# NORTH THURSTON PUBLIC SCHOOLS

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## Monitoring Report

**Report Date:** April 23, 2024

**Policy Type:** Ends

**Strategic Plan Goal 3**: **Critical Thinkers and Solution Seekers**
Every student will demonstrate skills in creative and evaluative reasoning, communication, and collaboration to address challenges in a socially just and democratic society.

**Outcome c:** Increased percentage of students who can solve real-world, interdisciplinary problems.

**Interpretation:**
Relevant and practical, real-world problem-solving opportunities provided through STEM field studies, CTE field and site-based learning experiences, student-run businesses, and rich tasks and challenges embedded in our curriculum.

**Rationale:**
STEM-connected occupations have grown to 23% of the total U.S. workforce. Unemployment trends lower among the STEM labor force (2%) compared to the non-STEM labor force (4%). STEM workers have higher median earnings than non-STEM workers (example: in 2019, $55,000 compared to $33,000). Individuals in the STEM workforce make important contributions to improving a nation's living standards, economic growth, and global competitiveness. They fuel a nation's innovative capacity through their work in research and development and in other technologically advanced activities referred to as the science and engineering enterprise.

**Tomorrow's STEM labor force---scientists, engineers, and skilled technical workers---are in our classrooms today!** Every one of our students deserves the opportunity to develop and apply problem solving skills through inquiry and hands-on experiences that are both engaging and thought-provoking. Developing the skills necessary to successfully solve real-world, interdisciplinary problems requires a complex and robust approach to instruction that engages students in opportunities where these skills are intentionally developed, modeled, and practiced. Our students need a learning environment where the skills of critical thinking, creativity, collaboration, and communication are developed and where they can grow their knowledge, insights, self-confidence, self-efficacy, and passion for learning. Our students need every opportunity to apply their mathematics, literacy, technology, research, scientific, and artistic skills to solve authentic, relevant, and practical problems facing our world today.

**Data:**

**Science: At the Elementary Level -** Students in 1st, 2nd, 4th, and 5th grades participate in a district-wide common, standards-aligned, STEM field study in our local community. These experiences include pre-trip teaching and post-trip extended learning connected to

the real-world application of the curriculum, connections to local native cultures, social emotional learning, and relevant environmental issues facing the region. Kindergarten and 3rd grade experiences, currently in the final stages of development and field-testing, will ensure every student experiences a STEM field study while in elementary school.

**Science and CTE: At the Secondary Level -** Students participate in district-wide common experiences in science at each grade level 6th-8th and students in the 7th and 8th grades, enrolled in CTE courses, have a variety of field and site-based experiences related to their CTE coursework. At the high school level, CTE opportunities are robust and varied, matching the interests of as many students as possible. And with the addition of Biology and Chemistry STEM field studies, the number of these opportunities for high school students has doubled. Student-run businesses continue to grow well past our target of 27; we are now at 30 and additional student interests continue to be explored.

**Math: At the Secondary Level –** There is an increase in the use of the various components in our enVision curriculum that foster problem solving such as 3 ACT Tasks, Pick-Your-Projects and enVision STEM. However, after this goal was set and we analyzed our post-pandemic assessment data and the needs of our students, we shifted our focus to improving the quality of core instruction and increasing implementation of Building Thinking Classrooms with the intent of increasing collaborative problem solving, student discourse, and engagement in our secondary math classes. With robust professional learning we now see this strategy incorporated into core instruction in many middle and high school classrooms and its use continues to gain momentum.

**Analysis and Conclusion:**
Over the last several years, the number of STEM field study and CTE field and site-based learning experiences that have been developed has exceeded the number required to ensure every student enrolled in NTPS has these opportunities. With at least one STEM field study in nearly every grade from Kindergarten through HS Chemistry, increased field and site-based experiences through CTE at both the MS and HS levels, and the growing number of student-run businesses, we are well over 17,000 individual student opportunities to participate in relevant and practical problem solving each year. Additionally, fostering collaborative problem solving in our secondary math classes by leveraging curricular features and high yield instructional strategies continues to positively impact student collaboration, discourse, and engagement.

We are in compliance with our goal of providing at least one high quality, locally relevant, standards-aligned STEM field study each year, maintaining our robust participation in department-sponsored field and site-based CTE experiences, increasing the number of student-run businesses, and providing increased opportunities for collaborative problem solving in math.

We will enact strategies to maintain our current commitment to providing a STEM field study opportunity for every student in grades K-8, to sustain the momentum we have for providing 2,000 CTE students opportunities to engage in a variety of field and site-based experiences, and to sustain a minimum of 27 student-run businesses through the 2024-2025 school year.
We will also continue to collaborate with partners to ensure experiences are standards-aligned and address problems that have relevance for our local community and our students.