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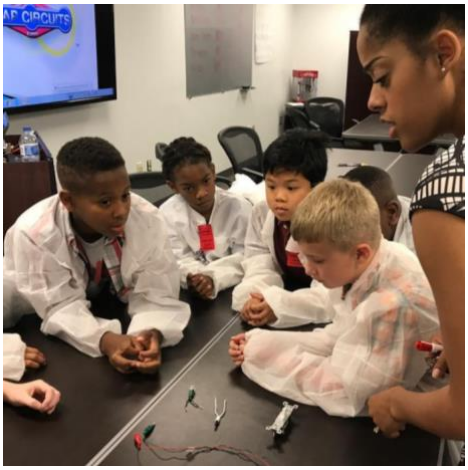

ARMY EDUCATIONAL OUTREACH PROGRAM

Unite

2018 Annual Program Evaluation Report

Appendix

June 2019

ARMY EDUCATIONAL OUTREACH PROGRAM

UNITE

1 | AEOP Consortium Contacts

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3 | Appendix A – FY18 Unite Evaluation Plan

Questionnaires

Purpose

Per the FY18 Army Education Outreach Program (AEOP) Annual Program Plan (APP), Purdue University will conduct an evaluation study of Unite that includes two post-program questionnaires:

1. AEOP Participant Questionnaire to be completed by student participants of the Unite program at all university sites; and
2. AEOP Mentor Questionnaire to be completed by Unite instructors, Unite Classroom Assistants, Unite Resource Teachers, and/or others (typically a business, industry, or DoD/Army scientist or engineer) who support students as they participate in the Unite program.

Questionnaires are the primary method of data collection for AEOP evaluation and collect information about participants' experiences with and perceptions of program resources, structures, and activities; potential benefits to participants; and strengths and areas of improvement for programs.

The questionnaires are aligned with:

- Army's strategic plan and AEOP Priorities 1 (STEM Literate Citizenry), 2 (STEM Savvy Educators) *and* 3 (Sustainable Infrastructure);
- Federal guidance for evaluation of Federal STEM investments (e.g., inclusive of implementation and outcomes evaluation, and outcomes of STEM-specific competencies, transferrable competencies, attitudes about/identifying with STEM, future engagement in STEM-related activities, and educational/career pathways);
- Best practices and published assessment tools in STEM education, STEM informal/outreach, and the evaluation/ research communities;
- AEOP's vision to improve the quality of the data collected, focusing on changes in intended student outcomes and contributions of AEOPs like CQL effecting those changes.

Deployment of common questionnaires with items that are appropriate for all AEOP programs allows evaluators to compare findings across AEOPs and, if administered in successive years, to establish longitudinal studies of student outcomes through the pipeline of AEOP programming. Questionnaires incorporate batteries of items from established assessments that have been validated in published research making external comparisons possible.

All AEOPs are expected to administer a Participant and a Mentor questionnaire provided to them by Purdue University. AEOP-wide Participant and Mentor questionnaires have two versions each; an "advanced" version (for JSHS and apprenticeship programs) and a "basic" version (for GEMS, JSS, and Unite). Similar item sets are used in both versions, with slight modifications to item wording or the number of items used to accommodate the needs of participants from each individual program. Additionally, program-specific questionnaires have been customized to gather information about programmatic structures, resources, and activities that are unique to each AEOP.

Focus Group Site Visits

Purpose

As per the approved FY18 AEOP APP, the external evaluation of Unite may include site visits/onsite focus groups. In FY18 due to scheduling issues, we did not conduct any site visits of Unite programs.

Site visits provide the evaluation team with first-hand opportunities to speak with students and their mentors. We are able to observe the AEOPs in action. The information gleaned from these visits assists us in illustrating and more deeply understanding the findings of other data collected (from questionnaires). In total, the evaluation findings are used to highlight program successes and inform program changes so that the AEOPs can be even better in the future.

Evaluation Activities during Unite Site Visits:

- One or two 45 minute focus group with 6-8 apprentice participants;
- One 45-minute focus group with 6-8 mentors;
- 30-60 minutes to observe the program (specifically, to see students engaged in program activities, preferably with their mentors); and
- 10-15 minute transitions between each evaluation activity for moving groups in and out and providing evaluators with time to organize paperwork and take nature breaks.

Data Analyses

Quantitative and qualitative data were compiled and analyzed after all data collection concluded. Evaluators summarized quantitative data with descriptive statistics such as numbers of respondents, frequencies and proportions of responses, average response when responses categories are assigned to a 6-point scale (e.g., 1 = “Strongly Disagree” to 6 = “Strongly Agree”), and standard deviations. Emergent coding was used for the qualitative data to identify the most common themes in responses.

Evaluators conducted inferential statistics to study any differences among participant groups (e.g., by gender or race/ethnicity) that could indicate inequities in the Unite program. Statistical significance indicates whether a result is unlikely to be due to chance alone. Statistical significance was determined with t-tests, chi-square tests, and various non-parametric tests as appropriate, with significance defined at $p < 0.05$. Because statistical significance is sensitive to the number of respondents, it is more difficult to detect significant changes with small numbers of respondents. Practical significance, also known as effect size, indicates the magnitude of an effect, and it is typically reported when differences are statistically significant. The formula for effect sizes depends on the type of statistical test used, and is specified, along with generally accepted rules of thumb for interpretation, in the body of the report.

4 | Appendix B – Student Participant Questionnaire

Contact Information		
Please verify the following information:		
*First Name:		
*Last Name:		
*Email Address:		
All fields with an asterisk (*) are required.		

*1. Do you agree to participate in this survey? (required)(*Required)		
Select one.		
○	Yes, I agree to participate in this survey	
○	No, I do not wish to participate in this survey	Go to end of chapter

So that we can understand how diverse students think about their participation in AEOP programs, please tell us about yourself and your school.

*2. What grade will you start in the fall? (select one)(*Required)

Select one.

○	9th
○	10th
○	11th
○	12th
○	College freshman
○	Choose not to report
○	Other, (specify)::

*3. What is your gender?(*Required)

Select one.

○	Male
○	Female
○	Choose not to report

*4. What is your race or ethnicity?(*Required)	
Select one.	
○	Hispanic or Latino
○	Asian
○	Black or African American
○	Native American or Alaska Native
○	Native Hawaiian or other Pacific Islander
○	White
○	Choose not to report
○	Other race or ethnicity, (specify)::

*5. Do you receive free or reduced lunches at school?(*Required)	
Select one.	
○	Yes
○	No
○	Choose not to report

*7. How often did you do each of the following in STEM classes at school?(*Required)

Select one per row.

	Not at all	*At least once*	*A few times*	*Most days*	*Every day*
*Work with a STEM researcher or company on a real world STEM research project	○	○	○	○	○
*Work with a STEM researcher on a research project assigned by my teacher.	○	○	○	○	○
*Design my own research or investigation based on my own question(s).	○	○	○	○	○
*Present my STEM research to a panel of judges from industry or the military.	○	○	○	○	○
*Interact with STEM researchers.	○	○	○	○	○
*Identify questions or problems to investigate.	○	○	○	○	○
*Design and carry out an investigation.	○	○	○	○	○
*Analyze data or information and draw conclusions.	○	○	○	○	○
*Work collaboratively as part of a team.	○	○	○	○	○
*Build or make a computer model.	○	○	○	○	○
*Solve real world problems.	○	○	○	○	○

*8. How often did you do each of the following in Unite this year?(*Required)

Select one per row.

	Not at all	*At least once*	*A few times*	*Most days*	*Every day*
*Work with a STEM researcher or company on a real world STEM research project.	○	○	○	○	○
*Work with a STEM researcher on a research project topic assigned by my mentor or teacher.	○	○	○	○	○
*Design my own research or investigation based on my own question(s).	○	○	○	○	○
*Present my STEM research to a panel of judges from industry or the military.	○	○	○	○	○
*Interact with STEM reseachers.	○	○	○	○	○
*Use laboratory procedures and tools.	○	○	○	○	○
*Identify questions or problems to investigate.	○	○	○	○	○
*Design and carry out an investigation.	○	○	○	○	○
*Analyze data or information and draw conclusions.	○	○	○	○	○
*Work collaboratively as part of a team.	○	○	○	○	○
*Build or make a computer model.	○	○	○	○	○
*Solve real world problems.	○	○	○	○	○

*9. The list below includes effective teaching and mentoring strategies. From the list, please indicate which strategies that your mentor(s) used when working with you in Unite:(*Required)		
	Yes - my mentor used this strategy with me	*No - my mentor did not use this strategy with me*
*Helped me become aware of STEM in my everyday life	○	○
*Helped me understand how I can use STEM to improve my community	○	○
*Used a variety of strategies to help me learn	○	○
*Gave me extra support when I needed it	○	○
*Encouraged me to share ideas with others who have different backgrounds or viewpoints than I do	○	○
*Allowed me to work on a team project or activity	○	○
*Helped me learn or practice a variety of STEM skills	○	○
*Gave me feedback to help me improve in STEM	○	○
*Talked to me about the education I need for a STEM career	○	○
*Recommended Army Educational Outreach Programs that match my interests	○	○
*Discussed STEM careers with the DoD or government	○	○

*10. How much did each of the following resources help you learn about Army Educational Outreach Programs (AEOPs)?(*Required)

Select one per row.

	Did not experience	*Not at all*	*A little*	*Somewhat*	*Very much*
*Technology Student Association (TSA) website	○	○	○	○	○
*Army Educational Outreach Program (AEOP) website	○	○	○	○	○
*AEOP on Facebook, Twitter, Pinterest or other social media	○	○	○	○	○
*AEOP brochure	○	○	○	○	○
*My Unite mentor(s)	○	○	○	○	○
*Invited speakers or “career” events during Unite	○	○	○	○	○
*Participation in Unite	○	○	○	○	○

*11. How much did each of the following resources help you learn about STEM careers in the Army or Department of Defense (DoD)?(*Required)

Select one per row.

	Did not experience	*Not at all*	*A little*	*Somewhat*	*Very much*
*Technology Student Association (TSA) website	○	○	○	○	○
*Army Educational Outreach Program (AEOP) website	○	○	○	○	○
*AEOP on Facebook, Twitter, Pinterest or other social media	○	○	○	○	○
*AEOP brochure	○	○	○	○	○
*My UNITE mentor(s)	○	○	○	○	○
*Invited speakers or "career" events during UNITE	○	○	○	○	○
*Participation in Unite	○	○	○	○	○

*12. How SATISFIED were you with each of the following?(*Required)

Select one per row.

	Did not experience	*Not at all*	*A little*	*Somewhat*	*Very much*
*Applying or registering for the program	○	○	○	○	○
*Communicating with your Unite host site organizers	○	○	○	○	○
*The physical location(s) of Unite activities	○	○	○	○	○
*The variety of STEM topics available to you in Unite	○	○	○	○	○
*Teaching or mentoring provided during Unite activities	○	○	○	○	○
*Stipends (payment)	○	○	○	○	○
*Educational materials (e.g., workbooks, online resources, etc.) used during program activities	○	○	○	○	○
*Invited speakers or “career” events	○	○	○	○	○
*Field trips or laboratory tours	○	○	○	○	○

*13. As a result of your Unite experience, how much did you GAIN in the following areas?(*Required)

Select one per row.

	No gain	*Small gain*	*Medium gain*	*Large gain*
*In depth knowledge of a STEM topic(s)	○	○	○	○
*Knowledge of research conducted in a STEM topic or field	○	○	○	○
*Knowledge of research processes, ethics, and rules for conduct in STEM	○	○	○	○
*Knowledge of how scientists and engineers work on real problems in STEM	○	○	○	○
*Knowledge of what everyday research work is like in STEM	○	○	○	○

*14. Which category best describes the focus of your Unite experience?(*Required)

Select one.

○	Science
○	Technology
○	Engineering
○	Mathematics

*15. As a result of your Unite experience, how much did you GAIN in the following areas?(*Required)

Select one per row.

	No gain	*Small gain*	*Medium gain*	*Large gain*
*Asking a question that can be answered with one or more scientific experiments	○	○	○	○
*Using knowledge and creativity to suggest a testable explanation (hypothesis) for an observation	○	○	○	○
*Supporting an explanation for an observation with data from experiments	○	○	○	○
*Defending an argument that conveys how an explanation best describes an observation	○	○	○	○
*Integrating information from technical or scientific texts and other media to support your explanation of an observation	○	○	○	○
*Communicating about your experiments and explanations in different ways (through talking, writing, graphics, or mathematics)	○	○	○	○

*16. As a result of your Unite experience, how much did you GAIN in the following areas?(*Required)

	No gain	*Small gain*	*Medium gain*	*Large gain*
*Defining a problem that can be solved by developing a new or improved object, process, or system	○	○	○	○
*Using knowledge and creativity to propose a testable solution for a problem	○	○	○	○
*Making a model of an object or system to show its parts and how they work	○	○	○	○
*Carrying out procedures for an experiment and recording data accurately	○	○	○	○
*Using computer models of an object or system to investigate cause and effect relationships	○	○	○	○
*Considering different interpretations of the data when deciding if a solution works as intended	○	○	○	○
*Organizing data in charts or graphs to find patterns and relationships	○	○	○	○
*Supporting a solution for a problem with data from experiments	○	○	○	○
*Defending an argument that conveys how a solution best meets design criteria	○	○	○	○
*Integrating information from technical or scientific texts and other media to support your solution to a problem	○	○	○	○
*Communicating information about your design experiments and solutions in different ways (through talking, writing, graphics, or math equations)	○	○	○	○

*17. As a result of your Unite experience, how much did you GAIN in each of the skills/abilities listed below?(*Required)

Select one per row.

	No gain	*Small gain*	*Medium gain*	*Large gain*
*Sticking with a task until it is finished	○	○	○	○
*Making changes when things do not go as planned	○	○	○	○
*Working well with students from all backgrounds	○	○	○	○
*Including others' perspectives when making decisions	○	○	○	○
*Communicating effectively with others	○	○	○	○
*Viewing failure as an opportunity to learn	○	○	○	○

*18. As a result of your Unite experience, how much did you GAIN in the following areas?(*Required)

Select one per row.

	No gain	*Small gain*	*Medium gain*	*Large gain*
*Interest in a new STEM topic	○	○	○	○
*Deciding on a path to pursue a STEM career	○	○	○	○
*Sense of accomplishing something in STEM	○	○	○	○
*Feeling prepared for more challenging STEM activities	○	○	○	○
*Thinking creatively about a STEM project or activity	○	○	○	○
*Desire to build relationships with mentors who work in STEM	○	○	○	○
*Connecting a STEM topic or field to my personal values	○	○	○	○

*19. AS A RESULT OF YOUR Unite experience, are you MORE or LESS likely to engage in the following activities in science, technology, engineering, or mathematics (STEM) outside of school requirements or activities?(*Required)

	Much less likely	*Less likely*	*About the same before and after*	*More likely*	*Much more likely*
*Watch or read non-fiction STEM	○	○	○	○	○
*Tinker (play) with a mechanical or electrical device	○	○	○	○	○
*Work on solving mathematical or scientific puzzles	○	○	○	○	○
*Use a computer to design or program something	○	○	○	○	○
*Talk with friends or family about STEM	○	○	○	○	○
*Mentor or teach other students about STEM	○	○	○	○	○
*Help with a community service project related to STEM	○	○	○	○	○
*Participate in a STEM camp, club, or competition	○	○	○	○	○
*Take an elective (not required) STEM class	○	○	○	○	○
*Work on a STEM project or experiment in a university or professional setting	○	○	○	○	○

*20. After you have participated in Unite, how far do you want to go in school?(*Required)

Select one.

○	Graduate from high school
○	Go to a trade or vocational school
○	Go to college for a little while
○	Finish college (get a Bachelor's degree)
○	Get more education after college

*21. How interested are you in participating in the following programs in the future?(*Required)

	I've never heard of this program	*Not at all*	*A little*	*Somewhat*	*Very much*
*Gains in the Education of Mathematics and Science (GEMS)	○	○	○	○	○
*Unite	○	○	○	○	○
*Junior Science & Humanities Symposium (JSHS)	○	○	○	○	○
*Science & Engineering Apprenticeship Program (SEAP)	○	○	○	○	○
*Research & Engineering Apprenticeship Program (REAP)	○	○	○	○	○
*High School Apprenticeship Program (HSAP)	○	○	○	○	○
*College Qualified Leaders (CQL)	○	○	○	○	○
*GEMS Near Peer Mentor Program	○	○	○	○	○
*Undergraduate Research Apprenticeship Program (URAP)	○	○	○	○	○
*Science Mathematics, and Research for Transformation (SMART) College Scholarship	○	○	○	○	○
*National Defense Science & Engineering Graduate (NDSEG) Fellowship	○	○	○	○	○

*22. How many jobs/careers in STEM did you learn about during Unite?(*Required)	
Select one.	
○	None
○	1
○	2
○	3
○	4
○	5 or more

*23. How many Army or Department of Defense (DoD) STEM jobs/careers did you learn about during Unite?(*Required)	
Select one.	
○	None
○	1
○	2
○	3
○	4
○	5 or more

*24. How much do you agree or disagree with the following statements about Department of Defense (DoD) researchers and research:(*Required)

Select one per row.

	Strongly Disagree	*Disagree*	*Neither Agree nor Disagree*	*Agree*	*Strongly Agree*
*DoD researchers advance science and engineering fields	○	○	○	○	○
*DoD researchers develop new, cutting edge technologies	○	○	○	○	○
*DoD researchers solve real-world problems	○	○	○	○	○
*DoD research is valuable to society	○	○	○	○	○

*25. Which of the following statements describe you AFTER PARTICIPATING IN THE Unite PROGRAM?(*Required)

	Disagree - This did not happen	*Disagree - This happened but not because of Unite*	*Agree - Unite contributed*	*Agree - Unite was primary reason*
*I am more confident in my STEM knowledge, skills, and abilities	○	○	○	○
*I am more interested in participating in STEM activities outside of school	○	○	○	○
*I am more aware of other AEOPs	○	○	○	○
*I am more interested in participating in other AEOPs	○	○	○	○
*I am more interested in taking STEM classes in school	○	○	○	○
*I am more interested in earning a STEM degree	○	○	○	○
*I am more interested in pursuing a career in STEM	○	○	○	○
*I am more aware of Army or DoD STEM research and careers	○	○	○	○
*I have a greater appreciation of Army or DoD STEM research	○	○	○	○
*I am more interested in pursuing a STEM career with the Army or DoD	○	○	○	○

26. What topic(s) from your Unite experience were most impressive?

27. How have your Unite activities or experience helped increase your interest in pursuing a career in STEM disciplines?

28. What are the three most important ways that Unite has helped you?	
Benefit #1:	
Benefit #2:	
Benefit #3:	

29. What are the three ways that we could make Unite better?	
Improvement #1:	
Improvement #2:	
Improvement #3:	

30. Please tell us about your overall satisfaction with your Unite experience.

5 | Appendix C – Mentor Questionnaire

Contact Information		
Please verify the following information:		
*First Name:		
*Last Name:		
*Email Address:		
All fields with an asterisk (*) are required.		

*1. Do you agree to participate in this survey? (required)(*Required)		
Select one.		
○	Yes, I agree to participate in this survey	(Go to question number 2.)
○	No, I do not wish to participate in this survey	Go to end of chapter

*4. What is your gender?(*Required)	
Select one.	
○	Male
○	Female
○	Choose not to report

*5. What is your race or ethnicity?(*Required)	
Select one.	
○	Hispanic or Latino
○	Asian
○	Black or African American
○	Native American or Alaska Native
○	Native Hawaiian or Other Pacific Islander
○	White
○	Choose not to report
○	Other race or ethnicity, (specify)::

*6. Which of the following BEST describes the organization you work for? (select ONE)(*Required)	
Select one.	
○	No organization
○	School or district (K-12)
○	State educational agency
○	Institution of higher education (vocational school, junior college, college, or university)
○	Private Industry
○	Department of Defense or other government agency
○	Non-profit
○	Other, (specify):

*7. Which of the following BEST describes your current occupation? (select ONE)(*Required)		
Select one.		
○	Teacher	(Go to question number 8.)
○	Other school staff	(Go to question number 8.)
○	University educator	(Go to question number 13.)
○	Scientist, Engineer, or Mathematician in training (undergraduate or graduate student, etc.)	(Go to question number 13.)
○	Scientist, Engineer, or Mathematics professional	(Go to question number 13.)
○	Other, (specify)::	(Go to question number 13.)

*8. What grade level(s) do you teach (select all that apply)?(*Required)	
Select all that apply.	
☐	Upper elementary
☐	Middle school
☐	High school
☐	N/A

*11. Do you work at a "Title-I" school?(*Required)	
Select one.	
○	Yes
○	No
○	I am not sure
○	N/A

*12. Which of the following subjects do you teach? (select ALL that apply)(*Required)	
Select all that apply.	
If answered, go to question number 14.	
☐	Upper elementary
☐	Physical science (physics, chemistry, astronomy, materials science, etc.)
☐	Biological science
☐	Earth, atmospheric, or oceanic science
☐	Environmental science
☐	Computer science
☐	Technology
☐	Engineering
☐	Mathematics or statistics
☐	Medical, health, or behavioral science
☐	Social science (psychology, sociology, anthropology)
☐	Other, (specify)::
☐	N/A

*13. Which of the following best describes your primary area of research?(*Required)	
Select one.	
○	Physical science (physics, chemistry, astronomy, materials science, etc.)
○	Biological science
○	Earth, atmospheric, or oceanic science
○	Environmental science
○	Computer science
○	Technology
○	Engineering
○	Mathematics or statistics
○	Medical, health, or behavioral science
○	Social science (psychology, sociology, anthropology)
○	Other, (specify)::
○	N/A

*14. At which of the following Unite sites did you participate? (Select ONE)(*Required)	
○	Alabama State University (AL)
○	Fayetteville State University (NC)
○	Florida State University (FL)
○	Harris-Stowe State University (MO)
○	Jackson State University (MS)
○	Marshall University (WV)
○	Michigan Technological University (MI)
○	Montana State University (MD)
○	Morgan State University (MD)
○	New Jersey Institute of Technology (NJ)
○	Savannah State University (GA)
○	Texas Southern University (TX)
○	University of Colorado, Colorado Springs (CO)
○	University of Iowa (IA)
○	University of Nevada, Las Vegas (NV)
○	University of New Mexico (NM)
○	University of Pennsylvania (PA)
○	University of Puerto Rico, Rio Piedras (PR)
○	Virginia Tech (VA)

*15. Which of the following BEST describes your role during Unite?(*Required)	
Select one.	
○	Instructor (typically a University or Army Scientist or Engineer)
○	Classroom Assistant
○	Resource Teacher
○	Other, (specify)::

*16. How many Unite students did you work with this year?(*Required)
_____ students.

*19. How SATISFIED were you with the following Unite features?(*Required)
Select one per row.

	Did not experience	*Not at all*	*A little*	*Somewhat*	*Very much*
*Application or registration process	○	○	○	○	○
*Communicating with Technology Student Association (TSA)	○	○	○	○	○
*Communicating with Unite site coordinators	○	○	○	○	○
*The physical location(s) of Unite's activities	○	○	○	○	○
*Support for instruction or mentorship during program activities	○	○	○	○	○
*Stipends (payment)	○	○	○	○	○
*Invited speakers or “career” events	○	○	○	○	○
*Field trips or laboratory tours	○	○	○	○	○

*20. The list below describes mentoring strategies that are effective ways to establish the relevance of learning activities for students. From the list below, please indicate which strategies you used when working with your students in Unite.(*Required)

Select one per row.

	Yes - I used this strategy	*No - I did not use this strategy*
*Become familiar with my student(s) background and interests at the beginning of the Unite experience	○	○
*Giving students real-life problems to investigate or solve	○	○
*Selecting readings or activities that relate to students' backgrounds	○	○
*Encouraging students to suggest new readings, activities, or projects	○	○
*Helping students become aware of the role(s) that STEM plays in their everyday lives	○	○
*Helping students understand how STEM can help them improve their own community	○	○
*Asking students to relate real-life events or activities to topics covered in Unite	○	○

*21. The list below describes mentoring strategies that are effective ways to support the diverse needs of students as learners. From the list below, please indicate which strategies you used when working with your students in Unite.(*Required)

Select one per row.

	Yes - I used this strategy	*No - I did not use this strategy*
*Identify the different learning styles that my students may have at the beginning of the Unite experience	○	○
*Interact with students and other personnel the same way regardless of their background	○	○
*Use a variety of teaching and/or mentoring activities to meet the needs of all students	○	○
*Integrating ideas from education literature to teach/mentor students from groups underrepresented in STEM	○	○
*Providing extra readings, activities, or learning support for students who lack essential background knowledge or skills	○	○
*Directing students to other individuals or programs for additional support as needed	○	○
*Highlighting under-representation of women and racial and ethnic minority populations in STEM and/or their contributions in STEM	○	○

*22. The list below describes mentoring strategies that are effective ways to support student development of collaboration and interpersonal skills. From the list below, please indicate which strategies you used when working with your students in Unite.(*Required)

Select one per row.

	Yes - I used this strategy	*No - I did not use this strategy*
*Having my students tell other people about their backgrounds and interests	○	○
*Having my students explain difficult ideas to others	○	○
*Having my students listen to the ideas of others with an open mind	○	○
*Having my students exchange ideas with others whose backgrounds or viewpoints are different from their own	○	○
*Having my students give and receive constructive feedback with others	○	○
*Having students work on collaborative activities or projects as a member of a team	○	○
*Allowing my students to resolve conflicts and reach agreement within their team	○	○

*23. The list below describes mentoring strategies that are effective ways to support students' engagement in "authentic" STEM activities. From the list below, please indicate which strategies you used when working with your students in Unite.(*Required)

Select one per row.

	Yes - I used this strategy	*No - I did not use this strategy*
*Teaching (or assigning readings) about specific STEM subject matter	○	○
*Having my students search for and review technical research to support their work	○	○
*Demonstrating laboratory/field techniques, procedures, and tools for my student(s)	○	○
*Supervising my students while they practice STEM research skills	○	○
*Providing my students with constructive feedback to improve their STEM competencies	○	○
*Allowing students to work independently to improve their self-management abilities	○	○
*Encouraging students to learn collaboratively (team projects, team meetings, journal clubs, etc.)	○	○
*Encouraging students to seek support from other team members	○	○

*24. This list describes mentoring strategies that are effective ways to support students STEM educational and career pathways. The list also includes items that reflect AEOP and Army priorities. From this list, please indicate which strategies you used when working with your students in Unite.(*Required)

	Yes - I used this strategy	*No - I did not use this strategy*
*Asking my student(s) about their educational and/or career goals	○	○
*Recommending extracurricular programs that align with students' goals	○	○
*Recommending Army Educational Outreach Programs that align with students' goals	○	○
*Providing guidance about educational pathways that will prepare my students for a STEM career	○	○
*Discussing STEM career opportunities within the DoD or other government agencies	○	○
*Discussing STEM career opportunities in private industry or academia	○	○
*Discussing the economic, political, ethical, and/or social context of a STEM career	○	○
*Recommending student and professional organizations in STEM to my students	○	○
*Helping students build a professional network in a STEM field	○	○
*Helping my students)with their resume, application, personal statement, and/or interview preparations	○	○

*25. How useful were each of the following in your efforts to expose students to Army Educational Outreach Programs (AEOPs) during Unite?(*Required)

Select one per row.

	Did not experience	*Not at all*	*A little*	*Somewhat*	*Very much*
*Technology Student Association (TSA) website	○	○	○	○	○
*Army Educational Outreach Program (AEOP) website	○	○	○	○	○
*AEOP on Facebook, Twitter, Pinterest or other social media	○	○	○	○	○
*AEOP brochure	○	○	○	○	○
*Unite Program administrator or site coordinator	○	○	○	○	○
*Invited speakers or “career” events	○	○	○	○	○
*Participation in Unite	○	○	○	○	○

*26. How USEFUL were each of the following in your efforts to expose your students to Department of Defense (DoD) STEM careers during Unite.(*Required)

Select one per row.

	Did not experience	*Not at all*	*A little*	*Somewhat*	*Very much*
*Technology Student Association (TSA) website	○	○	○	○	○
*Army Educational Outreach Program (AEOP) website	○	○	○	○	○
*AEOP on Facebook, Twitter, Pinterest or other social media	○	○	○	○	○
*AEOP brochure	○	○	○	○	○
*Unite Program administrator or site coordinator	○	○	○	○	○
*Invited speakers or “career” events	○	○	○	○	○
*Participation in Unite	○	○	○	○	○

*27. Which of the following AEOPs did YOU EXPLICITLY DISCUSS with your student(s) during Unite? (check ALL that apply)(*Required)

	Yes - I discussed this program with my student(s)	*No - I did not discuss this program with my student(s)*
*Gains in the Education of Mathematics and Science (GEMS)	○	○
*Unite	○	○
*Junior Science & Humanities Symposium (JSHS)	○	○
*Science & Engineering Apprenticeship Program (SEAP)	○	○
*Research & Engineering Apprenticeship Program (REAP)	○	○
*High School Apprenticeship Program (HSAP)	○	○
*College Qualified Leaders (CQL)	○	○
*GEMS Near Peer Mentor Program	○	○
*Undergraduate Research Apprenticeship Program (URAP)	○	○
*Science Mathematics, and Research for Transformation (SMART) College	○	○
*National Defense Science & Engineering Graduate (NDSEG) Fellowship	○	○
*I discussed AEOP with my student(s) but did not discuss any specific program	○	○

*28. How much do you agree or disagree with the following statements about Department of Defense (DoD) researchers and research:(*Required)

Select one per row.

	Strongly Disagree	*Disagree*	*Neither Agree nor Disagree*	*Agree*	*Strongly Agree*
*DoD researchers advance science and engineering fields	○	○	○	○	○
*DoD researchers develop new, cutting edge technologies	○	○	○	○	○
*DoD researchers solve real-world problems	○	○	○	○	○
*DoD research is valuable to society	○	○	○	○	○

*29. How often did YOUR STUDENTS have opportunities to do each of the following in Unite?(*Required)

	Not at all	*At least once*	*A few times*	*Most days*	*Every day*
*Work with a STEM researcher or company on a real world STEM research project	○	○	○	○	○
*Work with a STEM researcher on a research project topic assigned by the mentor/teacher	○	○	○	○	○
*Design their own research or investigation based on their own question(s)	○	○	○	○	○
*Present their STEM research to a panel of judges from industry or the military	○	○	○	○	○
*Interact with STEM researchers	○	○	○	○	○
*Use laboratory or field techniques, procedures, and tools	○	○	○	○	○
*Identify questions or problems to investigate	○	○	○	○	○
*Design and carry out an investigation	○	○	○	○	○
*Analyze data or information and draw conclusions	○	○	○	○	○
*Work collaboratively as part of a team	○	○	○	○	○
*Build or make a computer model	○	○	○	○	○
*Solve real world problems	○	○	○	○	○

*30. AS A RESULT OF THEIR Unite EXPERIENCE, how much did your students GAIN in the following areas?(*Required)

Select one per row.

	No gain	*Small gain*	*Medium gain*	*Large gain*
*In depth knowledge of a STEM topic(s)	○	○	○	○
*Knowledge of research conducted in a STEM topic or field	○	○	○	○
*Knowledge of research processes, ethics, and rules for conduct in STEM	○	○	○	○
*Knowledge of how professionals work on real problems in STEM	○	○	○	○
*Knowledge of what everyday research work is like in STEM	○	○	○	○

*31. Which category best describes the focus of your students Unite activities?(*Required)

Select one.

○	Science	(Go to question number 32.)
○	Technology	(Go to question number 33.)
○	Engineering	(Go to question number 33.)
○	Mathematics	(Go to question number 33.)

*32. AS A RESULT OF THEIR Unite EXPERIENCE, how much did your students GAIN in their abilities to do each of the following?(*Required)

Select one per row.

If answered, go to question number 34.

*32. AS A RESULT OF THEIR Unite EXPERIENCE, how much did your students GAIN in their abilities to do each of the following?(*Required)
Select on per row.

If answered, go to question number 34.

	No gain	*Small gain*	*Medium gain*	*Large gain*
*Asking a question that can be answered with one or more scientific experiments	○	○	○	○
*Using knowledge and creativity to suggest a testable explanation (hypothesis) for an observation	○	○	○	○
*Making a model of an object or system showing its parts and how they work	○	○	○	○
*Carrying out procedures for an experiment and recording data accurately	○	○	○	○
*Using computer models of objects or systems to test cause and effect relationships	○	○	○	○
*Organizing data in charts or graphs to find patterns and relationships	○	○	○	○
*Considering different interpretations of data when deciding how the data answer a question	○	○	○	○
*Supporting an explanation for an observation with data from experiments	○	○	○	○
*Defending an argument that conveys how an explanation best describes an observation	○	○	○	○
*Integrating information from technical or scientific texts and other media to support an explanation of an observation	○	○	○	○
*Communicating about experiments and explanations in different ways (through talking, writing, graphics, or mathematics)	○	○	○	○

*33. AS A RESULT OF THEIR Unite EXPERIENCE, how much did your students GAIN in their ability to do each of the following?(*Required)

	No gain	*Small gain*	*Medium gain*	*Large gain*
*Defining a problem that can be solved by developing a new or improved object, process, or system	○	○	○	○
*Using knowledge and creativity to propose a testable solution for a problem	○	○	○	○
*Making a model of an object or system to show its parts and how they work	○	○	○	○
*Carrying out procedures for an experiment and recording data accurately	○	○	○	○
*Using computer models of an object or system to investigate cause and effect relationships	○	○	○	○
*Considering different interpretations of the data when deciding if a solution works as intended	○	○	○	○
*Organizing data in charts or graphs to find patterns and relationships	○	○	○	○
*Supporting a solution for a problem with data from experiments	○	○	○	○
*Defending an argument that conveys how a solution best meets design criteria	○	○	○	○
*Integrating information from technical or scientific texts and other media to support solution to a problem	○	○	○	○
*Communicating information about design experiments and solutions in different ways (through talking, writing, graphics, or math equations)	○	○	○	○

*34. AS A RESULT OF THE Unite EXPERIENCE, how much did your students GAIN (on average) in the skills/abilities listed below?(*Required)

Select one per row.

	No gain	*Small gain*	*Medium gain*	*Large gain*
*Sticking with a task until it is finished	○	○	○	○
*Making changes when things do not go as planned	○	○	○	○
*Including others' perspectives when making decisions	○	○	○	○
*Communicating effectively with others	○	○	○	○
*Desire to build relationships with professionals in a field	○	○	○	○
*Connecting a topic or field with their personal values	○	○	○	○

*35. Which of the following statements describe YOUR STUDENTS after participating in the Unite program?(*Required)

	Disagree - This did not happen	*Disagree - This happened but not because of Unite*	*Agree - Unite contributed*	*Agree - Unite was primary reason*
*More confident in STEM knowledge, skills, and abilities	○	○	○	○
*More interested in participating in STEM activities outside of school	○	○	○	○
*More aware of other AEOPs	○	○	○	○
*More interested in participating in other AEOPs	○	○	○	○
*More interested in taking STEM classes in school	○	○	○	○
*More interested in earning a STEM degree	○	○	○	○
*More interested in pursuing a career in STEM	○	○	○	○
*More aware of DoD STEM research and careers	○	○	○	○
*Greater appreciation of DoD STEM research	○	○	○	○
*More interested in pursuing a STEM career with the DoD	○	○	○	○

36. What are the three most important strengths of Unite?	
Strength #1:	
Strength #2:	
Strength #3:	

37. What are the three ways Unite should be improved for future participants?	
Improvement #1:	
Improvement #2:	
Improvement #3:	

38. Please tell us about your overall satisfaction with your Unite experience.

6 | Appendix D – 21st Century Skills Assessment

*1. Enter the first and last name of your apprentice that you are assessing with this instrument:(*Required)

*2. Please indicate if this is the PRE (first) or POST (second) assessment you are completing for this apprentice:(*Required)	
Select all that apply.	
☐	Pre
☐	Post

*3. Enter today's date:(*Required)

4. Please rate the Apprentice on this Creativity and Innovation Skill:

Select one per row.

	Needs improvement - selects one idea without evaluation of others and/or uses existing ideas without imagining new ones	*Progressing - develops some original ideas; evaluates ideas, but not thoroughly before selection; shows some imagination in shaping ideas but stays within conventional boundaries*	*Demonstrates mastery - uses a wide range of idea creation techniques to develop several original ideas; elaborates, refines, analyzes and evaluates own ideas in order to improve and maximize creative efforts*	*Did not observe*
Ability to think creatively	○	○	○	○

5. Please rate the Apprentice on this Creativity and Innovation Skill:

Select one per row.

	Needs improvement - does not ask new questions or elaborate on the selected ideas and/or does not contribute to group discussions and/or distracts from group progress	*Progressing - considers and uses some feedback but does not seek it out; asks questions but only makes minor tweaks; contributes to group discussions and activities occasionally*	*Demonstrates mastery - asks new questions and takes different perspectives to elaborate on ideas; seeks and uses group feedback and critique to revise ideas and formulate new ones; contributes to group discussions frequently; takes initiative to ensure all group members are on task*	*Did not observe*
Ability to work creatively with others	○	○	○	○

6. Please rate the Apprentice on this Creativity and Innovation Skill:

Select one per row.

	Needs improvement - shows a lack of originality and/or understanding	*Progressing - makes some attempts of relevant originality; solutions demonstrate some understanding and creativity*	*Demonstrates mastery - implements innovative ideas to make a tangible and meaningful product; attempts creativity multiple times and understands the cyclical process of small successes and frequent mistakes; product/solution displays unique, detailed perspective*	*Did not observe*
Ability to implement innovations	○	○	○	○

7. Please rate the Apprentice on this Critical Thinking and Problem Solving Skill:				
Select one per row.				
	Needs improvement - does not use reasoning as appropriate to the situation	*Progressing - uses one type of reasoning appropriate to the situation*	*Demonstrates mastery - uses various types of reasoning (inductive, deductive, etc.) as appropriate to the situation*	*Did not observe*
Ability to reason effectively	○	○	○	○

8. Please rate the Apprentice on this Critical Thinking and Problem Solving Skill:				
Select one per row.				
	Needs improvement - fails to demonstrate how parts of a whole interact with each other	*Progressing - inconsistent in analyzing how parts of a whole interact with each other to produce overall outcomes in complex systems*	*Demonstrates mastery - analyzes how parts of a whole interact with each other to produce overall outcomes in complex systems*	*Did not observe*
Ability to use systems thinking	○	○	○	○

9. Please rate the Apprentice on this Critical Thinking and Problem Solving Skill:

Select one per row.

	Needs improvement - lacks analysis and evaluation of evidence, arguments, claims, and beliefs and/or lacks alternative points of view and/or lacks connections between information and arguments and/or does not interpret information and draw conclusions and/or does not reflect critically on learning experiences and processes	*Progressing - limited analysis and evaluation of evidence, arguments, claims, and beliefs; missing key alternative points of view; missing key connections between information and arguments; interprets information and draws conclusions based on inaccurate analysis; limited reflection on the learning experiences and processes*	*Demonstrates mastery - effectively analyzes and evaluates evidence, arguments, claims, and beliefs; analyzes and evaluates major alternative points of view; synthesizes and makes connections between information and arguments; interprets information and draws conclusions based on the best analysis; reflects critically on learning experiences and processes*	*Did not observe*
Ability to make judgments and decisions	○	○	○	○

10. Please rate the Apprentice on this Critical Thinking and Problem Solving Skill:

Select one per row.

	Needs improvement - does not attempt to solve problems and/or does not identify and ask significant questions that clarify various points of view and lead to better solutions	*Progressing - attempts to solve different kinds of non-familiar problems; identifies and asks questions occasionally that clarify a point of view and lead to better solutions*	*Demonstrates mastery - solves different kinds of non-familiar problems in both conventional and innovative ways; identifies and asks significant questions that clarify various points of view and lead to better solutions*	*Did not observe*
Ability to solve problems	○	○	○	○

11. Please rate the Apprentice on this Communication, Collaboration, Social and Cross-Cultural Skill:

Select one per row.

	Needs improvement - does not consistently articulate thoughts and ideas effectively and/or does not listen to others and/or does not consistently communicate with others to instruct, motivate, or persuade and/or utilizes media and technologies in ineffective ways	*Progressing - articulates thoughts and ideas occasionally using oral, written and nonverbal communication skills; listens occasionally to decipher meaning, including knowledge, values, attitudes, and intentions; uses communication for some purposes (inform, instruct, motivate, or persuade); utilizes some media and technologies and knows how to judge their effectiveness as well as assess their impact*	*Demonstrates mastery - articulates thoughts and ideas effectively using oral, written, and nonverbal in a variety of forms and contexts; listens effectively to decipher meaning, including knowledge, values, attitudes and intentions; uses effective communication for a range of purposes (inform, instruct, motivate and persuade); utilizes multiple media and technologies and knows how to judge their effectiveness as well as assess their impact*	*Did not observe*
Ability to communicate clearly	○	○	○	○

12. Please rate the Apprentice on this Communication, Collaboration, Social and Cross-Cultural Skill:

Select one per row.

	Needs improvement - does not work effectively and respectfully with others and/or not willing to be flexible and work toward a common goal and/or not willing to be responsible for shared work and/or does not value the individual contributions of others	*Progressing - demonstrates ability to work effectively and respectfully with diverse teams; assumes shared responsibility some of the time for collaborative work and values the individual contributions made by each team member*	*Demonstrates mastery - demonstrates ability to work effectively and respectfully with diverse teams; exercises flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal; assumes shared responsibility for collaborative work and values the individual contributions made by each team member*	*Did not observe*
Ability to collaborate with others	○	○	○	○

13. Please rate the Apprentice on this Communication, Collaboration, Social and Cross-Cultural Skill:

Select one per row.

	Needs improvement - does not contribute to the group or does not allow others to contribute and/or displays disrespect to other members of the group	*Progressing - conducts themselves in respectful, professional manner*	*Demonstrates mastery - knows when it is appropriate to listen and when to speak; conducts themselves in a respectful, professional manner; leverages social and cultural differences to create new ideas and increase both innovation and quality of work*	*Did not observe*
Ability to interact effectively with others	○	○	○	○

14. Please rate the Apprentice on this Information, Media, and Technological Literacy Skill:

Select one per row.

	Needs improvement - does not use time efficiently (time) and effectively (sources) and/or does not evaluate information	*Progressing - does not consistently access information efficiently (time) and effectively (sources); does not consistently evaluate information critically and competently*	*Demonstrates mastery - accesses information efficiently (time) and effectively (sources); evaluates information critically and competently*	*Did not observe*
Ability to access and evaluate information	○	○	○	○

15. Please rate the Apprentice on this Information, Media, and Technological Literacy Skill:

Select one per row.

	Needs improvement - does not use information to solve the issue or problem at hand and/or does not attempt to use a wide variety of valid and relevant sources and/or does not apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information	*Progressing - does not consistently use information accurately for the issue or problem at hand; does not consistently manage the flow of information from a wide variety of valid and relevant sources; does not apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information*	*Demonstrates mastery - uses information accurately and creatively for the issue or problem at hand; manages the flow of information from a wide variety of valid and relevant sources; applies a fundamental understanding of the ethical/legal issues surrounding the access and use of information*	*Did not observe*
Ability to use and manage information	○	○	○	○

16. Please rate the Apprentice on this Information, Media, and Technological Literacy Skill:

Select one per row.

	Needs improvement - does not understand how media messages are constructed and for what purposes and/or does not examine how individuals interpret messages differently and/or how values and points of view are included or excluded and how media can influence beliefs and behaviors and/or does not apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media	*Progressing - does not consistently understand both how and why media messages are constructed and for what purposes; does not consistently examine how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors; does not apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media*	*Demonstrates mastery - understands both how and why media messages are constructed and for what purposes; examines how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors; applies a fundamental understanding of the ethical/legal issues surrounding the access and use of media*	*Did not observe*
Ability to analyze media	○	○	○	○

17. Please rate the Apprentice on this Information, Media, and Technological Literacy Skill:

Select one per row.

	Needs improvement - does not utilize the most appropriate media creation tools, characteristics, and conventions and/or does not understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments	*Progressing - does not consistently utilize the most appropriate media creation tools, characteristics, and conventions; does not consistently understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments*	*Demonstrates mastery - understands and utilizes the most appropriate media creation tools, characteristics, and conventions; understands and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments*	*Did not observe*
Ability to create media products	○	○	○	○

18. Please rate the Apprentice on this Information, Media, and Technological Literacy Skill:

Select one per row.

	Needs improvement - does not use technology as a tool to research, organize, evaluate, and communicate information and/or does not use digital technologies (computers, PDAs, media players, etc.) communication/networking tools and social networks appropriately to access, manage, integrate, evaluate, and create information to successfully function in a knowledge community and/or does not apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies	*Progressing - does not use technology as a tool consistently to research, organize, evaluate, and communicate information; does not consistently use digital technologies (computers, PDAs, media players, etc.) communication/networking tools and social networks appropriately to access, manage, integrate, evaluate, and create information to successfully function in a knowledge community; does not consistently apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies*	*Demonstrates mastery - uses technology as a tool to research, organize, evaluate, and communicate information; uses digital technologies (computers, PDAs, media players, etc.) communication/networking tools and social networks appropriately to access, manage, integrate, evaluate, and create information to successfully function in a knowledge community; applies a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies*	*Did not observe*
Ability to apply technology effectively	○	○	○	○

19. Please rate the Apprentice on this Flexibility, Adaptability, Initiative, and Self-Direction Skill:

Select one per row.

	Needs improvement - does not adapt to varied roles, job responsibilities, schedules and contexts and/or does not work effectively in a climate of ambiguity and changing priorities	*Progressing - adapts to varied roles, job responsibilities, schedules and contexts OR works effectively in a climate of ambiguity and changing priorities*	*Demonstrates mastery - adapts to varied roles, job responsibilities, schedules and contexts AND works effectively in a climate of ambiguity and changing priorities*	*Did not observe*
Ability to adapt to change	○	○	○	○

20. Please rate the Apprentice on this Flexibility, Adaptability, Initiative, and Self-Direction Skill:

Select one per row.

	Needs improvement - does not incorporate feedback effectively; does not deal positively with praise, setbacks, or criticism; does not understand, negotiate, and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments	*Progressing - incorporates feedback effectively; deals positively with praise, setbacks, and criticism; does not understand, negotiate, and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments*	*Demonstrates mastery - incorporates feedback effectively; deals positively with praise, setbacks, and criticism; understands, negotiate, and balance diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments*	*Did not observe*
Ability to be flexible	○	○	○	○

21. Please rate the Apprentice on this Flexibility, Adaptability, Initiative, and Self-Direction Skill:

Select one per row.

	Needs improvement - does not set goals with tangible and intangible success criteria; does not balance tactical (short-term) and strategic (long-term) goals; does not utilize time and manage workload effectively	*Progressing - does not set goals with tangible and intangible success criteria; does not balance tactical (short-term) and strategic (long-term) goals; utilizes time and manage workload effectively*	*Demonstrates mastery - sets goals with tangible and intangible success criteria; balances tactical (short-term) and strategic (long-term) goals; utilizes time and manage workload effectively*	*Did not observe*
Ability to manage goals and time	○	○	○	○

22. Please rate the Apprentice on this Flexibility, Adaptability, Initiative, and Self-Direction Skill:

Select one per row.

	Needs improvement - does not monitor, define, or prioritize and does not complete tasks without direct oversight	*Progressing - occasionally monitors, defines, prioritizes and completes tasks without direct oversight.*	*Demonstrates mastery - monitors, defines, prioritizes and completes tasks without direct oversight.*	*Did not observe*
Ability to work independently	○	○	○	○

23. Please rate the Apprentice on this Flexibility, Adaptability, Initiative, and Self-Direction Skill:				
Select one per row.				
	Needs improvement - does not go beyond basic mastery of skills and curriculum to explore and expand one's own learning and opportunities; does not demonstrate initiative to advance skill levels toward a professional level; does not demonstrate commitment to learning as a lifelong process; does not reflect critically on past experiences in order to inform future progress	*Progressing - goes beyond basic mastery of skills and curriculum to explore and expand one's own learning and opportunities; demonstrates initiative to advance skill levels toward a professional level; does not demonstrate commitment to learning as a lifelong process; does not reflect critically on past experiences in order to inform future progress*	*Demonstrates mastery - goes beyond basic mastery of skills and curriculum to explore and expand one's own learning and opportunities; demonstrates initiative to advance skill levels toward a professional level; demonstrates commitment to learning as a lifelong process; reflects critically on past experiences in order to inform future progress*	*Did not observe*
Ability to be self-directed learner	○	○	○	○

24. Please rate the Apprentice on this Productivity, Accountability, Leadership, and Responsibility Skill:

Select one per row.

	Needs improvement - does not set appropriate goals; no plan or management strategy is created to achieve the intended result	*Progressing - sets goals, but does not complete them in a timely manner; manages work with an incomplete plan to achieve the intended result*	*Demonstrates mastery - sets and meets goals, even in the face of obstacles and competing pressures; prioritizes, plans and manages work to achieve the intended result*	*Did not observe*
Ability to manage projects	○	○	○	○

25. Please rate the Apprentice on this Productivity, Accountability, Leadership, and Responsibility Skill:				
Select one per row.				
	Needs improvement - demonstrates less than half of the attributes associated with producing high quality products including abilities to: work positively and ethically; manage time and projects effectively; appropriately multi-task; participate actively; reliable and punctual; present oneself professionally with proper etiquette; collaborate and cooperate effectively with teams; respect and appreciate team diversity; be accountable for results.	*Progressing - demonstrates more than half of the attributes associated with producing high quality products including abilities to: work positively and ethically; manage time and projects effectively; appropriately multi-task; participate actively; reliable and punctual; present oneself professionally with proper etiquette; collaborate and cooperate effectively with teams; respect and appreciate team diversity; be accountable for results.*	*Demonstrates mastery - demonstrates all of the attributes associated with producing high quality products including abilities to: work positively and ethically; manage time and projects effectively; appropriately multi-task; participate actively; reliable and punctual; present oneself professionally with proper etiquette; collaborate and cooperate effectively with teams; respect and appreciate team diversity; be accountable for results.*	*Did not observe*
Ability to produce results	○	○	○	○

26. Please rate the Apprentice on this Productivity, Accountability, Leadership, and Responsibility Skill:

Select one per row.

	Needs improvement - shows no use of interpersonal skills and/or problem solving skills	*Progressing - uses interpersonal and problem solving skills to work toward a goal; leverages strengths of others to accomplish a goal*	*Demonstrates mastery - uses interpersonal and problem solving skills to influence and guide others toward a goal; leverages strengths of others to accomplish a goal; inspires others to reach their very best via example and selflessness; demonstrates integrity and ethical behavior in using influence and power*	*Did not observe*
Ability to guide and lead others	○	○	○	○

27. Please rate the Apprentice on this Productivity, Accountability, Leadership, and Responsibility Skill:

Select one per row.

	Needs improvement - does not act responsibly on a consistent basis	*Progressing - acts responsibly with the interests of the group or project in mind*	*Demonstrates mastery - acts responsibly with the interests of the larger community in mind*	*Did not observe*
Ability to be responsible to others	○	○	○	○

7 | Appendix E – TSA's Response to FY18 Evaluation Report

AEOP Priority: Support and empower educators with unique Army research and technology resources

The FY18 evaluation continued to provide evidence of the consistently positive impact of Unite on participants. However, students in the program shared that they would like to have more hands-on experiences/content in the program. The content for Unite is driven locally in most cases by the university and the focus of the proposal. It is our recommendation that Unite work with the evaluation team to refine the Request for Proposals (RFP) for Unite to incorporate a strategy to have more common hands-on experiences across the program that could be branded Unite activities, and/or a framework for local universities to use to plan required experiences to be determined for the program.

> For the recommendation above, the TSA response is: A new Unite Request for Proposals (RFP) will be released by TSA in fall 2019. Prior to the release, TSA will work with the evaluation team to refine the RFP to incorporate the suggested items: 1) a strategy to have more common hands-on experiences across the program that could be branded Unite activities, and/or 2) a framework for local universities to use to plan required experiences to be determined for the program.

AEOP Priority: Develop and implement a cohesive, coordinated, and sustainable STEM education outreach infrastructure across the Army

As in FY16 and FY17, nearly half of mentors reported they did not specifically discuss any other AEOPs with students (48%). While improved slightly from FY17, this has been a recurring and persistent area of concern for Unite. It is recommended that Unite develop a centralized and required component of the program that includes activities that are specifically designed to introduce participants to the relevant AEOPs within their pipeline.

> For the recommendation above, the TSA response is: Although for the past several years TSA has strongly emphasized with Unite site directors the importance of informing student (and mentor) participants of the AEOP pathway/pipeline, including activities to do so, performance in this area has fallen short. TSA will again focus on this area in the next RFP by noting it as a requirement (with suggested strategies/activities) in the RFP guidelines. Further, prior to release of the RFP, TSA will learn how other consortium members satisfy this element.