

Appendix B

Initial Survey Items

Remembering your experiences in your 9th grade math and science class, please circle your answer.

1. My teachers related math to our daily lives.
2. I often understood my math assignments.
3. My math teachers valued my ideas.
4. I took Algebra 1 in the 9th grade.
5. I took Algebra 1 after the 9th grade.
6. I took Algebra 1 before the 9th grade.
7. I took an advanced math class.
8. My math teachers clearly communicated what was expected of me.
9. I took math because I really enjoyed math.
10. I was confident I would do an excellent job on my science assignments.
11. I wanted to study math after secondary school.
12. I liked watching TV programs about science.
13. My math teachers thought I did well in class with difficult material.
14. I was confident I would do excellent on my math tests.
15. My teachers related science to our daily lives.
16. I needed to do well in math to get into the university or college of my choice.
17. My science teachers clearly communicated what was expected of me.
18. Sometimes, when I did not initially understand a new topic in mathematics, I knew that I would never really understand it.
19. When I was taught science in school, I understood the concepts very well.
20. I took additional science courses because I enjoyed studying science.
21. Math was a worthwhile, necessary subject.
22. I needed a good understanding of math for my future work.
23. Others saw me as a math person.
24. I was confident I would do an excellent job on my math assignments.
25. I did not expect to use math much when I got out of school.
26. I wanted to study science after secondary school.
27. I studied science because I knew how useful it was going to be.
28. When I was taught science in school, I understood the concepts very well.
29. When I was taught math in school, I understood the concepts very well.
30. I took additional math courses because I enjoyed studying math.
31. Others saw me as a science person
32. I knew I would use math in many ways as an adult.
33. I needed a good understanding of science for my future work.
34. I knew science would help me earn a living.
35. I did not expect to use science much when I got out of school.

36. In my math class we began homework in class.
37. I knew math would help me earn a living.
38. I often understood my science assignments.
39. I studied math because I knew how useful it was going to be.
40. When I was taught math in school, I understood the concepts very well.
41. I took science because I really enjoyed science
42. My science teachers valued my ideas.
43. I took an advanced science class.
44. Math was not important to my life.
45. I was confident I would do excellent on my science tests.
46. I needed science for my future work.
47. Doing well in math was not important for my future.

PBOSS
(A STEM Survey)

Directions. Place a check next to each statement to provide feedback about your experiences. After completing the survey, please complete the scoring guide on page 3. Ignore the letters (c), (e), and (gf), until after completing the survey. Be Honest!

Math. Think about your experiences in your High School MATH Classes and rate your level of agreement with the following statements to the best of your ability.

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
1. My teachers related math to our daily lives. (c)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My math teachers thought I did well in class with difficult material. (gf)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. In high school, math was a worthwhile, necessary subject. (e)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I was confident I would do an excellent job on math assignments. (gf)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I knew math would help me earn a living. (e)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. My math teachers valued my ideas. (c)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. My math teachers clearly communicated what was expected of me. (c)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. I was confident I would do excellent on my math tests. (gf)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I needed a good understanding of math for my future work. (e)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. When I was taught math, I understood the concepts very well. (gf)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I studied math because I knew how useful it was going to be. (e)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Science. Think about your experiences in your **High School SCIENCE Classes** and rate your level of agreement with the following statements to the best of your ability.

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
1. I was confident I would do an excellent job on my science assignments. (gf)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. My science teachers clearly communicated what was expected of me. (c)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I wanted to study science after high school. (e)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I needed a good understanding of science for my future work. (e)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. When I was taught science in school, I understood the concepts very well. (gf)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. My teachers related science to our daily lives. (c)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I was confident I would do excellent on my science tests. (gf)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. My science teachers valued my ideas. (c)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I expected to use science when I got out of school. (e)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I studied science because I knew how useful it was going to be. (e)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I often understood my science assignments. (gf)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Survey

Scoring Guide for the PBOSS
(A STEM Survey)

Find the letters (c), (e), or (gf) at the end of each item on the survey. Look at your responses. You should see 1, 2, 3, or 4 at the top of the column. Add the scores of all the items with (c). Repeat for (e) and (gf). Insert the sum of your responses for each category in the boxes below. You should have a separate mathematics and separate science score for each category. Round to two decimal places.

Continuity (c)			
	Sum of (c)	Divided By	= Score
Mathematics		3	
Science		3	
Engagement (e)			
	Sum of (e)	Divided By	= Score
Mathematics		4	
Science		4	

Guiding Functions (gf)			
	Sum of (gf)	Divided By	= Score
Mathematics		4	
Science		4	
Total Scores			
	Sum of all items	Divided By	= Overall Score
Mathematics		11	
Science		11	

- Continuity – Opportunities, resources, and guidance provided by teachers, schools, or other institutions, that support your advancement to increasingly rigorous content in the sciences and quantitative subjects.
- Engagement – Having an orientation to mathematics or the sciences which draws you to keep studying science or quantitative subjects.
- Guiding Functions – Your beliefs about your ability to self-regulate your learning, accomplish good outcomes, and improve in science or quantitative subjects over time.

The maximum score is 4 points for any category. Your highest scores represent your strongest areas. Your lowest scores may suggest that you could use more support in these areas to help you succeed in science or quantitative disciplines in the future.