Summative Evaluation of

Discovery Lab's Accessible Discovery Program

Discovery Lab, Tulsa, OK

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INTRODUCTION

ORGANIZATION BACKGROUND

Discovery Lab is a children's museum located in Tulsa, Oklahoma focusing on science, technology, engineering, arts, and math (STEAM) as well as health and wellness. Its mission is "to inspire children, connect families, and build community through exploration, exhibits, programming, and play." Discovery Lab's facility consists of three exhibit spaces. The largest space changes exhibit once per year, the second space changes exhibit every three months, and the Maker-Space exhibit changes weekly. Its exhibits and programs primarily focus on mastering process skills though hands-on learning and informal play exploration. In addition to exhibits, Discovery Lab has a large education department sharing outreach programs with local schools and the community. Discovery Lab serves over 20,000 school children each year through educational programing. Discovery Lab is an educational center that serves all members of the community regardless of income, ethnicity, or education, and it aims to reach out and impact underserved populations whenever possible. More than 25% of students who visit the museum on field trips and 40% of outreach programs are at a free or reduced rate.

Discovery Lab has been at its current location in Tulsa's Owen Park neighborhood since 2013. In response to a growing need for STEAM education and support in Tulsa, Discovery Lab is expanding and will soon break ground on a state of the art 50, 000 square foot facility located at the nationally renowned A Gathering Place for Tulsa. This facility will consist of more and larger exhibit halls, maker-spaces, outdoor spaces, and dedicated classrooms and science labs. In addition to this benefit for the community, the new Discovery Lab space will serve as a STEAM center partnership for Tulsa Public Schools.

DESCRIPTION OF ACCESSIBLE DISCOVERY PROGRAM

Discovery Lab's Accessible Discovery program targets children and families in need through partnerships with Tulsa Public Schools, the Department of Human Services, Tulsa Housing Authority, YMCA of Greater Tulsa, and Family and Children's Services of Tulsa. The goal is to increase student interest and attitudes about science, technology, engineering, and math (STEM). The Accessible Discovery program provides a museum visit, state content standard aligned museum class, and outreach program free of charge for qualifying schools and groups. The schools must apply for the program and be chosen for one of the limited number of spaces each year. The only criteria for application are that the school is in the Tulsa Public School District and classified as Title I, meaning the school serves a majority of poverty level families and at least 90% of its students are on free or reduced lunch.

The museum visit and class portion of the program consists of a standard school field trip. Students are able to freely explore the museum halls with their classmates including the Main Hall, Feature Hall, and Maker-Space. After visiting the museum exhibits, they move to the classroom for a museum educator instructed class of their choosing. The school teachers are able to choose any state content standard aligned class they prefer for their experience. The outreach portion of the program can be scheduled at the schools' convenience either before or after their museum visit. During the outreach, museum educators go to the school site to present a specific lesson and activity to the students. This three-pronged approach is meant to increase learning and interest in STEM concepts by presenting the materials in different ways, multiple times.

METHODOLOGY

SAMPLE SELECTION

For the purpose of this evaluation, Discovery Lab chose two grade levels from two eligible schools to participate in pre and post assessments. Schools were selected by determining which schools had participated only once before. For their participation in this evaluation, they were given the incentive of being automatically selected for the Accessible Discovery program the following year. From the selected schools, 99 pre-assessments were completed and 64 post-assessments were completed.

RESEARCH QUESTIONS

The overarching research questions for this evaluation revolve around the impact the Accessible Discovery program has on the student participants' attitudes and interests about STEM learning and STEM careers. The list of overarching research questions is found below.

Table 1: Overarching Research Questions
1. How does the Accessible Discovery program affect student attitudes about STEM?
2. How does the Accessible Discovery program affect student attitudes about STEM careers?
3. What type of STEM environment do the schools already provide?

SURVEY INSTRUMENTS

Before beginning the evaluation, I first developed survey instruments for pre and post assessments of student attitudes toward STEM learning and STEM careers. Both the pre and post assessments were identical except one section added to the end of the post assessment. The assessments include simple statements to which students respond on a Likert scale. The scale contains four options ranging from "strongly disagree" to "strongly agree". Sample statements

include: “I get excited about STEM”, “I like to see how things are made”, “I like to make things”, and “I would like to have a STEM job in the future”. They were also asked to rate their level of curiousness about science, technology, engineering, and math individually on a four option Likert scale ranging from “not curious at all” to “very curious”.

Teachers were asked to complete a survey relating to the STEM environment in their school, STEM activity in their classroom, and self-efficacy in teaching STEM subjects. This included Likert scale questions ranging “never” to “5 or more” for STEM programs, enrichment, and field trips, “never” to “often” for STEM activity in the classroom, and “strongly disagree” to “strongly agree” for self-efficacy.

Survey links for the pre and post-assessments were emailed to the classroom teachers, and the teachers administered them to their students on computers. One classroom teacher chose not to administer by computer. Instead, they were emailed a copy of the pre and post-assessment to print and administer to students. The entire teacher survey, student pre-assessment, and student post-assessment can be found in Appendix A.

DATA ANALYSIS

This report uses teacher survey, student pre-assessment, and post-assessment survey responses a repeated measures design to determine change in student attitudes and feelings towards STEM after experiencing the Accessible Discovery program. Teacher survey responses were also used to account for extraneous variables. Data analysis of the survey results was conducted by using data exploration to determine the aggregated results of the surveys. Of the 99 pre-assessments and 64 post-assessments, 41 students were able to be matched and analyzed.

LIMITATIONS

There are limitations to this evaluation involving sample sizing and research constraints. I was not able to have all students to take both the pre and post-assessments, therefore; the sample size used for analysis is limited due on the number of students who accurately completed both assessments with valid data. Some students entered inaccurate responses which rendered their sample inapplicable for inclusion in the analysis. Also, some students completed the pre-assessment but not the post-assessment, so the sample size used for analysis was also limited in this way. Additionally, paper copies of the assessments were given to one classroom teacher who did not want to use computers for administration, and we were unable to retrieve their paper copies for inclusion in the analysis. Research constraints limited the ability to control when and how the students took their assessments. Some students took the post-assessment immediately after their Accessible Discovery Visit, and others did not take the post-assessment later.

FINDINGS AND ANALYSIS

INTRODUCTION

This section highlights the findings and analysis based on the pre- and post-assessment data exploration. Each survey question was broken down into aggregated tables to show overall counts and percentages of the pre-assessments and post-assessments for the 41 matched assessments. From the tables, the Likert scale was grouped into categories of “positive” and “negative”. The “positive” category includes “strongly agree” and “agree or “very curious” and “somewhat curious”, depending on the question. The “negative” category includes “strongly disagree” and “disagree” or “not at all curious” and “not very curious”, depending on the question. These groupings make it simpler to visualize the overall positive or negative affect on the students’ affective outcomes.

After aggregation and categorization of the results, the percent difference in pre-assessment and post-assessment results and the percent change from pre-assessment to post-assessment was calculated. The uncategorized raw data is found in Appendix B.

STUDENT SURVEYS

Demographics

The first section of the student survey pertains to demographics of the student including their school, gender, grade level, and language. From the demographics of the 41 matched assessments, 46% were male, 54% were female, and all students were in the 4th grade.

The key question in this section pertains to language. This question was included to determine the percent of underrepresented students that benefit from the Accessible Discovery program. While there are many factors that constitute an underrepresented population, "language spoken at home" is a simple indicator that a student will be able to answer on their own.

For the question "I speak a language OTHER than English at home", 63% of students responded "yes", indicating that they DO speak a language other than English at home, 34% responded "no", indicating that they do not speak a language other than English at home, and 3% chose "prefer not to answer". These results are displayed in Figure 1.

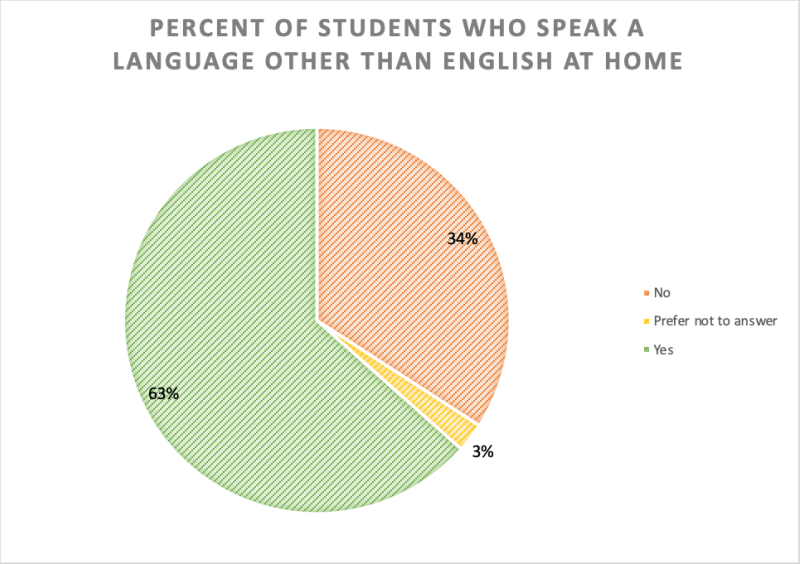


Figure 1: I Speak a Language OTHER Than English at Home

Q1: I Get Excited About STEM

The first question relating to student STEM feelings asks students if they "get excited about STEM". While post-assessment results decreased in the category of "strongly agree", the category of "agree" increased. "Disagree" and "strongly disagree" also decreased. Overall, 88% of students on the pre-assessment survey responded positively with "agree" or "strongly agree" while only 12% responded negatively with "disagree" or "strongly disagree". After experiencing the Accessible Discovery program, student excitement about STEM was 93% positive. This is a 5% increase in excitement about STEM. Figure 2 shows a graph of these results.

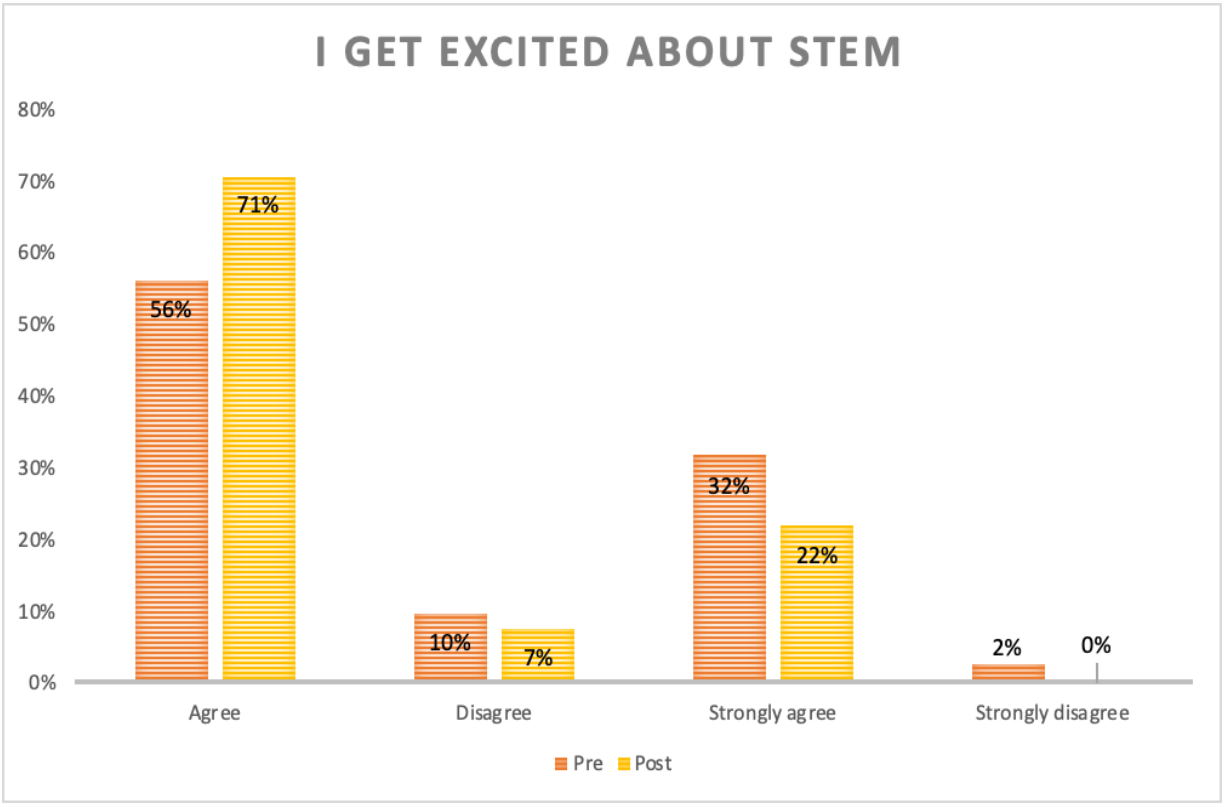


Figure 2: I Get Excited About STEM

Q2: I Like to Participate in STEM Projects

Figure 3 shows the breakdown of student responses to the question of whether they like to participate in STEM projects. Similarly to question one, “strongly agree” decreased, “agree” increased”, and negative reactions decreased. Overall, pre-assessments showed 85% positive reactions to STEM project participation and 15% negative reactions. Post-assessment results show improvement in this category with 90% of students responding positively and only 10% responding negatively. Positive reactions were dominant and increased by 5% overall.

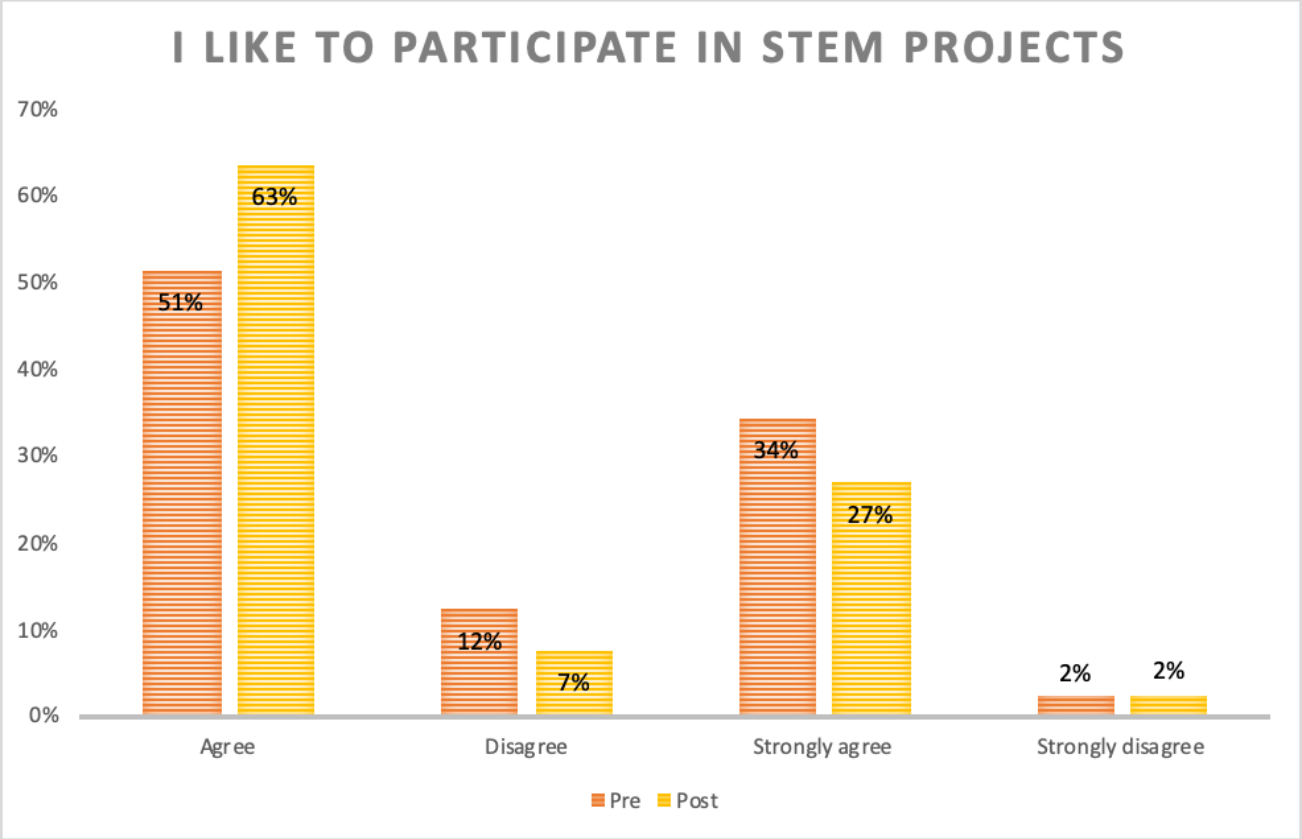


Figure 3: I Like to Participate in STEM Projects

Q3: I Want to Understand STEM

Reactions to wanting to understand STEM surprisingly did not support the intended results. Overall, this question showed a strong increase in negative feelings toward understanding STEM and a slight decrease in positive feelings. Overall positive feelings toward understanding STEM went from 93% in the pre-assessment to 88% in the post-assessment. Negative feelings toward understanding STEM went from 8% in the pre-assessment to 13% in the post-assessment. While the majority of the results were positive, the 5% shift from positive to negative was not expected. The detailed graph depicting the shifts are shown in Figure 4.

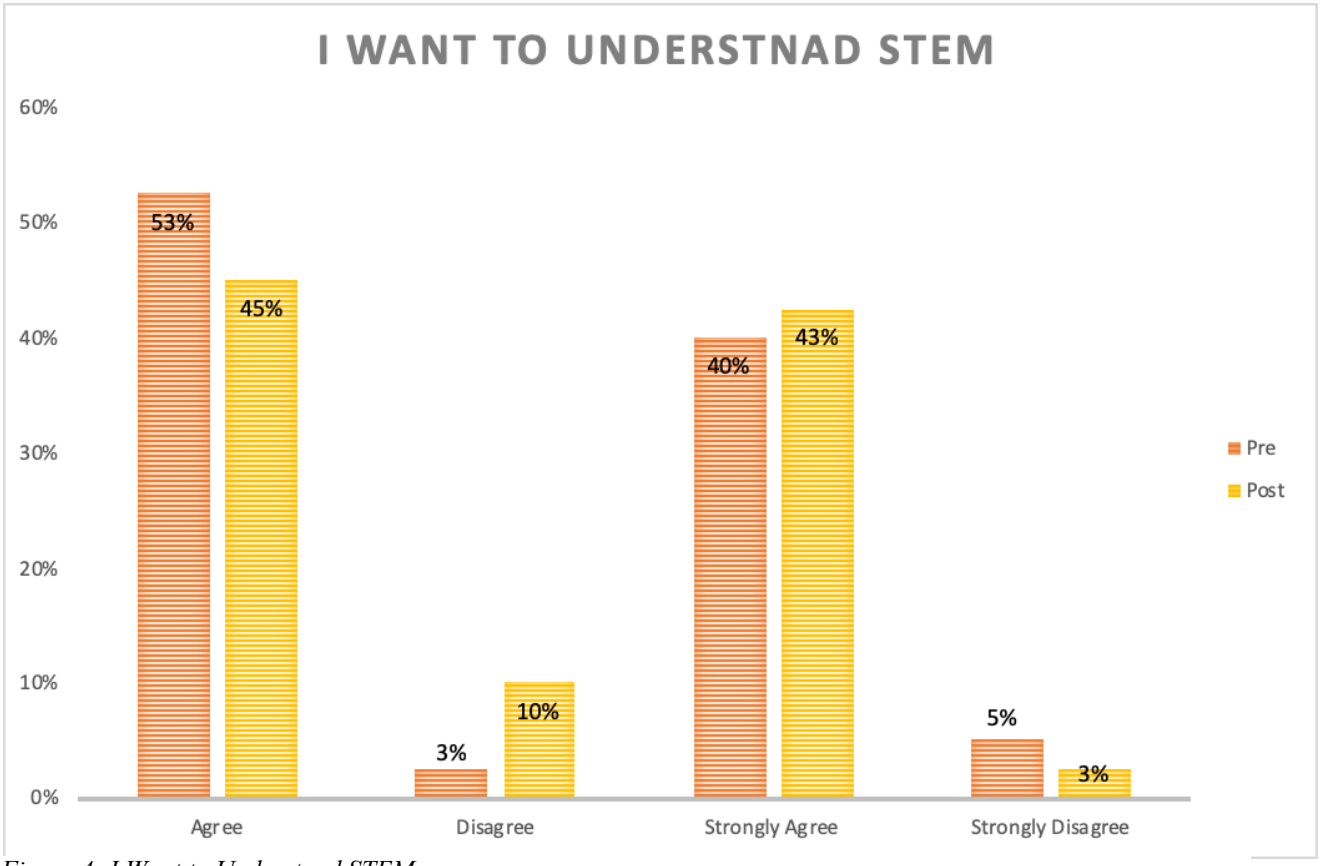


Figure 4: I Want to Understand STEM

Q4: I Like to See How Things Are Made

The fourth question pertaining to STEM feelings asks students if they like to see how things are made. The overall results of the pre and post- assessment are both positive. The pre-assessment shows 93% positive reactions to liking to see how things are made. The post-assessment shows 95% of students reacting positively. Negative reactions decreased from 7% in the pre-assessment to 5% in the post-assessment. Individually, both "agree" and "strongly agree" increased or stayed the same. "Disagree" and "strongly disagree" decreased or stayed the same. The detailed results are shown in figure 5.

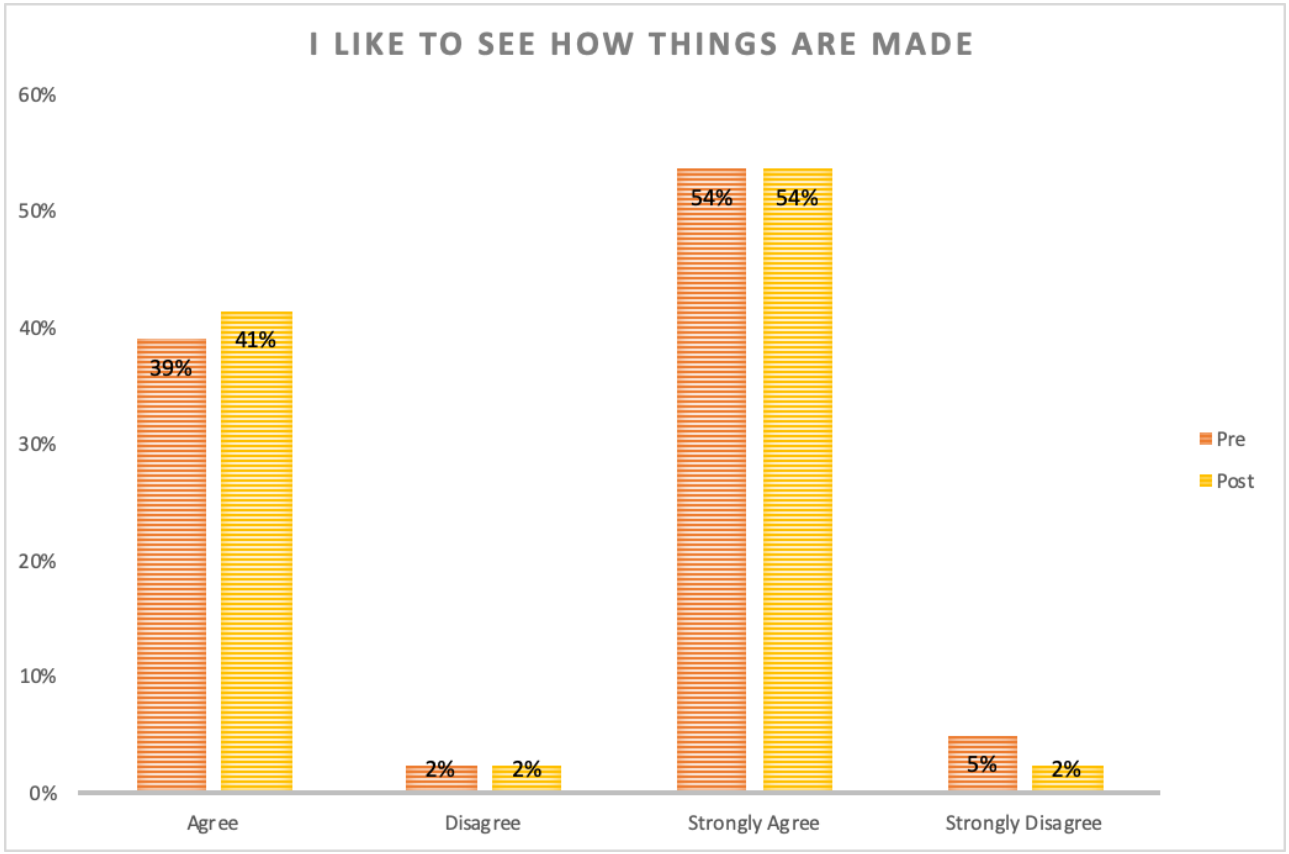


Figure 5: I Like to See How Things Are Made

Q5: I Get Excited to Learn About New Discoveries

Question five asks students if they get excited to learn about new discoveries. Overall, the results for this question are positive. Pre-assessment shows that 85% of students had positive feelings about learning about new discoveries and only 15% had negative feelings. This positive reaction increased by 5% on the post-assessment to 90% of students feeling positive about new discoveries and only 10% feeling negatively. The detailed results are shown in Figure 6.

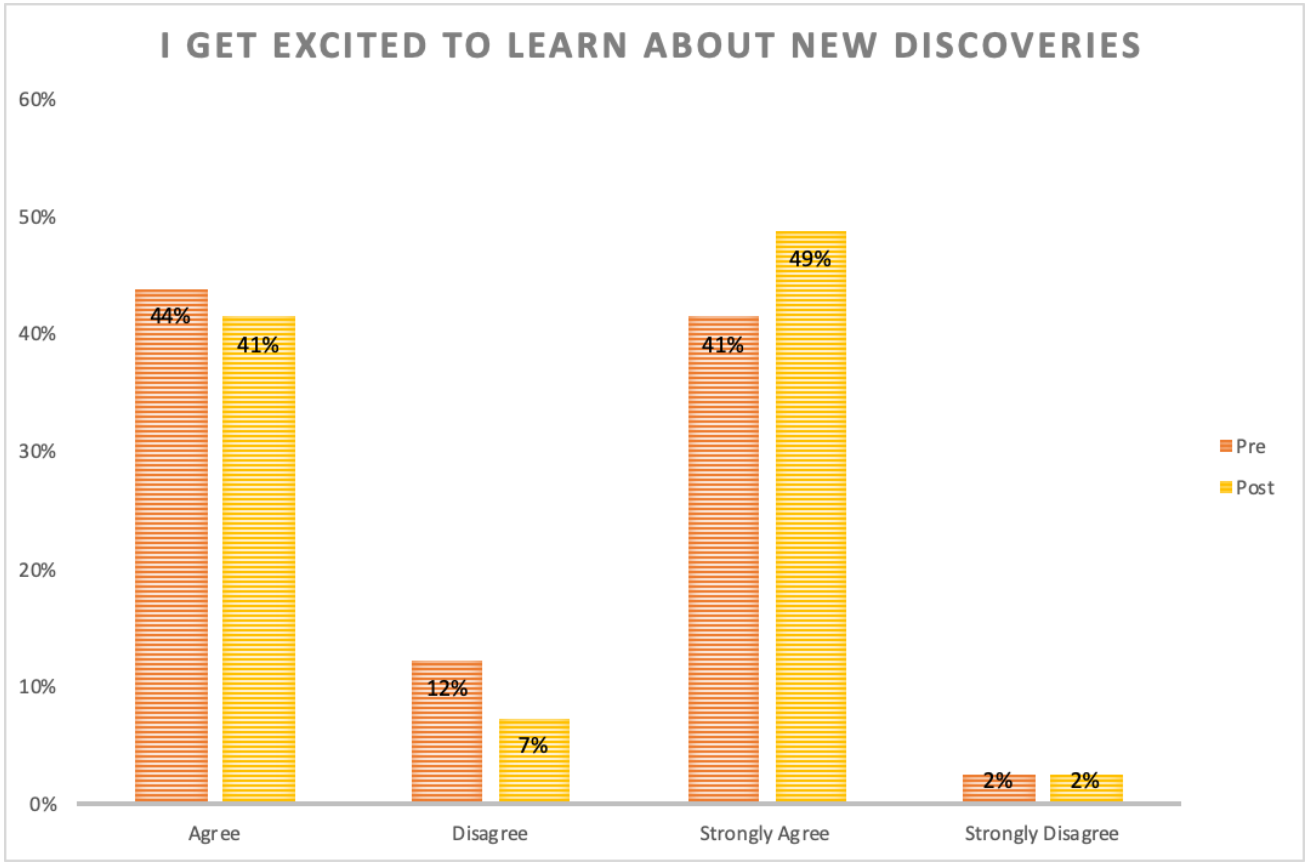


Figure 6: I Get Excited to Learn About New Discoveries

Q6: I Am Interested in STEM Inventions

Figure 7 shows the results of question six. Question six asks students to rate their feelings on interest in STEM inventions. The overall results are positive, however, there was an unexpected decrease in positive feelings on the post-assessment. Pre-assessment results show 90% of students reacting positively to interest in STEM inventions and 10% reacting negatively. On the post-assessment the positive reactions decrease to 85%, and negative reaction increased to 15%, a difference of 5%. While both the pre and post-assessment show the majority of students have positive feelings, we expected the percent to increase after the program, not decrease.

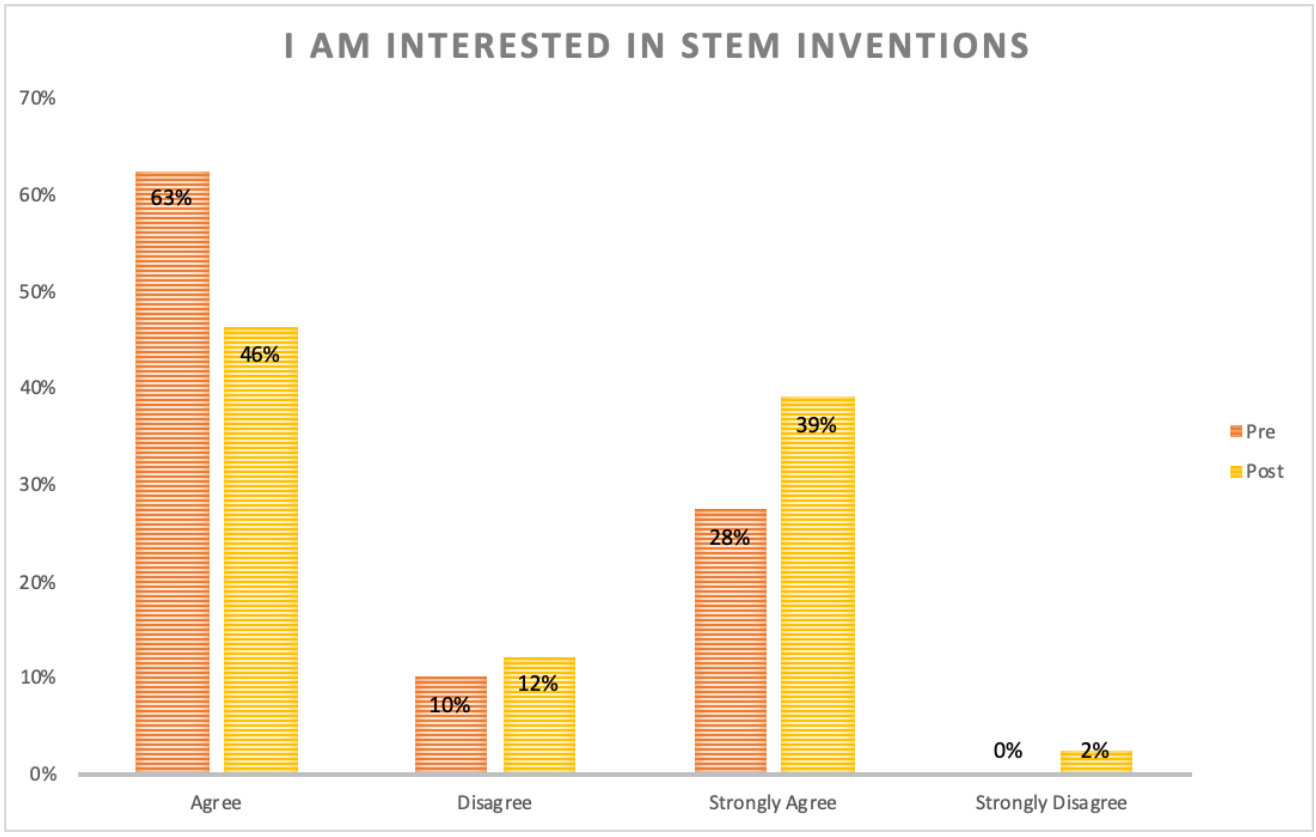


Figure 7: I am Interested in STEM Inventions

Q7: I Would Like to Have a STEM Job in the Future

Question seven is the single question that relates to research question number two: "How does the Accessible Discovery program affect student attitudes about STEM careers?". Of all the survey questions, the results of question seven are the most surprising. Overall the positive feelings about having a STEM job in the future decreased by 22% between the pre and post-assessment. Before the Accessible Discovery program, student feelings were only slightly more positive than they were negative. 54% of students reacted positively to having a STEM job in the future, and 46% reacted negatively. However, the post-assessment results changed drastically. On the post-assessment, only 32% of students had positive feelings about having a STEM job in the future while 68% expressed negative feelings. This is the only question for which positive feelings decreased and negative feelings increased across all categories. The detailed results of this question are shown in Figure 8.

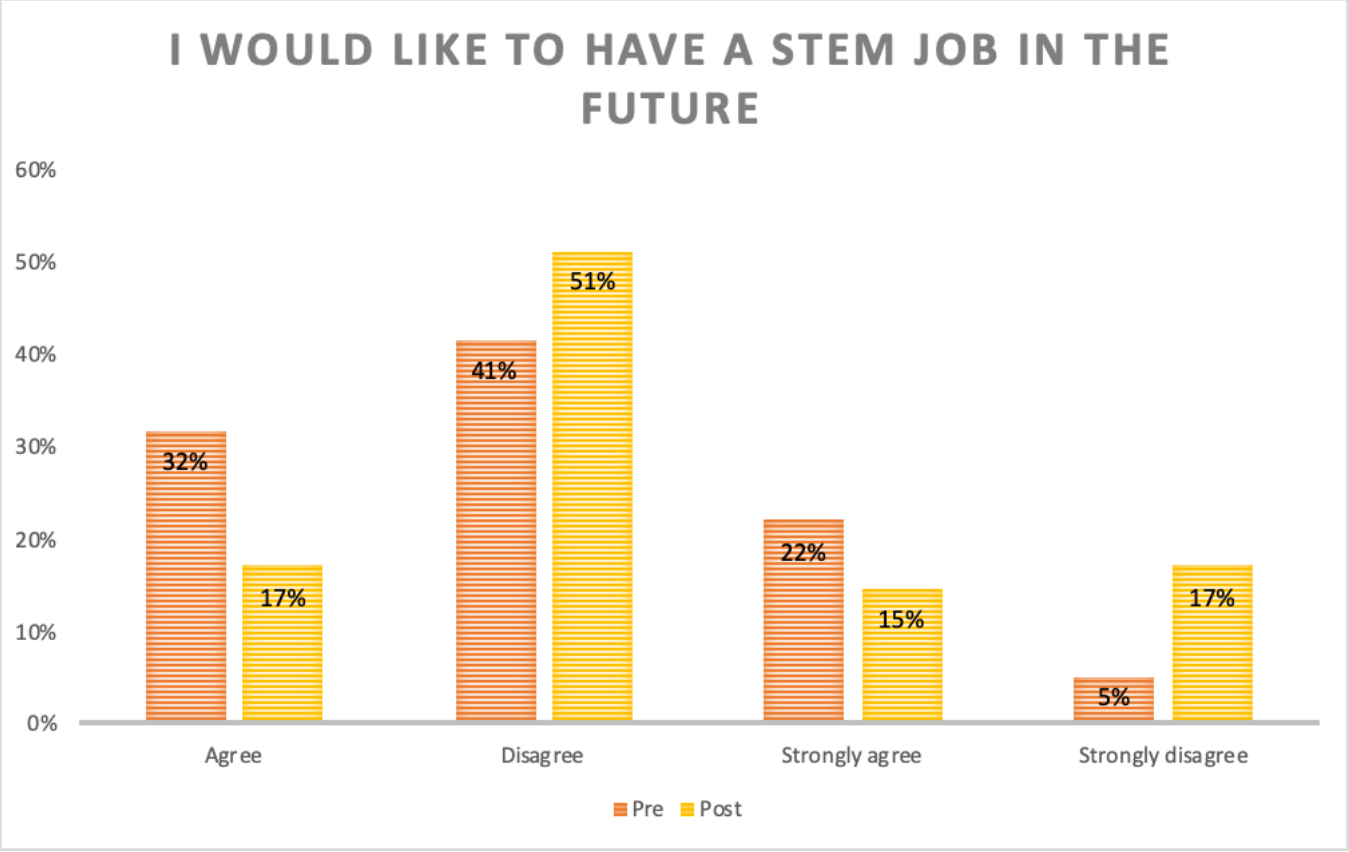


Figure 8: I Would Like to Have a STEM Job in the Future

Q8: I Enjoy Playing Games That Teach Me About STEM

Students were asked about their feelings regarding playing STEM games, and the results were unexpected. Altogether, more students felt positively about playing games that teach about STEM than negatively. However, overall, from pre-assessment to post-assessment there was a 10% decrease in positive feelings and 10% increase in negative feelings. Pre-assessment results showed 88% of students stating positive feelings and 12% stating negative feelings. Post-assessment results showed 78% positive and 22% negative. Individually, "agree" increased from 51% to 54% and "strongly agree" decreased from 37% to 24%. "Strongly disagree stayed the same, at 2%, and "disagree increased from 10% to 20%. The most drastic change was in the "disagree" category. These results are shown in Figure 9.

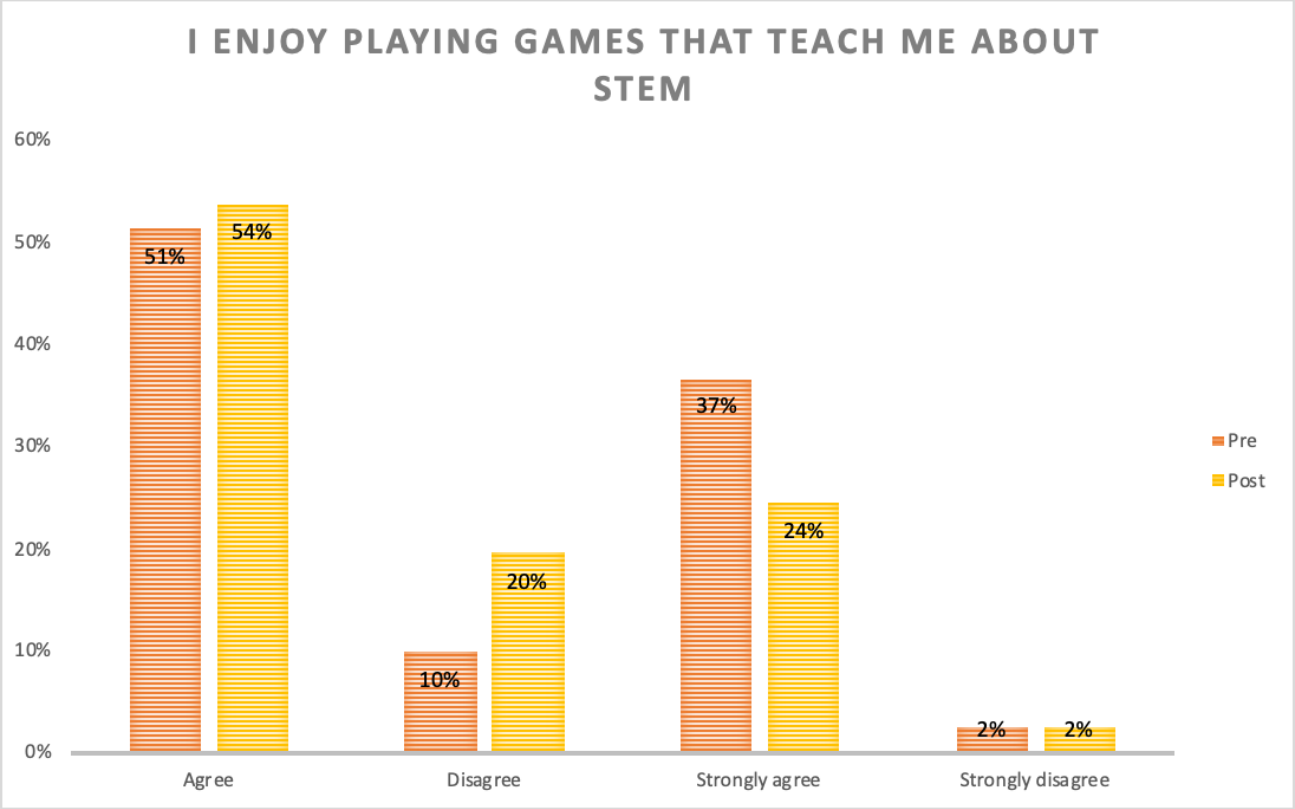


Figure 9: I Enjoy Playing Games That Teach Me About STEM

Q9: I Like to Make Things

Question nine relates to how much the students like to make things. The results of this question also show a pre-assessment to post-assessment decrease in positive feelings. Individually, "strongly agree" increased from 49% to 59%, "agree" decreased from 44% to 27%. "Disagree" increased from 2% to 10%, and "strongly disagree" stayed the same at 5%. Overall the results show that the majority of students feel positively about making things, but there was a decrease in those positive feelings after the program. On the pre-assessment 93% of students felt positively about making things and 7% felt negatively. On the post-assessment, 85% of students felt positively and 15% felt negatively. This is a difference of 7%. The detailed graph is shown in Figure 10.

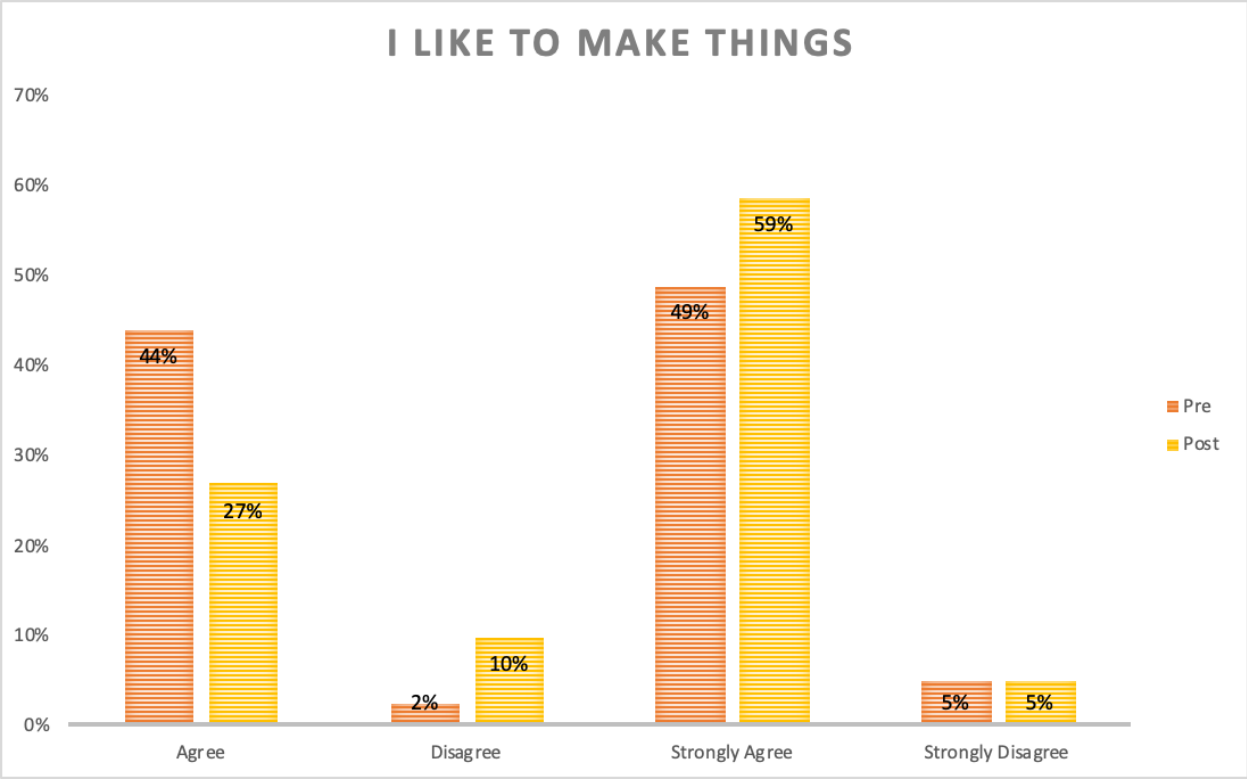


Figure 10: I Like to Make Things

Q10 – Q13: STEM Curiosity

Questions ten through thirteen address student curiosity about each STEM subject: Science, Technology, Engineering, and Math. Q10 asks about science, Q11 asks about technology, Q12 asks about engineering, and Q13 asks about math. For science and technology there was no change from pre to post-assessment. For science, 85% of students selected somewhat or very curious (positive) and 15% selected not at all or not very curious (negative). For technology, 90% selected somewhat or very curious (positive) and 10% selected not at all or not very curious (negative).

Math was positive overall as well with 83% reacting positively and 17% reacting negatively on the pre-assessment. On the post-assessment, positive feelings increased to 85%, and negative feelings decreased to 15%. This is an overall positive change of 2%.

Engineering, however, does not follow the same pattern as the other three. Curiosity is positive overall, but it decreased on the post-assessment. The pre-assessment showed 88% of students curious about engineering and 12% not curious. On the post-assessment, positive reactions decreased to 76% and negative reactions increased to 24%. There was an overall decrease in positive feelings of 12%. Figures 11, 12, 13, and 14 show the curiosity percentages for pre and post-assessments.

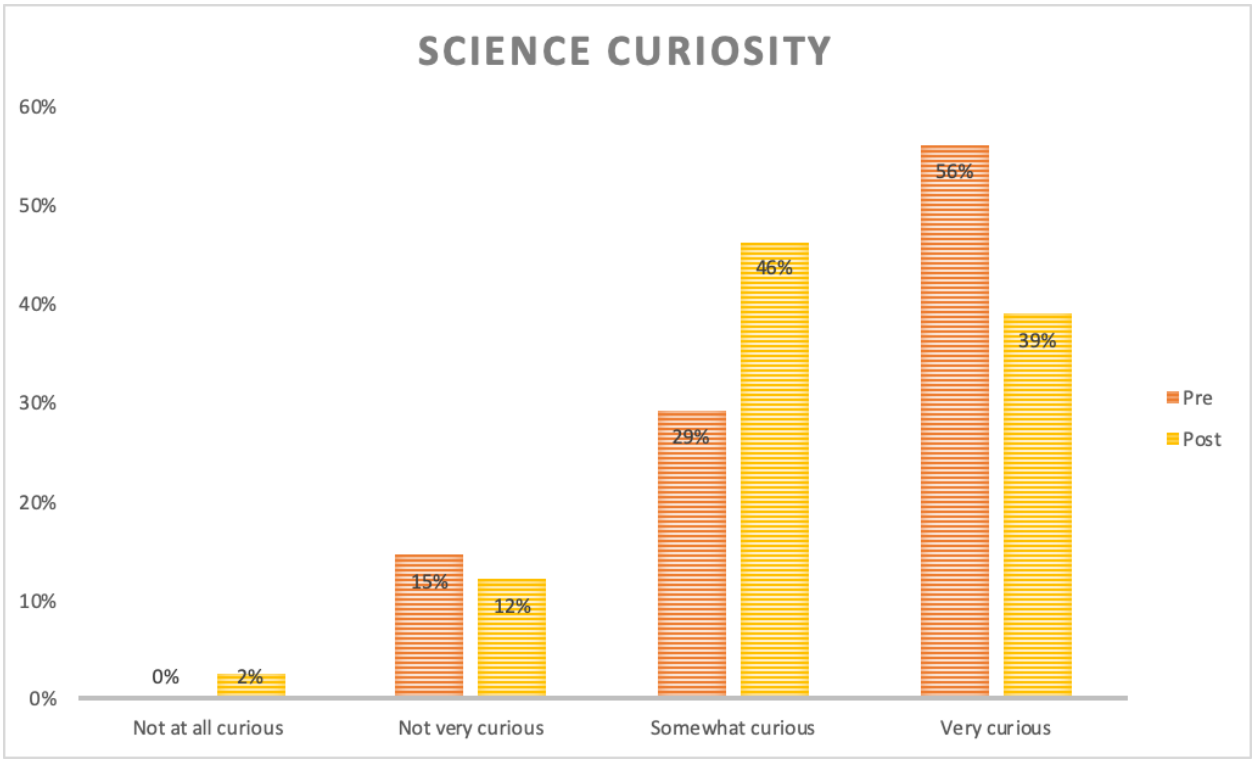


Figure 11: Science Curiosity

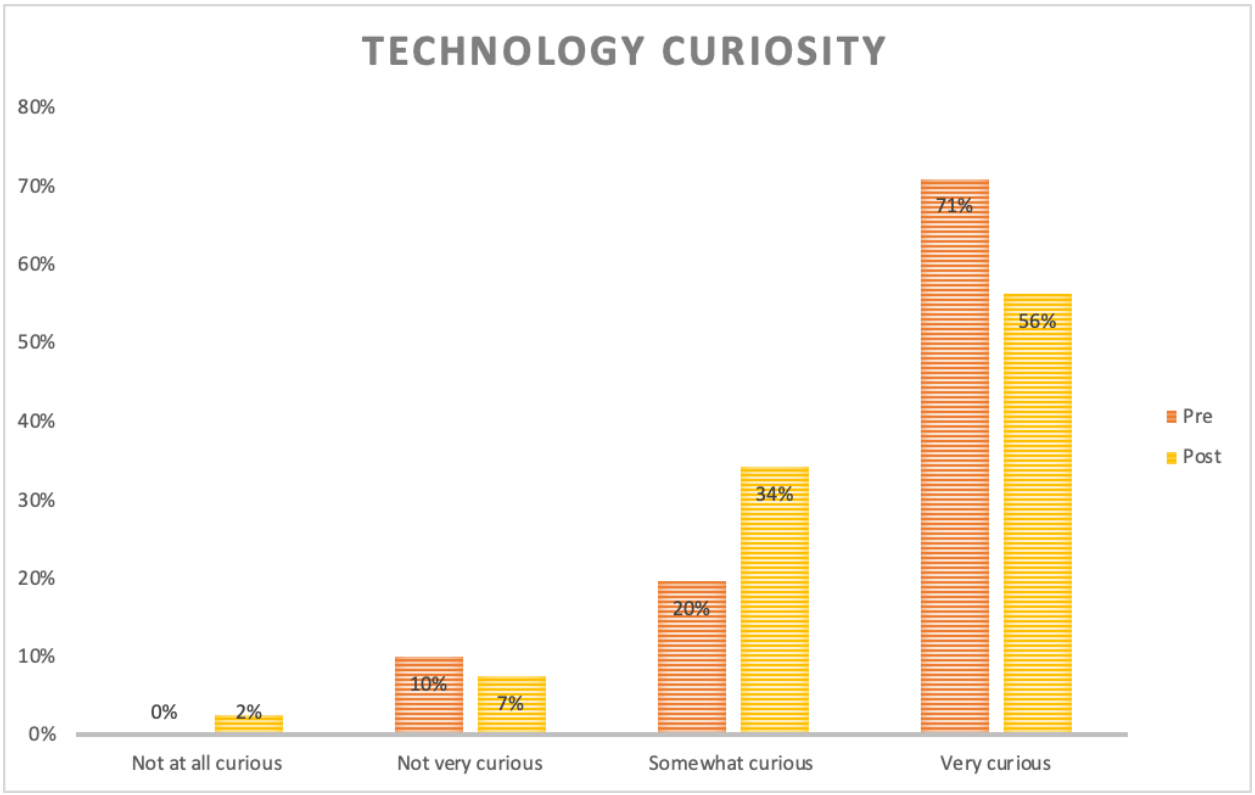


Figure 12: Technology Curiosity

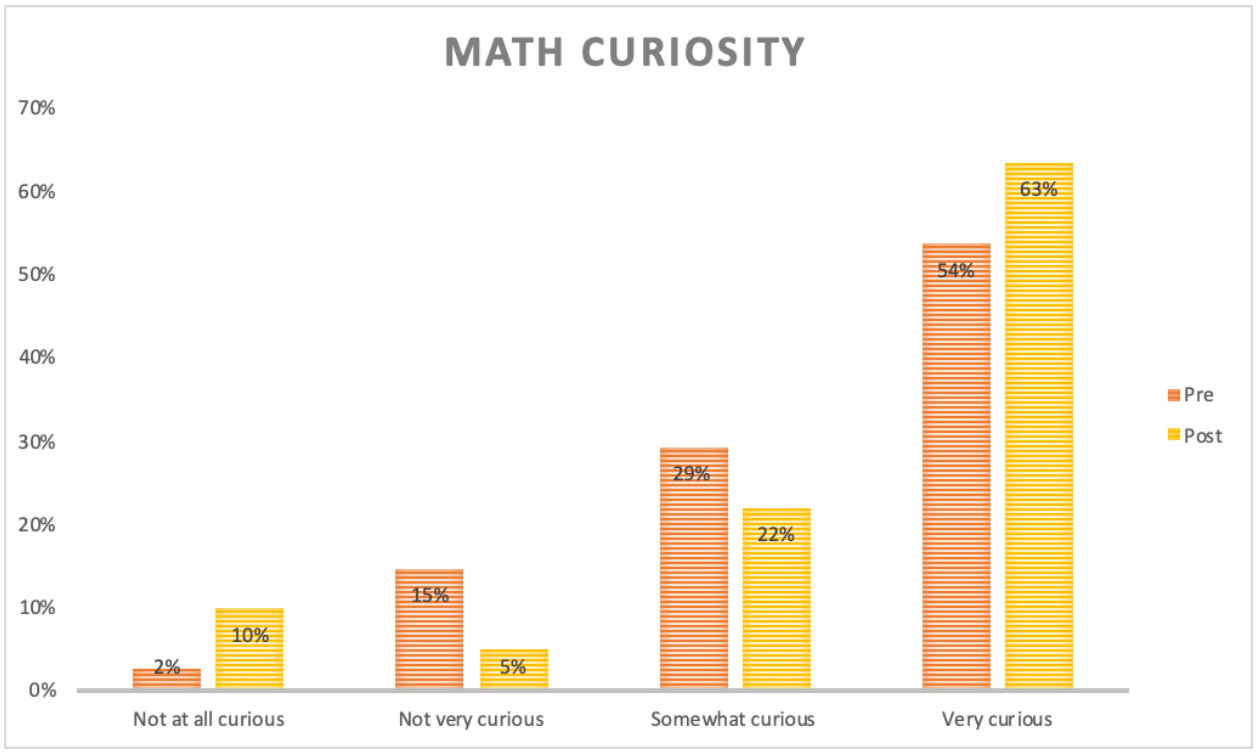


Figure 13: Math Curiosity

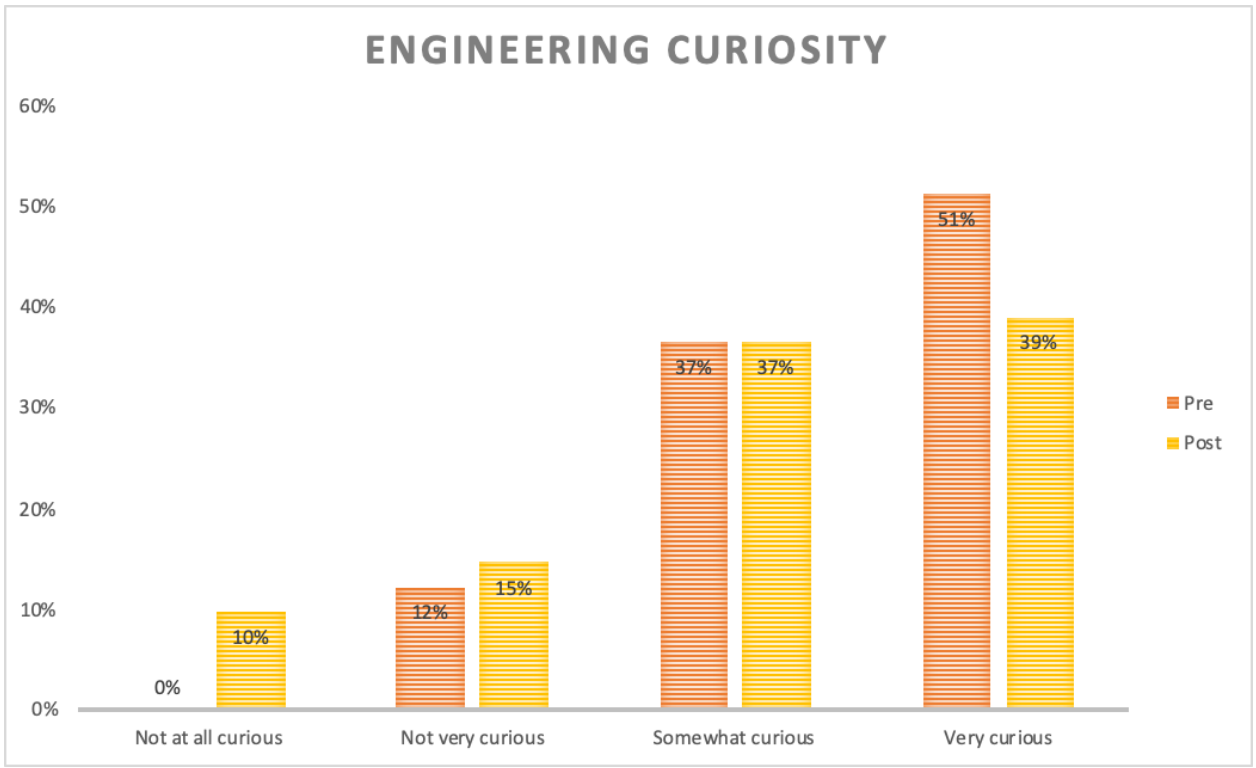


Figure 14: Engineering Curiosity

TEACHER SURVEYS

Teachers were asked to complete a survey relating to the STEM environment in their school, STEM activity in their classroom, and self-efficacy in teaching STEM subjects. This was used to account for extraneous variables from the school environment that may affect student feelings about STEM. It also helps to answer research question number three: "What type of STEM environment do the schools already provide?"

The teacher's responded that none of the schools provide a STEM-related club for students. All responses showed that the schools provide STEM events of programs outside of school hours 0-2 times per school year. They responded that they participate in 1-2 STEM related field trips per year. This includes the Accessible Discovery field trip. Teachers stated that the school has in-school STEM-related enrichment 1-2 times per year. This includes the Accessible Discovery outreach.

The teachers were also asked about STEM activity in their classrooms. They were asked to respond to statements about STEM-related activity in their classroom on a Likert scale of "Never" to "Daily". All teachers stated that students use computers daily. Other areas of STEM activity were lacking. When asked if students learn about a variety of STEM careers, 80% selected "not very often" (2), and 20% selected "sometimes" (3). For the rest of the questions regarding STEM activity in the classroom, the answers ranged from "not very often" (2) to "often" (4) with the exception of the question asking about group collaboration. 20% stated that they collaborate in groups "daily" (5), 60% stated "often" (4), and 20% stated "sometimes" (3). Teacher self-efficacy in science, technology, engineering, and math was also asked in the teacher survey. The only subject that teachers did not feel confident teaching was engineering. Teachers were given the option to provide additional comments, and only one teacher responded. The

teacher expressed: *"I just need more time to be able to do more things. There are so many requirements put on us to complete and be tested on."*

DISCUSSION

Based on the data collected, it is clear that the overwhelming majority of the students who participated in the Accessible Discovery program have positive attitudes and feelings towards STEM learning, STEM exploration, and STEM curiosity. Before participating in the program, student attitudes were positive. This could be because of learning environments at school and attitudes of their teachers, influence from parents, or simply childhood inquisitiveness.

As we look back at the overarching research questions, located in Table 2, that guided this study, we can infer the effect the Accessible Discovery program has had on the students. We can also find deficits in our outcomes and determine how to improve.

Table 2: Overarching Research Questions
1. How does the Accessible Discovery program affect student attitudes about STEM?
2. How does the Accessible Discovery program affect student attitudes about STEM careers?
3. What type of STEM environment do the schools already provide?

Research question one relates to the STEM attitudes and feelings of the students before and after the program. Questions one - six and eight - thirteen provide data that helps to answer this question. Of the twelve questions, five showed positive effect on student attitudes, five showed negative effect on student attitudes, and two showed no effect. While this does not seem to be the results that were anticipated, it is important to note that even though there was negative

or no effect on over half of the questions, the percentage of students overall showing positive reactions was overwhelmingly high.

These results inform Discovery Lab of exactly which areas of focus may be deficient in the program. Including activities and information in the program to improve student feelings about making things, understanding STEM, and playing STEM games can be a way to target some of the deficits. Curiosity in engineering showed one of the largest deficits. Increasing awareness and activity in engineering can help to improve student curiosity and understanding.

Question seven is the only question that provides data for research question two. Of all the results, question seven, "I would like to have a STEM job in the future", showed the largest shift from pre to post-assessment. It is also the most negative outcome of all the questions. Results shifted from only slightly positive on the pre-assessment to heavily negative on the post assessment. This shows Discovery Lab a direct area where improvement can be made. By focusing more on reasonable and attainable STEM careers during the Accessible Discovery program students will become aware of the variety and accessibility of these careers. If they are made aware of the array of STEM career opportunities, they may be more likely to desire to have a STEM job in the future.

The final research question relates to data that was collected from the teacher surveys. The STEM environment that the school provides can have a great impact on student feelings toward STEM, and it is a factor in overall student outcomes. The Accessible Discovery program in just a small piece that can affect student STEM feelings, so understanding the other variables that the students are experiencing can help Discovery Lab tailor the program to support the students from where they are.

It is seen from these results that the schools do not provide a rich STEM environment in this capacity. They provide very few STEM field trips, STEM enrichment, or socialization in a STEM environment for students. Most of the enrichment and opportunity actually comes from the Discovery Lab program itself. Additionally, within the classroom, students are not being exposed to STEM careers, concepts, or process skill learning opportunities often. This contributes to less motivation to engage in STEM and less excitement about the subjects of discovery and innovation.

These results help to further understand the students' reactions to STEM careers on the student survey based on these extraneous variables. This is clearly an area that needs to be enhanced both in the school environment and within the Accessible Discovery Program. Unfortunately, with the constraints on public schools and teachers, enhanced STEM enrichment is difficult to incorporate into the environment.

CONCLUSION

Overall, the data collected through the student surveys show that the majority of students participating in Discovery Lab's Accessible Discovery program are excited and curious about STEM learning and activities. Teacher surveys infer that curricular and testing constraints lead to a lackluster STEM environment at the schools contributing to lower engagement and less positive student reaction to STEM. Although the student responses are overwhelmingly positive in most areas, it is important to also note the deficiencies discovered through the data in order to improve and continue to grow the Accessible Discovery program.

APPENDIX

APPENDIX A: SURVEY INSTRUMENTS

Section 1: Student Pre-Assessment Survey

Accessible Discovery Survey (Pre)

1. **School Name:**

_____

2. **Student ID Number:**

_____

3. **I am a:**
Mark only one oval.

- ◯ Boy
- ◯ Girl
- ◯ Other
- ◯ Prefer not to answer

4. **This school year (2018-2019), I am in grade:**
Mark only one oval.

- ◯ 1st
- ◯ 2nd
- ◯ 3rd
- ◯ 4th
- ◯ 5th
- ◯ 6th

5. **I speak a language OTHER than English at home:**
Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ Prefer not to answer

How do you feel about STEM?

STEM stands for Science, Technology, Engineering, and Math.
Please pick the bubble that matches how you feel about STEM.

6. **I get excited about STEM.**
Mark only one oval.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

7. **I like to participate in STEM projects.**
Mark only one oval.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

8. **I want to understand STEM.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

9. **I like to see how things are made.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

10. **I get excited to learn about new discoveries.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

11. **I am interested in STEM inventions.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

12. **I would like to have a STEM job in the future.**
Mark only one oval.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

13. **I enjoy playing games that teach me about STEM.**
Mark only one oval.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

14. **I like to make things.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

How curious are you about these topics?

Please pick the bubble that matches how curious you are about these things.

15. **Science**
Mark only one oval.

- Not at all curious
- Not very curious
- Somewhat curious
- Very curious

16. **Technology**
Mark only one oval.

- Not at all curious
- Not very curious
- Somewhat curious
- Very curious

17. **Engineering**

Mark only one oval.

- Not at all curious
- Not very curious
- Somewhat curious
- Very curious

18. **Math**

Mark only one oval.

- Not at all curious
- Not very curious
- Somewhat curious
- Very curious

Section 2: Student Post-Assessment Survey

Student Information

1. **School Name:**
   Mark only one oval.
   - ◯ Hamilton
   - ◯ Eugene Field

2. **Student ID Number:**

   _____

3. **I am a:**
   Mark only one oval.
   - ◯ Boy
   - ◯ Girl
   - ◯ Other
   - ◯ Prefer not to answer

4. **This school year (2018-2019), I am in grade:**
   Mark only one oval.
   - ◯ 3rd
   - ◯ 4th

5. **I speak a language OTHER than English at home:**
   Mark only one oval.
   - ◯ Yes
   - ◯ No
   - ◯ Prefer not to answer

How do you feel about STEM?

Please pick the bubble that matches how you feel about STEM.

6. **I get excited about STEM.**
   Mark only one oval.
   - ◯ Strongly disagree
   - ◯ Disagree
   - ◯ Agree
   - ◯ Strongly agree

7. **I like to participate in STEM projects.**
Mark only one oval.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

8. **I want to understand STEM.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

9. **I like to see how things are made.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

10. **I get excited to learn about new discoveries.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

11. **I am interested in STEM inventions.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

12. **I would like to have a STEM job in the future.**
Mark only one oval.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

13. **I enjoy playing games that teach me about STEM.**
Mark only one oval.

- Strongly disagree
- Disagree
- Agree
- Strongly agree

14. **I like to make things.**
Mark only one oval.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

How curious are you about these topics?

Please pick the bubble that matches how curious you are about these things.

15. **Science**
Mark only one oval.

- Not at all curious
- Not very curious
- Somewhat curious
- Very curious

16. **Technology**
Mark only one oval.

- Not at all curious
- Not very curious
- Somewhat curious
- Very curious

17. **Engineering**
Mark only one oval.

- Not at all curious
- Not very curious
- Somewhat curious
- Very curious

18. **Math**
Mark only one oval.

- ◯ Not at all curious
- ◯ Not very curious
- ◯ Somewhat curious
- ◯ Very curious

How did you feel about STEM before this program?

Please pick the bubble that matches how you felt before this program.

19. **Before joining this program, I was interested in STEM and STEM-related things.**
Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly agree

20. **Before joining this program, I participated in STEM activities outside of school.**
Mark only one oval.

- ◯ Strongly disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly agree

Section 3: Teacher Survey

Teacher Survey on School STEM Culture

Thank you for taking the time to complete this survey. Your answers will be used to help determine the impact of Discovery Lab's Accessible Discovery program and to help improve Discovery Lab's educational program opportunities in the future.

* Required

1. **At which school do you teach?** *
   Mark only one oval.
   - ◯ Hamilton Elementary
   - ◯ Eugene Field Elementary

2. **What grade level do you teach?** *
   Check all that apply.
   - ☐ 3rd
   - ☐ 4th
   - ☐ Other: _____

3. **Does your school have a STEM-related club for students?** *
   Mark only one oval.
   - ◯ Yes
   - ◯ No

4. **How often does your school provide STEM events or programs for students and families outside of school hours?**
   Mark only one oval.
   - ◯ 5 or more times per year
   - ◯ 3-4 times per year
   - ◯ 1-2 times per year
   - ◯ Never

5. **How many STEM-related field trips does your grade level take per year?**
   Mark only one oval.
   - ◯ 5 or more
   - ◯ 3-4
   - ◯ 1-2
   - ◯ None

6. **How many in-school STEM-related enrichment opportunities do you schedule for your grade level per year? (examples: guest speakers, assemblies, demonstrations, skype sessions etc.)**
Mark only one oval.

- ◯ 5 or more
- ◯ 3-4
- ◯ 1-2

STEM Activity in the Classroom

Please respond to the following questions regarding your students' STEM activities during classroom time.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Daily

During classroom time, how often do your students:

7. **Use technology such as tablets or computers.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

8. **Learn about a variety of STEM careers.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

9. **Learn about new discoveries.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

10. **Use critical thinking skills to develop new concepts or inventions.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

11. **Build or make things.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

12. **Make predictions that can be tested.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

13. **Make observations or measurements using scientific tools (calculators, rulers, scales, microscope, computer/tablet software, etc.).**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

14. **Complete activities in a real-world context.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

15. **Collaborate in groups.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

16. **Share their work, projects, or findings publicly to enhance learning for their peers.**
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Daily

STEM Teacher Self-Efficacy & Beliefs

Please respond to the following statements regarding your own beliefs about and feelings of efficacy in STEM.

1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree

17. **I feel confident in teaching:**
Mark only one oval per row.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Science				
Technology				
Engineering				
Math				

18. **I think it is important to teach:**
Mark only one oval per row.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Science				
Technology				
Engineering				
Math				

19. **I have the ability to affect a student's feelings about STEM.**
Mark only one oval.

	1	2	3	4	
Strongly Disagree					Strongly Agree

20. **I continually seek out professional development to improve my skills in teaching STEM content.**
Mark only one oval.

	1	2	3	4	
Strongly Disagree					Strongly Agree

Additional Comments

21. **Please share any additional comments about STEM culture in your school or classroom:**

APPENDIX B: RAW SURVEY DATA

Section 1: Student Pre-Assessment Data

Timestamp	School Name:	Student ID Number:	I am a:	This school year (2018-2019), I am in grade:	I speak a language OTHER than English at home:	I get excited about STEM.	I like to participate in STEM projects.	I want to understand STEM.	I like to see how things are made.	I get excited to learn about new discoveries.	I am interested in STEM inventions.	I would like to have a STEM job in the future.	I enjoy playing games that teach me about STEM.	I like to make things.	Science	Technology	Engineering	Math
11/26/2018 14:54:52	Hamilton	641594	Boy	4th	Yes	Disagree	Agree	Agree	Strongly Agree	Agree	Agree	Disagree	Agree	Strongly Agree	Very curious	Very curious	Somewhat curious	Not very curious
11/26/2018 14:55:00	Hamilton	638269	Girl	4th	Yes	Agree	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Disagree	Agree	Strongly Agree	Somewhat curious	Very curious	Not very curious	Very curious
11/26/2018 14:55:21	Hamilton	673214	Boy	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
11/26/2018 14:55:34	Hamilton	638560	Girl	4th	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Strongly Agree	Very curious	Very curious	Somewhat curious	Somewhat curious
11/26/2018 14:55:40	Hamilton	654361	Boy	4th	No	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly disagree	Agree	Agree	Somewhat curious	Somewhat curious	Very curious	Very curious
11/26/2018 14:55:43	Hamilton	642644	Boy	4th	No	Agree	Agree	Agree	Disagree	Disagree	Disagree	Disagree	Disagree	Agree	Not very curious	Not very curious	Not very curious	Very curious
11/26/2018 14:55:52	Hamilton	640862	Boy	4th	Yes	Strongly agree	Disagree	Agree	Agree	Strongly Agree	Agree	Disagree	Strongly agree	Agree	Very curious	Somewhat curious	Somewhat curious	Very curious
11/26/2018 14:56:13	Hamilton	651137	Girl	4th	No	Strongly disagree	Disagree	Agree	Strongly Agree	Strongly Disagree	Disagree	Agree	Strongly agree	Strongly Disagree	Not very curious	Very curious	Very curious	Very curious
11/26/2018 14:56:22	Hamilton	619978	Boy	4th	Prefer not to answer	Agree	Strongly agree	Agree	Strongly Agree	Disagree	Strongly Agree	Agree	Strongly agree	Agree	Somewhat curious	Somewhat curious	Very curious	Very curious
11/26/2018 14:56:25	Hamilton	638240	Boy	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
11/26/2018 14:56:34	Hamilton	634772	Girl	4th	Yes	Agree	Strongly agree	Strongly Agree	Agree	Strongly Agree	Agree	Agree	Disagree	Agree	Very curious	Very curious	Somewhat curious	Very curious
11/26/2018 14:56:54	Hamilton	644684	Boy	4th	No	Disagree	Disagree	Strongly Disagree	Agree	Strongly Disagree	Strongly Agree	Disagree	Disagree	Agree	Somewhat curious	Somewhat curious	Not very curious	Very curious
11/26/2018 14:57:37	Hamilton	657719	Boy	4th	Yes	Agree	Agree	Agree	Agree	Agree	Strongly Agree	Disagree	Agree	Agree	Very curious	Very curious	Very curious	Very curious
11/26/2018 14:57:58	Hamilton	642633	Boy	4th	Yes	Strongly agree	Strongly agree	Agree	Strongly Agree	Agree	Agree	Agree	Agree	Strongly Agree	Somewhat curious	Very curious	Very curious	Somewhat curious
11/26/2018 14:58:14	Hamilton	659372	Boy	4th	No	Disagree	Agree		Agree	Agree		Disagree	Agree	Agree	Not very curious	Very curious	Very curious	Very curious
11/26/2018 14:58:48	Hamilton		Girl	4th	Yes	Disagree	Agree	Agree	Agree	Disagree	Agree	Disagree	Disagree	Agree	Not very curious	Very curious	Somewhat curious	Not at all curious
11/26/2018 14:59:07	Hamilton	642252	Boy	4th	Yes	Agree	Strongly disagree	Strongly Agree	Strongly Disagree	Disagree	Agree	Strongly disagree	Strongly disagree	Strongly Disagree	Not very curious	Not very curious	Very curious	Somewhat curious
11/26/2018 14:59:50	Hamilton	638304	Girl	4th	No	Strongly agree	Agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Disagree	Agree	Agree	Very curious	Very curious	Very curious	Somewhat curious
11/26/2018 15:00:09	Hamilton	649037	Girl	4th	No	Agree	Agree		Strongly Agree	Agree	Agree	Agree	Strongly agree	Strongly Agree	Very curious	Somewhat curious	Very curious	Somewhat curious
11/26/2018 15:01:33	Hamilton	6403894	Boy	4th	No	Strongly agree	Agree	Strongly Agree	Agree	Disagree	Agree	Disagree	Agree	Strongly Agree	Somewhat curious	Somewhat curious	Very curious	Very curious
11/26/2018 15:01:45	Hamilton	662284	Boy	4th	Yes	Agree	Disagree	Agree	Strongly Agree	Agree	Strongly Agree	Disagree	Agree	Agree	Somewhat curious	Not very curious	Somewhat curious	Somewhat curious
11/26/2018 15:08:31	Hamilton	63991	Boy	4th	Prefer not to answer	Agree	Strongly agree	Agree	Strongly Agree	Agree	Agree	Agree	Agree	Agree	Very curious	Very curious	Somewhat curious	Very curious
11/30/2018 9:10:07	Hamilton		Boy	4th	Yes	Strongly disagree	Disagree	Disagree	Agree	Strongly Agree	Strongly Agree	Disagree	Disagree	Agree	Not at all curious	Not at all curious	Not very curious	
11/30/2018 9:10:43	Hamilton	684474	Boy	4th	No	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Very curious	Very curious	Very curious	Not at all curious
11/30/2018 9:12:04	Hamilton	665153	Boy	4th	Yes	Disagree	Strongly agree	Strongly Disagree	Agree	Agree		Agree	Strongly agree	Agree	Very curious	Somewhat curious	Very curious	Somewhat curious
11/30/2018 9:13:13	Hamilton	684474	Boy	4th	No	Agree	Agree	Agree	Agree	Agree	Agree	Strongly disagree	Agree	Agree	Very curious	Very curious	Very curious	Not at all curious
11/30/2018 9:13:35	Hamilton	670447	Boy	4th	No	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Very curious	Very curious	Somewhat curious	Very curious
11/30/2018 9:13:38	Hamilton	642511	Boy	4th	No	Agree	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Strongly agree	Strongly Agree	Very curious	Somewhat curious	Somewhat curious	Somewhat curious
11/30/2018 9:14:38	Hamilton	657782	Boy	4th	Yes	Agree	Strongly disagree	Agree	Strongly Disagree	Agree	Agree	Disagree	Disagree	Disagree	Somewhat curious	Not very curious	Somewhat curious	Somewhat curious
11/30/2018 9:15:32	Hamilton	640506	Girl	4th	No	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Very curious	Very curious	Very curious	Very curious
11/30/2018 9:15:39	Hamilton	639404	Boy	4th	Yes	Agree	Strongly disagree	Agree	Agree	Agree	Strongly Disagree	Disagree	Disagree	Agree	Somewhat curious	Somewhat curious	Very curious	Very curious
11/30/2018 9:16:06	Hamilton	649632	Girl	4th	Yes	Agree	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly agree	Agree	Not very curious	Somewhat curious	Not very curious	Very curious
11/30/2018 9:16:40	Hamilton	652656	Boy	4th	No	Agree	Strongly agree	Agree	Strongly Agree	Agree	Agree	Strongly agree	Agree	Agree	Very curious	Somewhat curious	Somewhat curious	Very curious
11/30/2018 9:17:41	Hamilton	649304	Girl	4th	No	Strongly agree	Strongly agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Very curious	Very curious	Very curious	Very curious
11/30/2018 9:20:19	Hamilton	640814	Boy	4th	Yes	Disagree	Strongly agree	Strongly Disagree	Strongly Disagree	Disagree	Strongly Agree	Agree	Disagree	Strongly Agree	Very curious	Somewhat curious	Somewhat curious	Very curious
11/30/2018 9:22:56	Hamilton	638815	Girl	4th	Yes	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Somewhat curious
11/30/2018 9:23:47	Hamilton	640298	Boy	4th	Yes	Disagree	Disagree	Agree	Strongly Agree	Agree	Agree	Disagree	Disagree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious
11/30/2018 9:29:20	Hamilton	643768	Boy	4th	No	Agree	Strongly disagree	Strongly Agree	Strongly Agree	Strongly Disagree	Agree	Agree	Disagree	Strongly Agree	Very curious	Somewhat curious	Somewhat curious	Very curious
11/30/2018 9:32:18	Hamilton	629367	Boy	4th	No	Agree	Agree	Disagree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Not very curious		Somewhat curious
11/30/2018 9:33:41	Hamilton	640814	Boy	4th	Yes	Strongly disagree	Strongly agree	Agree	Disagree		Disagree	Strongly agree	Strongly agree	Strongly Disagree	Somewhat curious	Somewhat curious	Very curious	Somewhat curious
11/30/2018 10:05:50	Hamilton	667013	Boy	4th	Yes	Agree	Disagree	Agree	Agree	Agree	Agree	Strongly agree	Agree	Strongly Agree	Very curious	Very curious	Not very curious	Not at all curious
11/30/2018 10:06:05	Hamilton	638187	Boy	4th	No	Agree	Strongly agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Somewhat curious	Very curious	Very curious	Somewhat curious
11/30/2018 10:06:10	Hamilton	651139	Boy	4th	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Somewhat curious
11/30/2018 10:06:11	Hamilton	656213	Girl	4th	Yes	Agree	Agree	Strongly Disagree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Somewhat curious
11/30/2018 10:06:14	Hamilton	638551	Boy	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Agree	Strongly Agree	Very curious	Somewhat curious	Very curious	Very curious
11/30/2018 10:06:25	Hamilton	644147	Boy	4th	Yes	Agree	Agree	Strongly Disagree	Agree	Disagree	Agree	Strongly disagree	Disagree	Disagree	Somewhat curious	Very curious	Somewhat curious	Not very curious
11/30/2018 10:06:28	Hamilton	641595	Girl	4th	Yes	Agree	Agree	Agree	Agree	Strongly Agree	Disagree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Somewhat curious	Somewhat curious	Very curious
11/30/2018 10:06:32	Hamilton	634820	Boy	4th	Yes	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
11/30/2018 10:06:34	Hamilton	684160	Boy	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Strongly agree	Agree	Very curious	Very curious	Very curious	Very curious
11/30/2018 10:06:36	Hamilton	638133	Boy	4th	Prefer not to answer	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Disagree	Strongly agree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious
11/30/2018 10:06:38	Hamilton	634663	Girl	4th	No	Agree	Agree	Strongly Disagree	Agree	Strongly Agree	Agree	Agree	Agree	Agree	Very curious	Very curious	Very curious	Very curious
11/30/2018 10:06:51	Hamilton	644224	Boy	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Somewhat curious	Very curious	Not very curious
11/30/2018 10:07:17	Hamilton	638036	Boy	4th	Yes	Agree	Strongly disagree	Strongly Disagree	Strongly Disagree	Agree	Strongly Disagree	Strongly disagree	Agree	Agree	Very curious	Very curious	Somewhat curious	Very curious
11/30/2018 10:07:22	Hamilton	638406	Girl	4th	Yes	Agree	Agree	Agree	Agree	Agree	Strongly Agree	Strongly agree	Agree	Agree	Very curious	Very curious	Very curious	Very curious
11/30/2018 10:07:36	Hamilton	638031	Girl	4th	No	Strongly agree	Strongly agree	Agree	Strongly Agree	Agree	Agree	Disagree	Disagree	Agree	Somewhat curious	Very curious	Very curious	Very curious
11/30/2018 10:07:42	Hamilton	630327	Girl	4th	No	Strongly agree	Disagree	Disagree	Agree	Strongly Agree	Disagree	Agree	Agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
11/30/2018 10:07:45	Hamilton		Boy	4th	Yes	Agree	Agree	Disagree	Strongly Agree	Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Somewhat curious
11/30/2018 10:07:51	Hamilton	638432	Girl	4th	Yes	Strongly agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Very curious	Very curious	Very curious	Very curious
11/30/2018 10:08:19	Hamilton	638347	Girl	4th	Yes	Agree	Disagree	Strongly Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Not very curious	Very curious	Somewhat curious	Very curious
11/30/2018 10:09:34	Hamilton	638433	Girl	4th	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Agree	Very curious	Very curious	Somewhat curious	Somewhat curious
11/30/2018 10:12:13	Hamilton	641033	Girl	4th	Yes	Disagree	Agree	Strongly Agree	Strongly Disagree	Disagree	Agree	Disagree	Agree	Strongly Agree	Very curious	Somewhat curious	Very curious	Somewhat curious
11/30/2018 10:14:02	Hamilton	632131	Girl	4th	No	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Not very curious	Somewhat curious	Somewhat curious
11/30/2018 10:14:10	Hamilton	685080	Girl	4th	No	Agree	Agree	Agree	Agree	Disagree	Agree	Strongly disagree	Disagree	Agree	Somewhat curious	Somewhat curious	Not very curious	Very curious
1/10/2019 11:54:06	Eugene Field		Boy	4th	Yes	Strongly agree	Strongly agree	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Strongly agree	Strongly Agree	Very curious	Very curious	Somewhat curious	Very curious
1/10/2019 11:54:19	Eugene Field	642387	Boy	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Somewhat curious
1/10/2019 11:54:19	Eugene Field	630608	Girl	4th	No	Agree	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Very curious	Somewhat curious	Somewhat curious	Very curious
1/10/2019 11:55:15	Eugene Field	642483	Boy	4th	No	Agree	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Disagree	Agree	Agree	Somewhat curious	Very curious	Not very curious	Somewhat curious
1/10/2019 11:55:16	Eugene Field	685566	Boy	4th	Yes	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly agree	Agree	Disagree	Very curious	Somewhat curious	Not very curious	Somewhat curious
1/10/2019 11:55:33	Eugene Field	652295	Girl	4th	Yes	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
1/10/2019 11:55:48	Eugene Field	632992	Girl	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
1/10/2019 11:55:52	Eugene Field	643401	Girl	4th	Yes	Strongly agree	Agree	Agree	Strongly Agree	Agree	Agree	Disagree	Strongly agree	Agree	Somewhat curious	Very curious	Not very curious	Very curious
1/10/2019 11:56:18	Eugene Field	640628	Girl	4th	No	Strongly agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly agree	Agree	Strongly Agree	Very curious	Somewhat curious	Not very curious	Very curious
1/10/2019 11:56:24	Eugene Field	637488	Girl	4th	No	Strongly agree	Strongly agree	Strongly Agree	Disagree	Agree	Agree	Agree	Strongly agree	Strongly Disagree	Somewhat curious	Very curious	Not at all curious	Somewhat curious
1/10/2019 11:56:31	Eugene Field	649855	Girl	4th	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious
1/10/2019 11:56:43	Eugene Field	642387	Boy	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Somewhat curious
1/10/2019 11:56:54	Eugene Field	646848	Boy	4th	Yes	Strongly agree	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Strongly agree	Strongly Agree	Very curious	Very curious	Somewhat curious	Very curious
1/10/2019 11:57:20	Eugene Field	624968	Girl	4th	Prefer not to answer	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Not very curious	Not very curious	Somewhat curious
1/10/2019 11:57:31	Eugene Field	632184	Boy	4th	No	Agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Disagree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Not at all curious
1/10/2019 11:57:48	Eugene Field	639716	Girl	4th	No	Strongly agree	Strongly agree		Strongly Agree	Strongly Agree	Strongly Agree		Strongly agree	Agree	Very curious	Very curious	Somewhat curious	Very curious
1/10/2019 11:58:40	Eugene Field	641781	Boy	4th	Yes	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
1/10/2019 12:02:24	Eugene Field	655172	Girl	4th	Yes	Agree	Agree	Disagree	Agree		Disagree	Disagree	Disagree	Agree	Not at all curious	Not at all curious	Somewhat curious	Not at all curious
1/10/2019 12:02:56	Eugene Field	663760	Girl	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
1/10/2019 12:05:30	Eugene Field	651149	Boy	4th	No	Strongly agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Disagree	Agree	Strongly Agree	Very curious	Very curious	Very curious	Not very curious
1/10/2019 12:05:44	Eugene Field	640663	Girl	4th	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Strongly agree	Strongly Agree	Somewhat curious	Somewhat curious	Somewhat curious	Not very curious
1/10/2019 12:07:03	Eugene Field	641939	Girl	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Not very curious	Very curious
1/10/2019 12:07:27	Eugene Field	682267	Boy	4th	Yes	Agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Somewhat curious	Very curious	Very curious	Somewhat curious
1/10/2019 12:08:11	Eugene Field	632585	Girl	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
1/10/2019 12:09:32	Eugene Field	639655	Girl	4th	Yes	Strongly agree	Strongly agree	Agree	Strongly Agree	Agree	Agree	Agree	Agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
1/10/2019 12:10:31	Eugene Field	641866	Girl	4th	Yes	Strongly agree	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Disagree	Agree	Strongly Agree	Not at all curious	Not very curious	Somewhat curious	Very curious
1/10/2019 12:10:36	Eugene Field	642042	Girl	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious
1/10/2019 12:11:34	Eugene Field	634110	Prefer no	5th	Yes	Strongly agree	Disagree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Somewhat curious
1/10/2019 12:11:38	Eugene Field	637198	Other	4th	Prefer not to answer	Strongly disagree	Agree	Agree	Agree	Agree	Agree	Strongly disagree	Strongly agree	Strongly Disagree	Not at all curious	Somewhat curious	Not very curious	Somewhat curious
1/10/2019 12:11:42	Eugene Field	630286	Girl	4th	Yes	Agree	Agree	Agree	Strongly Agree	Agree	Disagree	Disagree	Agree	Agree	Somewhat curious	Very curious	Somewhat curious	Not very curious
1/10/2019 12:11:52	Eugene Field	685370	Boy	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Not very curious	Somewhat curious	Very curious
1/10/2019 12:12:28	Eugene Field	639459	Boy	4th	Yes	Agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Disagree	Strongly agree	Strongly Agree	Very curious	Somewhat curious	Somewhat curious	Not very curious
1/10/2019 12:12:28	Eugene Field	686321	Boy	4th	Yes	Strongly agree	Strongly agree	Agree	Agree	Strongly Agree	Agree	Disagree	Agree	Strongly Agree	Very curious	Very curious	Somewhat curious	Somewhat curious
1/10/2019 12:12:46	Eugene Field	670995	Boy	4th	Yes	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Strongly agree	Strongly Agree	Very curious	Very curious	Somewhat curious	Very curious
1/10/2019 12:24:37	Eugene Field	640462		4th	Yes	Strongly disagree	Strongly agree	Strongly Agree	Disagree	Agree	Strongly Agree	Strongly disagree	Disagree	Strongly Agree	Somewhat curious	Very curious	Somewhat curious	Very curious
1/10/2019 12:27:43	Eugene Field	678273	Girl	4th	No	Disagree	Strongly agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Somewhat curious

Section 2: Student Post-Assessment Data

Timestamp	School Name:	Student ID Number:	I am a:	This school year (2018-2019), I am in grade:	I speak a language OTHER than English at home:	I get excited about STEM.	I like to participate in STEM projects.	I want to understand STEM.	I like to see how things are made.	I get excited to learn about new discoveries.	I am interested in STEM inventions.	I would like to have a STEM job in the future.	I enjoy playing games that teach me about STEM.	I like to make things.	Science	Technology	Engineering	Math	Before joining this program, I was interested in STEM and STEM-related things.	Before joining this program, I participated in STEM activities outside of school.
4/19/2019 13:04:18	Hamilton	667013	Prefer n	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Somewhat curious	Somewhat curious	Very curious	Disagree	Agree
4/19/2019 13:04:43	Hamilton	651139	Boy	4th	Yes	Agree	Agree	Agree	Agree	Disagree	Agree	Disagree	Disagree	Disagree	Somewhat curious	Not very curious	Somewhat curious	Somewhat curious	Agree	Disagree
4/19/2019 13:05:08	Hamilton	638031	Girl	4th	No	Agree	Agree	Agree	Disagree	Agree	Disagree	Strongly disagree	Disagree	Agree	Somewhat curious	Very curious	Not very curious	Very curious	Disagree	Strongly disagree
4/19/2019 13:05:19	Hamilton	660275	Prefer n	4th	No	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Somewhat curious	Somewhat curious	Not very curious	Very curious	Agree	
4/19/2019 13:05:31	Hamilton	628738	Boy	4th	Yes	Strongly agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Not very curious	Strongly agree	Strongly agree
4/19/2019 13:05:32	Hamilton	639163	Girl	4th	Yes	Agree	Strongly agree	Agree	Strongly Agree	Strongly Agree	Agree	Disagree	Strongly agree	Strongly Agree	Somewhat curious	Very curious	Very curious	Somewhat curious	Strongly agree	Strongly agree
4/19/2019 13:05:41	Hamilton	641033	Prefer n	4th	Yes	Agree	Strongly agree	Agree	Agree	Agree	Strongly Agree	Strongly disagree	Disagree	Strongly Agree	Very curious	Very curious	Somewhat curious	Very curious	Disagree	Strongly disagree
4/19/2019 13:05:48	Hamilton	632131	Girl	4th	No	Strongly agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Not very curious	Not very curious	Somewhat curious	Somewhat curious	Agree	Agree
4/19/2019 13:05:51	Hamilton	638133	Boy	4th	Prefer not to answer	Disagree	Disagree	Disagree	Strongly Agree	Disagree	Strongly Disagree	Strongly disagree	Agree	Strongly Agree	Somewhat curious	Not at all curious	Not at all curious	Very curious	Strongly disagree	Strongly disagree
4/19/2019 13:05:53	Hamilton	630327	Prefer n	4th	No	Agree	Disagree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Agree	Strongly Agree	Very curious	Very curious	Not at all curious	Very curious	Disagree	Strongly disagree
4/19/2019 13:05:56	Hamilton	642644	Boy	4th	No	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Not very curious	Very curious	Very curious	Very curious	Disagree	Disagree
4/19/2019 13:07:24	Hamilton	638432	Girl	4th	Yes	Strongly agree	Strongly agree	Agree	Agree	Strongly Agree	Strongly Agree	Disagree	Agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious	Agree	Agree
4/19/2019 13:07:24	Hamilton	638406	Girl	4th	Yes	Agree	Strongly agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Disagree	Agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious	Agree	Agree
4/19/2019 13:07:45	Hamilton	634663	Prefer n	4th	No	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Agree	Disagree	Strongly Agree	Very curious	Somewhat curious	Not at all curious	Somewhat curious	Agree	Disagree
4/19/2019 13:07:48	Hamilton		Boy	4th	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Strongly disagree	Strongly disagree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious	Agree	Strongly disagree
4/19/2019 13:10:06	Hamilton	638187	Boy	4th	Yes	Agree	Agree	Disagree	Agree	Agree	Agree	Agree	Agree	Agree	Somewhat curious	Very curious	Very curious	Not very curious	Agree	Agree
4/19/2019 13:11:14	Hamilton	638560	Girl	4th	Yes	Agree	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly agree	Strongly Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious	Agree	Strongly agree
4/19/2019 13:11:23	Hamilton	638304	Girl	4th	No	Strongly agree	Agree	Strongly Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Very curious	Somewhat curious	Somewhat curious	Very curious	Agree	Disagree
4/19/2019 13:11:33	Hamilton	638269	Girl	4th	Yes	Agree	Agree	Agree	Strongly Agree	Agree	Agree	Disagree	Disagree	Strongly Agree	Somewhat curious	Very curious	Very curious	Very curious	Disagree	Strongly disagree
4/19/2019 13:11:36	Hamilton	642633	Boy	4th	Yes	Strongly agree	Agree		Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly agree	Strongly Agree	Very curious	Very curious	Somewhat curious	Very curious	Agree	Strongly agree
4/19/2019 13:11:41	Hamilton	644102	Girl	4th	Yes	Agree	Agree	Disagree	Disagree	Disagree	Agree	Disagree	Disagree	Strongly Agree	Not at all curious	Very curious	Somewhat curious	Not very curious	Disagree	Disagree
4/19/2019 13:11:49	Hamilton	684160	Boy	4th	Yes	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Agree	Agree	Very curious	Very curious	Very curious	Very curious	Agree	Agree
4/19/2019 13:12:02	Hamilton	638567	Girl	4th	Yes	Agree	Strongly agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious	Agree	Agree
4/19/2019 13:12:07	Hamilton	649632	Girl	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Disagree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious	Agree	Disagree
4/19/2019 13:12:14	Hamilton	634772	Girl	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Disagree	Disagree	Strongly Agree	Somewhat curious	Somewhat curious	Very curious	Very curious	Agree	Strongly agree
4/19/2019 13:12:40	Hamilton		Girl	4th	No	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Very curious	Somewhat curious	Somewhat curious	Agree	Disagree
4/19/2019 13:12:42	Hamilton	638397	Boy	4th	Yes	Disagree	Agree	Agree	Disagree	Strongly Agree	Strongly Disagree	Disagree	Disagree	Agree	Not very curious	Very curious	Very curious	Very curious	Disagree	Disagree
4/19/2019 13:12:44	Hamilton	640862	Boy	4th	Yes	Agree	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly disagree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious	Disagree	Disagree
4/19/2019 13:12:55	Hamilton	641594	Boy	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Disagree	Strongly disagree	Agree	Disagree	Very curious	Somewhat curious	Not very curious	Somewhat curious	Disagree	Strongly disagree
4/19/2019 13:12:59	Hamilton	639915	Boy	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Agree	Agree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Somewhat curious	Agree	Agree
4/19/2019 13:13:17	Hamilton	619978	Boy	4th	No	Agree	Strongly disagree	Strongly Agree	Agree	Strongly Agree	Disagree	Disagree	Strongly agree	Strongly Agree	Somewhat curious	Very curious	Not very curious	Very curious	Disagree	Agree
4/19/2019 13:13:34	Hamilton		Boy	4th	Yes	Strongly agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Not very curious	Somewhat curious	Very curious	Agree	Strongly agree
4/19/2019 13:13:39	Hamilton	659372	Boy	4th	No	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Disagree	Agree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Somewhat curious	Agree	Disagree
4/19/2019 13:13:40	Hamilton	638240	Boy	4th	Yes	Disagree	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly disagree	Agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious	Agree	Strongly disagree
4/19/2019 13:13:43	Hamilton	642252	Boy	4th	Yes	Disagree	Strongly agree	Strongly Disagree	Strongly Disagree	Strongly Disagree	Disagree	Strongly disagree	Disagree	Strongly Disagree	Somewhat curious	Somewhat curious	Not very curious	Somewhat curious	Disagree	Strongly disagree
4/19/2019 13:14:42	Hamilton	651137	Girl	4th	Yes	Agree	Strongly agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious	Agree	Strongly agree
4/19/2019 13:17:45	Hamilton	644147	Boy	4th	Yes	Agree	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Disagree	Disagree	Disagree	Somewhat curious	Very curious	Somewhat curious	Very curious	Disagree	Disagree
4/19/2019 13:22:18	Hamilton	638433	Girl	4th	Yes	Agree	Agree	Disagree	Agree	Agree	Disagree	Disagree	Agree	Strongly Agree	Not very curious	Somewhat curious	Somewhat curious	Very curious	Agree	Disagree
4/19/2019 13:40:40	Hamilton	638347	Girl	4th	Yes	Agree	Disagree	Strongly Agree	Agree	Agree	Agree	Strongly disagree	Agree	Strongly Disagree	Not very curious	Very curious	Somewhat curious	Very curious	Disagree	Disagree
4/19/2019 14:03:06	Eugene Field	650745	Boy	3rd	Prefer not to answer	Disagree	Strongly disagree	Disagree	Strongly Agree	Strongly Disagree	Strongly Disagree	Strongly disagree	Agree	Strongly Disagree	Very curious	Not at all curious	Not at all curious	Very curious	Disagree	Strongly agree
4/19/2019 14:09:19	Eugene Field	641939	Girl	4th	No	Strongly agree	Strongly agree	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Strongly agree	Strongly Agree	Very curious	Very curious	Not at all curious	Very curious	Agree	Strongly agree
4/19/2019 14:09:32	Eugene Field	651149	Boy	4th	No	Agree	Agree	Agree	Disagree	Strongly Agree	Strongly Agree	Strongly agree	Agree	Strongly Agree	Somewhat curious	Very curious	Very curious	Not at all curious	Agree	Agree
4/19/2019 14:10:42	Eugene Field	648897	Boy	3rd	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Very curious	Somewhat curious	Very curious	Agree	Disagree
4/19/2019 14:10:42	Eugene Field	651299		3rd	No	Agree	Agree	Agree	Disagree	Agree	Agree	Disagree	Agree	Agree	Very curious	Very curious	Not very curious	Not at all curious	Agree	Disagree
4/19/2019 14:10:43	Eugene Field	651168	Girl	3rd	No	Strongly agree	Agree	Agree	Disagree	Agree	Agree	Disagree	Disagree	Agree	Very curious	Not very curious	Not very curious	Very curious	Agree	Disagree
4/19/2019 14:10:43	Eugene Field		Boy	3rd	Yes	Disagree	Agree	Disagree	Agree	Agree	Agree	Disagree	Disagree	Disagree	Somewhat curious	Very curious	Somewhat curious	Very curious	Disagree	Agree
4/19/2019 14:10:46	Eugene Field	640807	Girl	3rd	No	Agree	Agree	Agree	Disagree	Agree	Agree	Disagree	Disagree	Agree	Very curious	Very curious	Not very curious	Very curious	Agree	Disagree
4/19/2019 14:10:46	Eugene Field	682268	Boy	3rd	Prefer not to answer	Strongly agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly agree	Agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious	Strongly agree	Strongly agree
4/19/2019 14:10:46	Eugene Field	653246	Girl	3rd	No	Strongly agree	Agree	Agree	Disagree	Agree	Strongly Agree	Strongly disagree	Disagree	Agree	Very curious	Very curious	Not very curious	Very curious	Agree	Strongly agree
4/19/2019 14:10:47	Eugene Field	660145	Girl	3rd	Yes	Agree	Strongly agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Very curious	Somewhat curious	Not very curious	Very curious	Strongly agree	Strongly agree
4/19/2019 14:10:48	Eugene Field	650745	Boy	3rd	No	Agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Disagree	Strongly agree	Strongly Agree	Very curious	Not at all curious	Not at all curious	Very curious	Strongly agree	Strongly disagree
4/19/2019 14:10:49	Eugene Field	651493	Boy	3rd	No	Agree	Disagree	Agree	Strongly Agree	Agree	Agree	Strongly disagree	Strongly agree	Agree	Very curious	Not very curious	Somewhat curious	Very curious	Agree	Strongly disagree
4/19/2019 14:10:51	Eugene Field		Girl	3rd	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Somewhat curious	Strongly agree	Disagree
4/19/2019 14:14:09	Eugene Field	682267	Boy	4th	Yes	Agree	Agree	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Disagree	Agree	Disagree	Not very curious	Somewhat curious	Not very curious	Not at all curious	Agree	Agree
4/19/2019 14:14:09	Eugene Field	639655	Girl	4th	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Strongly Agree	Somewhat curious	Very curious	Very curious	Very curious	Agree	Agree
4/19/2019 14:14:11	Eugene Field	632585	Girl	4th	No	Strongly agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious	Strongly agree	Strongly agree
4/19/2019 14:14:11	Eugene Field	685370	Boy	4th	Yes	Strongly agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Disagree	Agree	Strongly Agree	Very curious	Very curious	Somewhat curious	Not very curious	Agree	Agree
4/19/2019 14:14:11	Eugene Field	640663	Girl	4th	Yes	Agree	Agree	Agree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Somewhat curious	Agree	Agree
4/19/2019 14:14:12	Eugene Field	686321	Boy	4th	Yes	Agree	Strongly agree	Agree	Strongly Agree	Strongly Agree	Agree	Disagree	Agree	Strongly Agree	Not at all curious	Not very curious	Not very curious	Not at all curious	Agree	Agree
4/19/2019 14:14:12	Eugene Field	630286	Girl	3rd	Yes	Strongly agree	Agree	Disagree	Agree	Agree	Agree	Disagree	Agree	Agree	Somewhat curious	Very curious	Very curious	Somewhat curious	Agree	Agree
4/19/2019 14:14:12	Eugene Field	639459	Boy	4th	No	Agree	Strongly agree	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree	Disagree	Strongly agree	Strongly Agree	Somewhat curious	Somewhat curious	Very curious	Not at all curious	Agree	Agree
4/19/2019 14:14:14	Eugene Field	652362	Boy	4th	No	Agree	Strongly agree	Strongly Agree	Agree	Agree	Agree	Disagree	Disagree	Agree	Somewhat curious	Somewhat curious	Somewhat curious	Very curious	Agree	Agree
4/19/2019 14:14:17	Eugene Field	642042	Girl	4th	No	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly agree	Strongly agree	Strongly Agree	Somewhat curious	Very curious	Very curious	Somewhat curious	Agree	Strongly agree
4/19/2019 14:14:25	Eugene Field	678273	Girl	4th	No	Agree	Strongly agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly agree	Strongly Agree	Very curious	Very curious	Very curious	Very curious	Strongly agree	Strongly agree

Section 3: Teacher Survey Data

Timestamp	At which school do you teach?	What grade level do you teach?	Does your school have a STEM-related club for students?	How often does your school provide STEM events or programs for students and families outside of school hours?	How many STEM-related field trips does your grade level take per year?
3/11/2019 15:41:28	Eugene Field Elementary	4th	No	Never	1-2
3/11/2019 17:07:22	Eugene Field Elementary	4th	No	Never	1-2
3/12/2019 9:44:39	Hamilton Elementary	4th	No	1-2 times per year	1-2
4/10/2019 13:41:33	Eugene Field Elementary	3rd	No	1-2 times per year	1-2

How many in-school STEM-related enrichment opportunities do you schedule for your grade level per year? (examples: guest speakers, assemblies, demonstrations, skype sessions etc.)	Use technology such as tablets or computers.	Learn about a variety of STEM careers.	Learn about new discoveries.	Use critical thinking skills to develop new concepts or inventions.	Build or make things.	Make predictions that can be tested.	Make observations or measurements using scientific tools (calculators, rulers, scales, microscope, computer/tablet software, etc.).
1-2	5	2	2	3	4	3	2
1-2	5	2	4	2	2	2	3
1-2	5	2	2	3	2	3	3

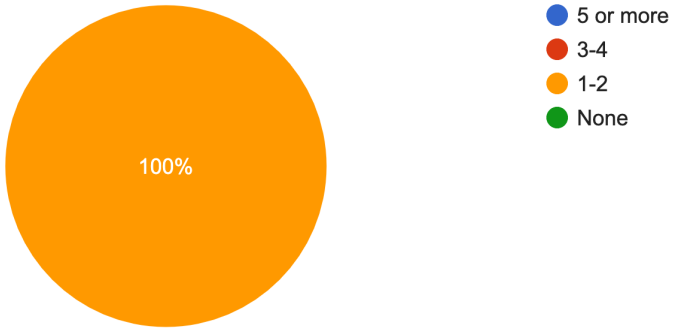
Complete activities in a real-world context.	Collaborate in groups.	Share their work, projects, or findings publicly to enhance learning for their peers.	I feel confident in teaching: [Science]	I feel confident in teaching: [Technology]	I feel confident in teaching: [Engineering]	I feel confident in teaching: [Math]	I think it is important to teach: [Science]
2	4	4	Agree	Agree	Agree	Strongly Agree	Strongly Agree
2	5	2	Agree	Agree	Agree	Strongly Agree	Strongly Agree
2	4	2	Agree	Agree	Disagree	Strongly Agree	Strongly Agree
3	3	3	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree

I think it is important to teach: [Technology]	I think it is important to teach: [Engineering]	I think it is important to teach: [Math]	I have the ability to affect a student's feelings about STEM.	I continually seek out professional development to improve my skills in teaching STEM content.	Please share any additional comments about STEM culture in your school or classroom: I just need more time to be able to do more things. There are so many requirements put on us to complete and be tested on.
Strongly Agree	Strongly Agree	Strongly Agree	4	2	
Agree	Agree	Strongly Agree	4	2	
Strongly Agree	Strongly Agree	Strongly Agree	3	2	
Strongly Agree	Strongly Agree	Strongly Agree	4	2	

APPENDIX C: TEACHER SURVEY GRAPHS

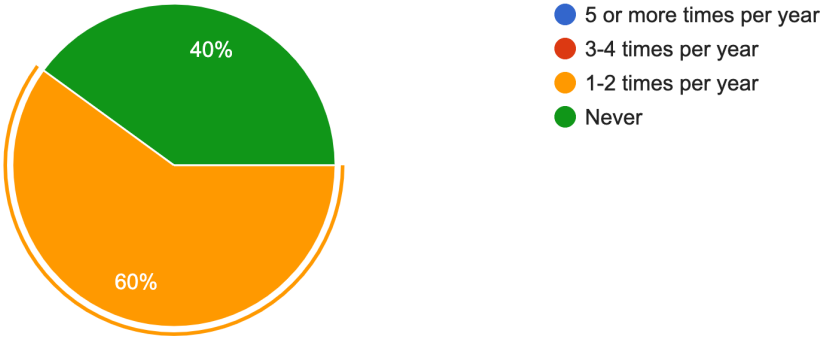
How many STEM-related field trips does your grade level take per year?

5 responses



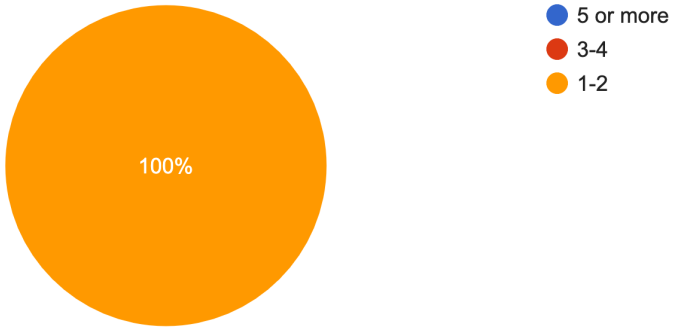
How often does your school provide STEM events or programs for students and families outside of school hours?

5 responses



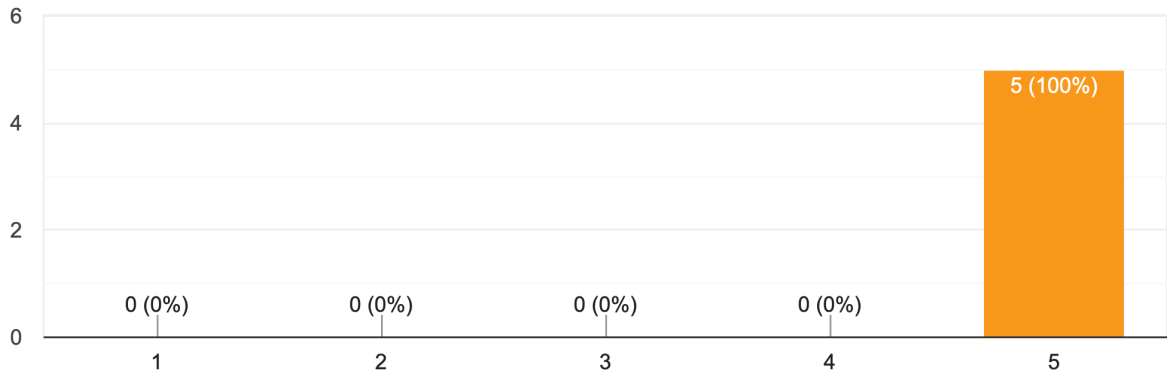
How many in-school STEM-related enrichment opportunities do you schedule for your grade level per year?..., demonstrations, skype sessions etc.)

5 responses



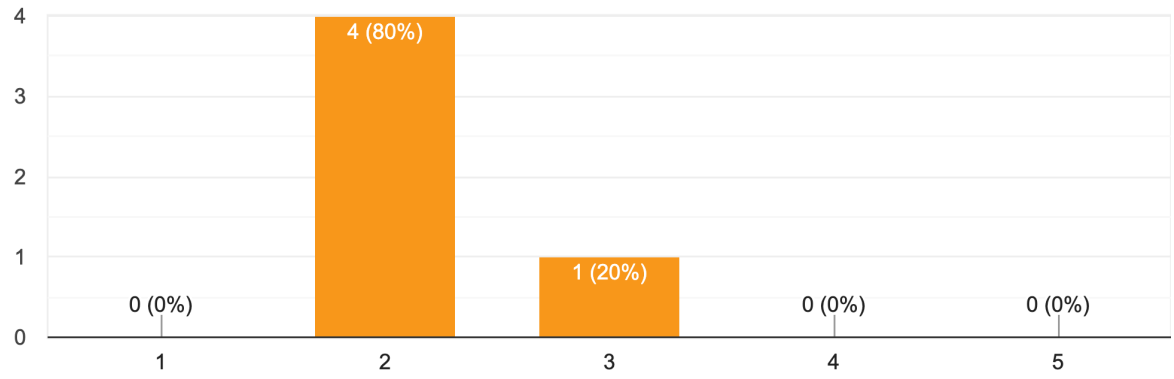
Use technology such as tablets or computers.

5 responses



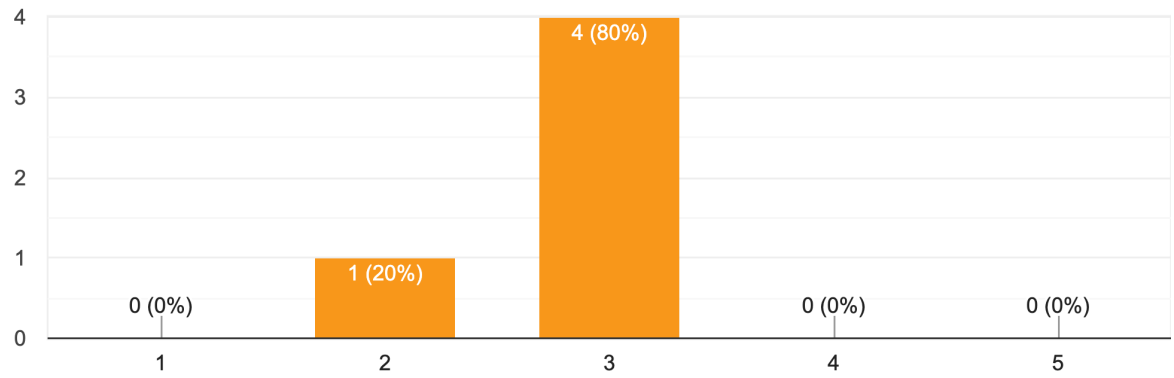
Learn about a variety of STEM careers.

5 responses



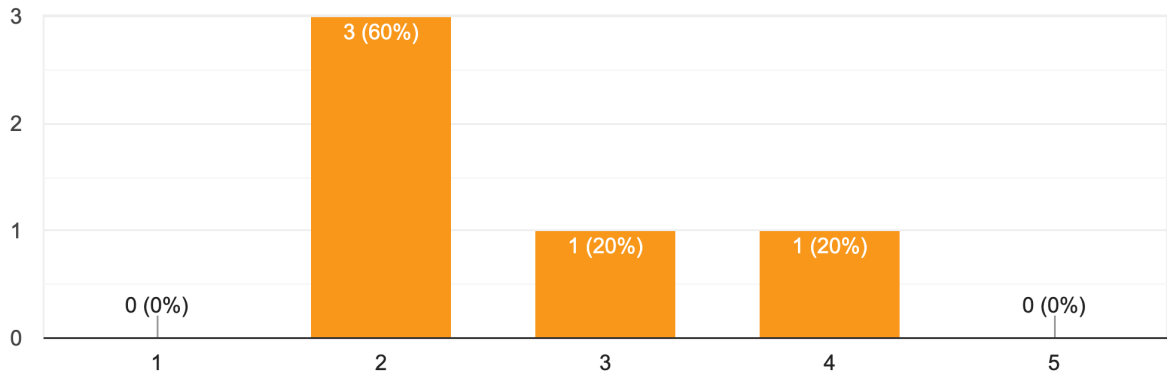
Use critical thinking skills to develop new concepts or inventions.

5 responses



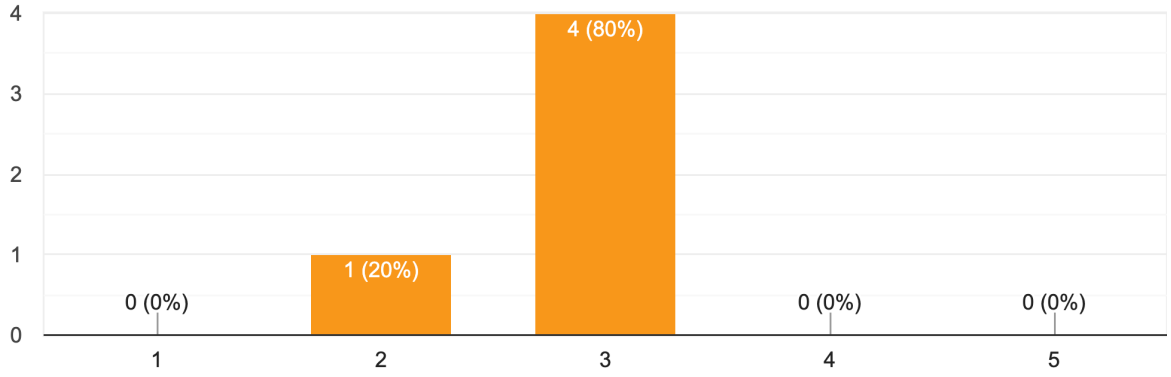
Build or make things.

5 responses



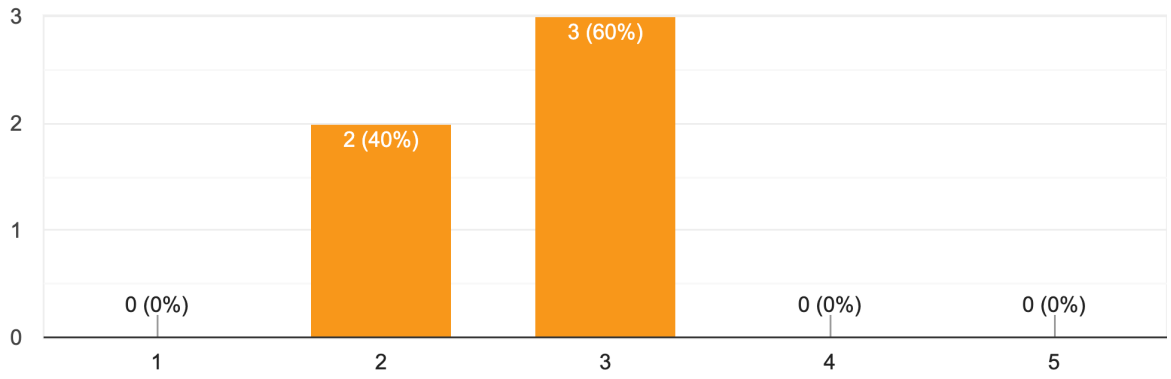
Make predictions that can be tested.

5 responses



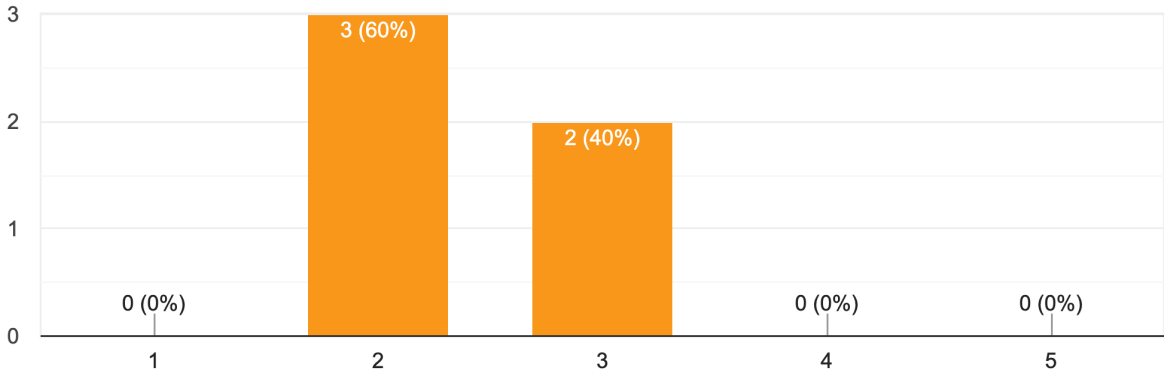
Make observations or measurements using scientific tools (calculators, rulers, scales, microscope, computer/tablet software, etc.).

5 responses



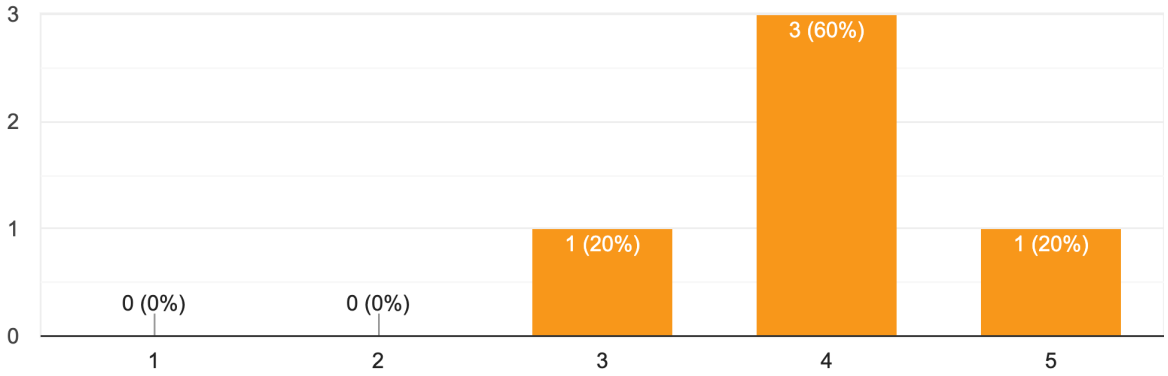
Complete activities in a real-world context.

5 responses



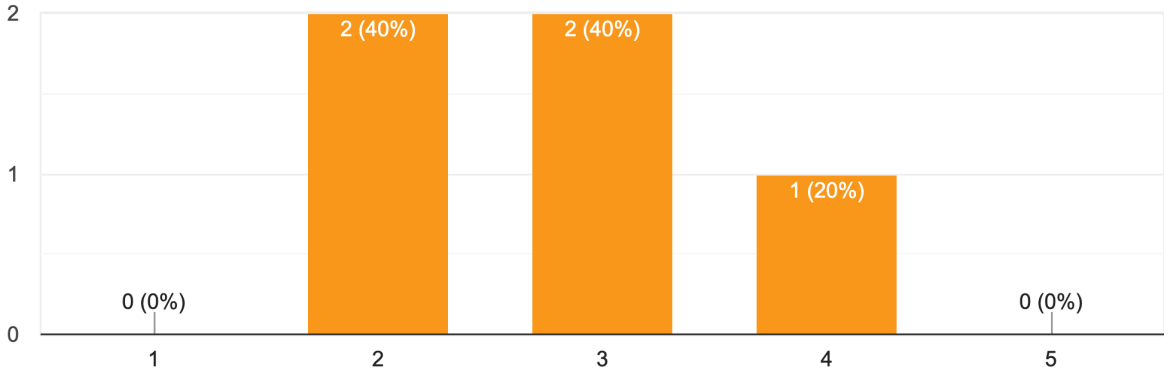
Collaborate in groups.

5 responses

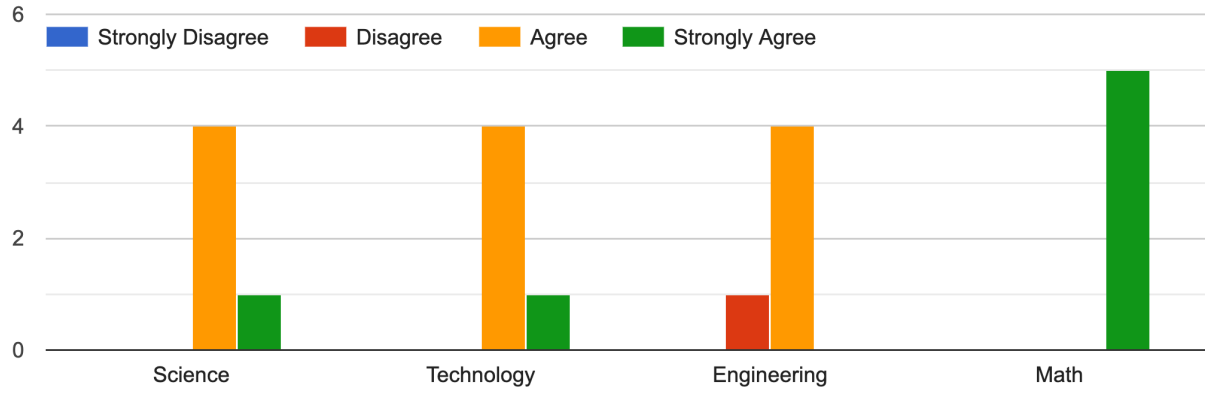


Share their work, projects, or findings publicly to enhance learning for their peers.

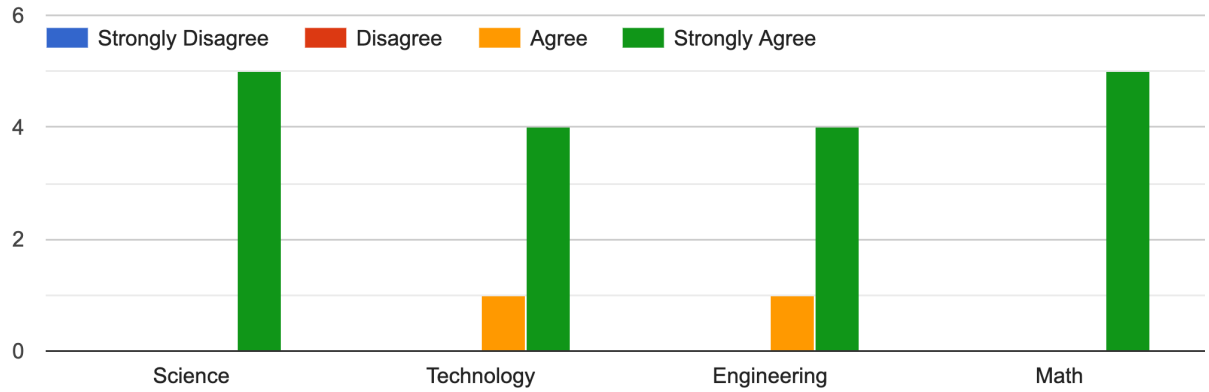
5 responses



I feel confident in teaching:

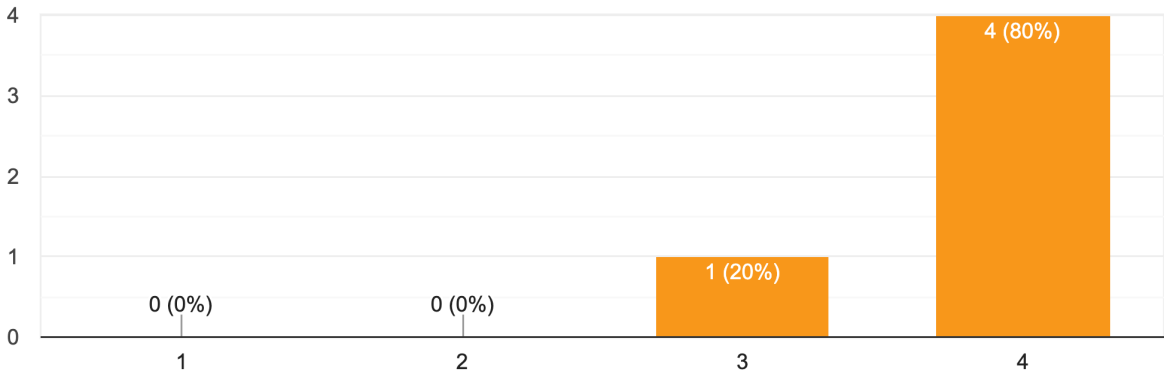


I think it is important to teach:



I have the ability to affect a student's feelings about STEM.

5 responses



I continually seek out professional development to improve my skills in teaching STEM content.

5 responses