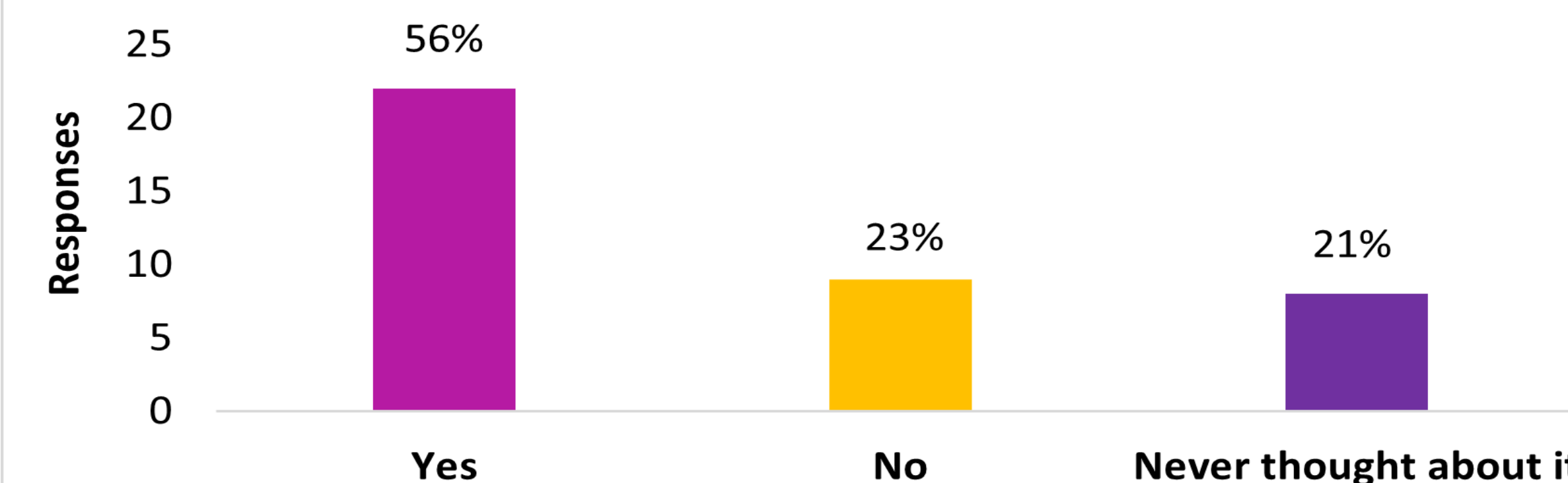
Middle School Female-Identifying & Non-Binary Youth	60
Adult Chaperones	13
Number of Organizations	3
Number of Sessions	5
Length of Sessions	30 minutes
Time Commitment	5 hours

Figures 3-7. Survey Feedback

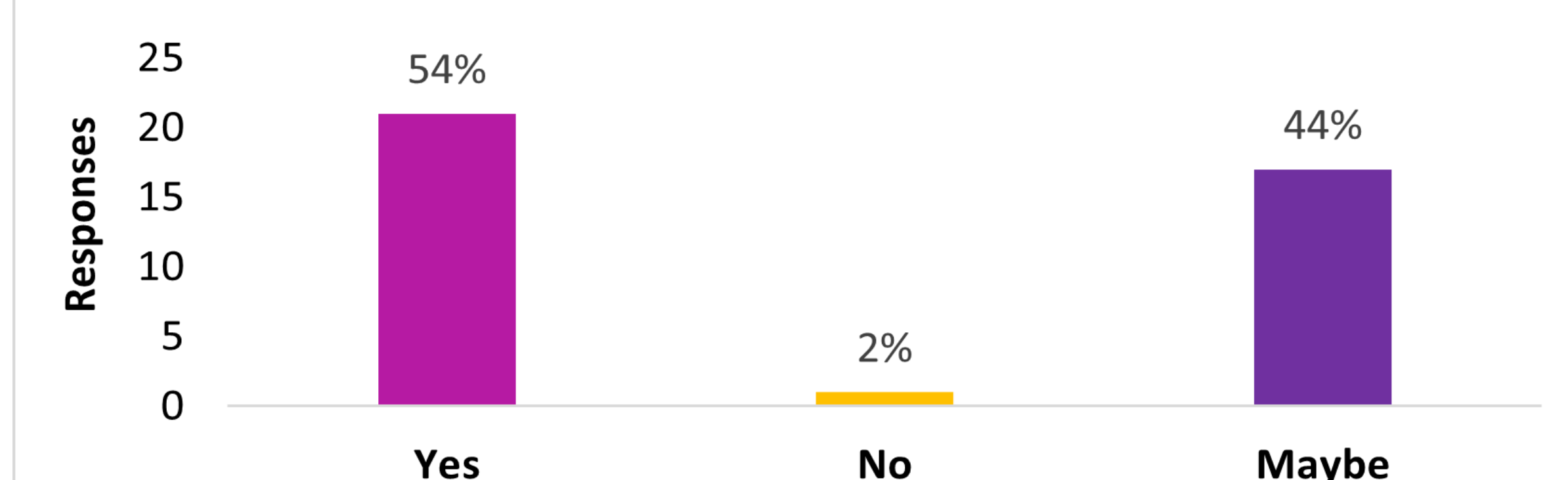
Did you enjoy the STEM activity with Building Bridges, Inc?



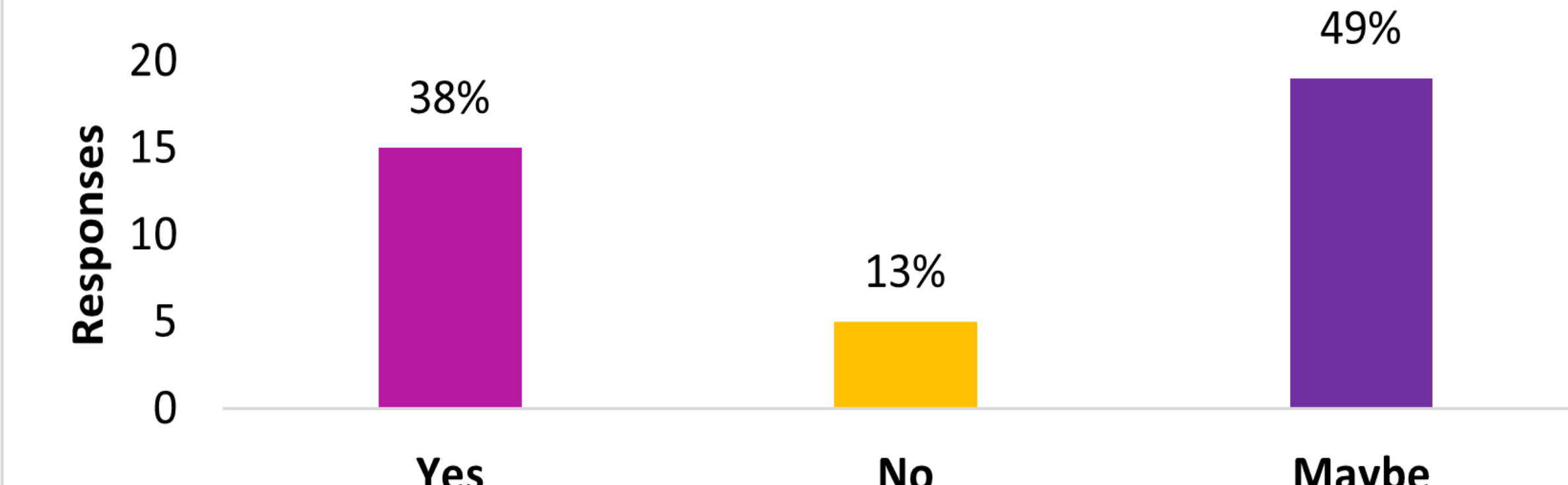
Have you ever thought about science, technology, engineering, and math (STEM) before this activity with Building Bridges, Inc?



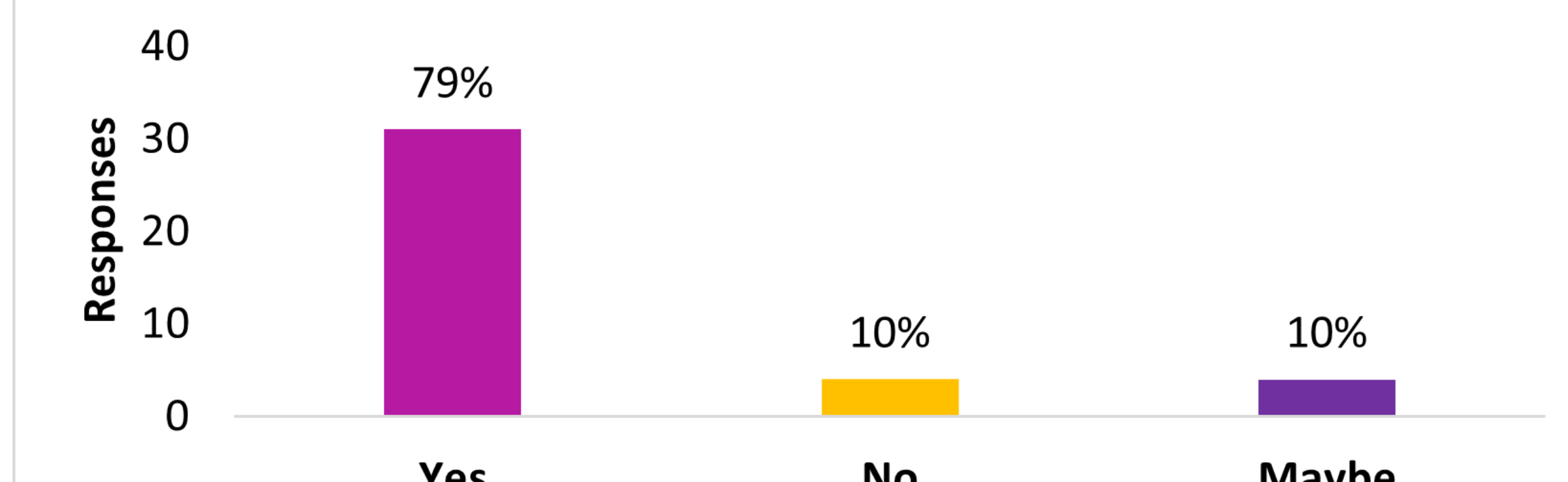
Would you like to learn more about science, technology, engineering, and math (STEM) by doing more hands-on activities with Building Bridges, Inc?



Do you see yourself considering a STEM career if you continued to interact with Building Bridges, Inc.?



Did you feel confident about yourself after the STEM program with Building Bridges, Inc.?



## CONCLUSIONS

- ❖ 65% survey feedback was received from youth.
- ❖ 44% had never thought about STEM, and 98% are open to learning more about STEM by doing more hands-on activities.
- ❖ 86% could see themselves considering a career in STEM.
- ❖ Middle school female-identifying and non-binary youth may benefit from continuous exposure to STEM activities and professionals through organized STEM outreach events from community partners and stakeholders.

## ACKNOWLEDGMENTS

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