

Photo of the arts and crafts human eye model that was made with the students.



Eyes on the Future Pre-Program Survey

Thank you for participating in our study. We are interested in knowing about how you feel about science. The answers that you provide will not be used toward your grade in science or test scores. Participation in this study is voluntary. Please try to answer all the questions if you can.

1. Please indicate your gender:

Boy

Girl

Other

2. Please indicate your race or ethnicity (select all that apply):

Asian

Black or African American

Hispanic or Latino/a

White

Native Hawaiian or Other Pacific Islander

American Indian or Alaska Native

Other

3. I plan to attend _____ after high school.

Four-year college

Two-year college

Technical school, apprenticeship, or trade school

Get a full-time job

Not sure

Other

4. Science is interesting.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

5. I like hearing science presentations.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

6. I like talking about science with others.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

7. I like asking questions.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

8. I want to take more classes in science.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

9. I want to have a job in science and medicine in the future.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

10. I understand science.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

11. I feel I will get a good grade in science.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

12. I am smart enough to pursue a job in science and medicine.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

13. Boys generally do better in the sciences than girls.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

14. A job in science and medicine is cool.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

15. Anyone can have a job in science and medicine.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

16. Science is useful to the world.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

17. Science will affect me throughout my life.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

18. Going to college is very important to me.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

19. Going to college is very important to my family.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

20. I feel like I will have adequate resources and support to apply to college in the future.

- Strongly disagree
- Disagree
- Neither agree nor disagree

Agree

Strongly agree

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Eyes on the Future Post-Program Survey

Thank you for participating in our study. We are interested in knowing about how you feel about science. The answers that you provide will not be used toward your grade in science or test scores. Participation in this study is voluntary. Please try to answer all the questions if you can.

1. Please indicate your gender:

Boy

Girl

Other

2. Please indicate your race or ethnicity (select all that apply):

Asian

Black or African American

Hispanic or Latino/a

White

Native Hawaiian or Other Pacific Islander

American Indian or Alaska Native

Other

3. I plan to attend _____ after high school.

Four-year college

Two-year college

Technical school, apprenticeship, or trade school

Get a full-time job

Not sure

Other

4. Science is interesting.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

5. I like hearing science presentations.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

6. I like talking about science with others.

Strongly disagree

- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

7. I like asking questions.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

8. I want to take more classes in science.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

9. I want to have a job in science and medicine in the future.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

10. I understand science.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

11. I feel I will get a good grade in science.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

12. I am smart enough to pursue a job in science and medicine.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

13. Boys generally do better in the sciences than girls.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

14. A job in science and medicine is cool.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

15. Anyone can have a job in science and medicine.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

16. Science is useful to the world.

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

17. Science will affect me throughout my life.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

18. Going to college is very important to me.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

19. Going to college is very important to my family.

- Strongly disagree
- Disagree
- Neither agree nor disagree
- Agree
- Strongly agree

20. I feel like I will have adequate resources and support to apply to college in the future.

- Strongly disagree
- Disagree
- Neither agree nor disagree

Agree

Strongly agree

21. How many of the Eyes of the Future sessions did you attend?

1

2

3

4

5

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Carrillo LA, Valdes RA, Desjarlais EB, Medic V, Kim JE. Eyes on the Future: Inspiring Latino Middle School Youth to Pursue Careers in STEM Through Early Interactive Science Programming. WMJ. 2024;123(1):34-38.

Cronbach's Alpha Reliability Coefficients for Science Attitudes Questions		
	Pre-Program	Post-Program
	Cronbach's Alpha (95% CI)	Cronbach's Alpha (95% CI)
Total - Science Interest Questions	0.79 (0.64 - 0.90)	0.69 (0.45 - 0.85)
Total - STEM Career Questions	0.62 (0.33 - 0.81)	0.67 (0.40 - 0.84)
Total - Science and STEM Questions	0.81 (0.67 - 0.90)	0.81 (0.66 - 0.91)
Boys - Science Interest Questions	0.71 (0.39 - 0.90)	0.48 (-0.12 - 0.82)
Boys - STEM Career Questions	0.71 (0.38 - 0.90)	0.51 (-0.09 - 0.83)
Boys - Science and STEM Questions	0.83 (0.59 - 0.93)	0.71 (0.40 - 0.90)
Girls - Science Interest Questions	0.80 (0.55 - 0.94)	0.77 (0.47 - 0.93)
Girls - STEM Career Questions	0.43 (-0.29 - 0.82)	0.79 (0.50 - 0.94)
Girls - Science and STEM Questions	0.79 (0.55 - 0.93)	0.88 (0.68 - 0.96)

Spearman Correlation Coefficients and <i>P</i> values of Science Attitudes Questions		
	Spearman Correlation Coefficient	<i>P</i> value
Total - Science Interest Questions	0.9	0.002
Total - STEM Career Questions	0.97	0.001
Total - Science and STEM Questions	0.96	<0.001
Boys - Science Interest Questions	0.76	0.02
Boys - STEM Career Questions	0.93	0.01
Boys - Science and STEM Questions	0.81	<0.001
Girls - Science Interest Questions	0.92	0.001
Girls - STEM Career Questions	0.83	0.03
Girls - Science and STEM Questions	0.94	<0.001

Results of Boys vs. Girls Science Attitude Question – Counts, Percentages, and Averages						
	Total		Boys		Girls	
Boys vs. Girls Science Question*	Pre-Program (N = 24)	Post-Program (N = 22)	Pre-Program (N = 13)	Post-Program (N = 12)	Pre-Program (N = 11)	Post-Program (N = 10)
Boys generally do better in the sciences than girls.	16 (67%) Avg: 2.04	17 (77%) Avg: 1.91	6 (46%) Avg: 2.31	8 (67%) Avg: 1.92	10 (91%) Avg: 1.73	9 (90%) Avg: 1.90
*Likert scale response options: Strongly Disagree (1 point), Disagree (2 points), Neither Agree nor Disagree (3 points), Agree (4 points), Strongly Agree (5 points). The values are given as the number of respondents who responded with “Disagree” (2 points) or “Strongly disagree” (1 points) on the 5-point Likert scale, with the percentage in parentheses.						