STEM COLLEGIATE EDMONTON

POLICY 1 FOUNDATIONAL STATEMENTS

Mission:

Our school prepares students to be life-long learners, effective global communicators, creative problem solvers, and tomorrow's industry leaders. STEM Collegiate students reach their maximum potential through innovative learning opportunities in an intellectually nurturing environment that emphasizes STEM based knowledge and skills. Students, teachers, and parents work together to demonstrate a commitment to actively serving the greater community while demonstrating resilience, good judgement, and an understanding and respect of diverse viewpoints.

Vision:

To be the premier center of innovation in Edmonton, Alberta for grades 7-12 in the areas of STEM education and programming development. Students will be knowledgeable leaders, global thinkers and innovative risk takers who are inspired to solve key challenges in a rapidly changing world.

Charter Goals:

- Students will graduate with superior STEM knowledge, skills, and competencies that provide a strong foundation for lifelong learning in a fast-paced global environment.
- Students will have core STEM based knowledge and skills needed to become global innovators and problem solvers.
- Students will have the opportunity to connect with post-secondary institutions and industry to provide strong pathways into both from high school.
- Students will be community minded learners who demonstrate courage, resilience, respect, and caring for others.

Key Design Elements

- **Shared culture, values, and community hub:** The school creates a dynamic culture that is innovative, collaborative, supportive, inspiring, and respectful. High levels of collaboration form the core of our learning community. As a community hub school, we strive to build strong, caring, and respectful relationships with parents, students, teachers, community and cultural organizations, and educational and industry partners.

- **Strategic partnerships:** We connect directly and formally with both industry and post-secondary institutions to ensure our programming is relevant, leading edge, and ties into the opportunities both groups have to offer our students. We respect feedback from students that flexibility is a key design feature as we build knowledge about what opportunities exist. We find opportunities for STEM specialization early in high school and expect this will develop as students gain a better understanding of career options through our programming.

- **A balanced approach to teaching and learning**: We embrace a variety of teaching strategies. Direct instruction provides a foundation of knowledge and concepts on which to build. Through project-based, problem-based, content-based and inquiry-based methodologies, teachers challenge students to use STEM knowledge as a vehicle for continued learning across the curriculum.

- **Rigorous standards-aligned curriculum**: To have all students meet or exceed the Ministerial Order on Student Learning and the Alberta Programs of Study, STEM Collegiate helps students ameliorate deficits in prior learning, develop grade appropriate skills and knowledge, and build a foundation for future success.

- **A future-focused orientation:** Our students are further prepared for success in high school, post-secondary education, careers, and life through the acquisition of relevant STEM knowledge and skills. To this end, classwork incorporates practices, assignments, routines, and other structures that encourage students to develop invaluable skills, including creative and critical thinking; innovation and entrepreneurship; collaboration and leadership, resilience, and self-reliance.

- **Digital fluency**: Students master both the concepts and tools of the latest technology. They understand how to use technology, gaining proficiency with the latest technological innovations. Students also become technology creators, learning fundamentals of computing and coding as well as the design and creative elements represented in the maker movement. In addition, they gain the capacity to incorporate technology beyond the classroom, developing sound decision-making skills regarding the selection and use of technology.

- **Diversity and inclusion**: Alberta must broaden the talent pool and boost overall participation in STEM, from under-represented groups, especially women, students of color, and Indigenous students. Women and students of color are underrepresented in STEM disciplines, representing a disproportionately low number of STEM undergraduates. Similarly, Alberta's Indigenous students have lagged in terms of student achievement and high school completion. Broadening the appeal of grades 7-12 STEM programming to diverse groups is done through intentional programming within the current Program of Study and by the development of new and innovative Locally Developed CTF Options and Honors Courses in core subjects.

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