

General Overview and Welcome

Welcome and thank you for your participation.

This survey is part of a study designed to identify and examine causes for low rates of American Indian and Alaskan Native students pursuing Scientific, Technology, Engineering, and Mathematics (STEM) fields and careers. We are particularly interested in examining any barriers that may exist in Bureau of Indian Education (BIE)-funded schools.

This research will be used to elaborate on barriers obstructing American Indian/Alaska Native students from pursuing STEM fields and careers. Your participation in this survey will make this study possible. Your responses will provide the BIE with pertinent data to address barriers to students being successful in the STEM field.

This survey will take between 15 and 20 minutes to complete. It is composed of four short sections:

1. Agree/Disagree Questions: examining attitudes, conditions, and support for STEM education
2. Identification Questions: identifying the types of opportunities for, exposure to, and barriers prohibiting, STEM opportunities
3. Open-ended Questions: describing the principal barriers and solutions
4. Demographics Questions: providing information on the school and its population

There are no right or wrong answers to this survey and your honesty will help accurately identify existing issues and potential solutions.

All survey responses will be held completely confidential and de-identified. Response data will be used to identify and describe the unique situations and problems facing American Indian and Alaskan Native students pursuing STEM fields in BIE-funded schools.

If you have questions or concerns about how your responses will be used or reported, please contact Dr. Mary Ann Jacobs at mary.jacobs@uncp.edu or 910-775-4262. If you encounter technical issues related to this survey, please contact Matt Tripp at mtripp@c2ti.com or 703-752-2134.

At the top of each survey page: During this survey, please do not use your browser's <Back> and <Next> buttons. Please use only the <Back> and <Next> buttons that appear at the bottom of each survey page.

Agree/Disagree Questions

In this section, please select the option on the scale of Strongly Disagree to Strongly Agree that most accurately reflects your level of agreement with each statement.

[Strongly Disagree – Disagree – Agree – Strongly Agree]

1. My students aspire to go to college, technical school, or vocational school to participate in STEM programs.

2. My students would like to have a career in a STEM Field.
3. My students' families are interested in the courses they take.
4. My students' families encourage them to study science and math.
5. My students are creative and like to imagine new products.
6. My students are good at building and fixing things.
7. My students like independent challenges with more than one answer.
8. My students believe education is a pathway to helping their family/community.
9. My students know a scientist/engineer.
10. My students believe science is fun.
11. There are opportunities in students' free time to immerse themselves in STEM.
12. Field trips to educational settings are often taken in our schools.
13. My students like to work independently.
14. A well-paid career is important to my students.
15. My students take four years of science.
16. My students take four years of math.
17. All mathematics and science teachers in my school are certified in their subject area by our state's department of education.
18. Science and math teachers are well respected and liked by students.
19. Reading and writing ability impacts student science and math success.
20. BIE-funded schools and tribal colleges/universities have access to and good connections with industry.
21. Schools have enough resources to support STEM teaching and learning.
22. Our schools have a lot of science- and math-teacher turnover
23. STEM teachers have access to quality professional development.
24. Our schools have a long-term STEM education plan.
25. Students have opportunities to shadow in or intern with industry.
26. School guidance counselors are well versed in STEM career pathways.
27. Science fair/Olympiad is a requirement in our schools.
28. Teachers have externship opportunities with industry.
29. Our students are academically prepared with the foundation in their language.
30. Our students are academically prepared with the foundation in their culture.
31. Our students want to return to their American Indian/Alaskan Native tribes and communities to apply knowledge they have learned after graduation.
32. A majority of our students have access to the local vocational school or college.
33. Our teachers and administrators are American Indian/Alaska Natives.

Identification Questions

For each question, please select all responses that apply.

34. My school has:
 - a. Career Day(s)
 - b. College fairs
 - c. Career aptitude programs (Work Keys, My Career Journey, etc.)
 - d. Guest speakers

- e. Interdisciplinary projects
 - f. STEM-related Gifted and Talented programs
 - g. STEM lab space
 - h. Adequate STEM instructional technology/materials/equipment
 - i. Adequate internet access
 - j. Adequate computers for students
35. Students are regularly exposed to:
- a. Inquiry-based activities
 - b. Biotechnology
 - c. Robotics
 - d. Engineering design
 - e. Energy and the environment
 - f. Computer application
 - g. STEM role models
36. Barriers that prohibit STEM in my school include:
- a. Distance/location
 - b. Family/work obligations for our students
 - c. Cost of outside programs
 - d. Lack of STEM-focused programs in my immediate region
 - e. Lack of teacher/school awareness of regional STEM programs
 - f. Teacher knowledge of STEM content and/or STEM instructional strategies
 - g. Lack of administrator support for STEM programming
 - h. Cost of STEM materials/equipment
 - i. Lack of STEM lab space
 - j. Lack of computers
 - k. Lack of internet access
 - l. Lack of tribal/community support for STEM programming

Open-ended Questions

37. What are the top three barriers preventing more effective STEM teaching and learning in my school?
38. What are the top three solutions that would make my school more effective regarding STEM teaching and learning?

Demographics

39. Please select the option that best describes your role within the school, college, or university for which you are responding:
- a. Teacher
 - b. Educational Administrator
 - c. Instructional Aide/Teaching Assistant
 - d. School Support Staff
 - e. Tribal College/University Staff
 - f. School Board Member
 - g. Other (Please Specify)

40. The school for which you are responding is a:
- Elementary School
 - Secondary School
 - Elementary and Secondary School
 - College or University
 - Other (Please Specify)
41. Please select the gender with which you identify:
- Female
 - Male
 - Prefer not to answer
42. Please enter your age. If you prefer not to answer, please type "N/A"
43. Are you of Hispanic/Latino origin?
- Yes
 - No
44. Please select the racial category that best describes you.
- African American or Black: A person having origins in any of the Black racial groups of Africa.
 - American Indian/Alaska Native: A person having origins in any of the original peoples of North and South American (including Central America) and who maintains tribal affiliation or community attachment.
 - Asian: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
 - Caucasian or White: A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.
 - Native Hawaiian/Other Pacific Islander: A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
 - Two or more races: People having origins any two or more of the above ethnicities
 - Other
 - Prefer not to answer
45. If applicable, please enter your tribal affiliation. If not applicable, please type "N/A"
46. Please enter the name of the school for which you are responding.
47. Please enter the state in which your school is located.