



Technology
Science Engineering
Math



**STEM opportunities
for each student** in
preparation for college,
career and life

Science and Engineering

A continuum of coordinated curriculum

Students in the district begin learning about science and engineering as early as pre-school. Their science and engineering experiences continue through high school and build upon what they learn year-to-year. Each student's understanding of life, physical and earth science grows richer and deeper.

This progression of student learning matches the Next Generation Science Standards (NGSS). Washington state adopted NGSS as the science learning standards for all students in 2013, at which time our district began the transition to NGSS. This work ensures graduates have solid understanding in science and engineering. It gives students a strong foundation for college, career and life – especially in an increasingly scientific and technological world.

Engineering integrated with science

The NGSS are unique as they guide students to engage with both science and engineering. Students discover the thrills of engineering by using complex thinking to tackle real world problems. When learning is relevant, students get excited about learning. Engineering challenges may include cleaning up an oil spill or designing an artificial limb for a person who has lost an arm. Students have opportunities to work directly with their community. They may study wetlands in their neighborhood and work with professionals to restore wildlife habitat. They study the science of materials and geometry to design a bridge strong enough to withstand an earthquake.



Science and Career & Technical Education (CTE) »

In our science and engineering classes, students learn about leadership, 21st Century Skills and the skills needed by certain industries. These are among the elements of CTE classroom learning. Because many middle school science classes meet CTE standards, students can earn high school CTE graduation credits while in middle school.



“... when learning is relevant, students get excited about learning.”

STEM Stats

Referenced from Washington STEM 2017 Fact Sheet & the Washington State STEM Education Alliance 2018 Report Card



The U.S. will have 9 million **STEM related job openings** by 2022.

Career and Technical Education (CTE)

Real world connections

The district's CTE courses emphasize academics as well as real world and real-life skills. CTE courses introduce students to regional careers in high demand. In today's economy, most of these careers are STEM-related careers. To open pathways to opportunity, CTE learning aligns with both industry and academic standards. Students may choose to pursue a range of credential opportunities after high school. These can include certificate and apprenticeship programs and associate and bachelor degree programs.

21st Century Skills

To succeed in college, work and life, students not only require academic knowledge, but also attitudes and skills that allow them to adapt to an ever-changing world in pursuit of their goals. STEM experiences support students to engage in:

- Communication
- Collaboration
- Citizenship
- Creativity
- Critical Thinking
- Growth Mindset



School-based

learning » CTE courses integrate academic and industry standards. CTE courses include Manufacturing, Biotechnology, Graphic Design, Sports Medicine, Engineering and Computer Science.

Extended learning » What students learn in school is enriched by learning experiences outside of school. The district offers after-school programs in which students improve academically and discover their passions for learning and careers. These programs include the district's robust K-12 robotics program. Career and Technical Student Organization (CTSO) chapters thrive at each middle and high school. Students practice leadership, engage in competitions and explore career possibilities through CTOS including Technology Student Association, DECA, Health Occupations Students of America, Educators Rising and Future Business Leaders of America.

Work-based learning » Working with industry professionals, student connect what they are learning in school-to-career possibilities in this region. The interactions with positive adult mentors at their places of work help students gain strong understanding of the knowledge and skills to succeed in careers and education after high school.

Employer partners » The district is grateful for the expertise and generosity of employer partners. They help to advise our course content and are invaluable mentors for students and teachers.



Washington state ranks
second in the nation in the
concentration of STEM jobs.



In 2017, **62% of Washington voters**
had heard of STEM, almost double
the percentage in 2013 (32%).

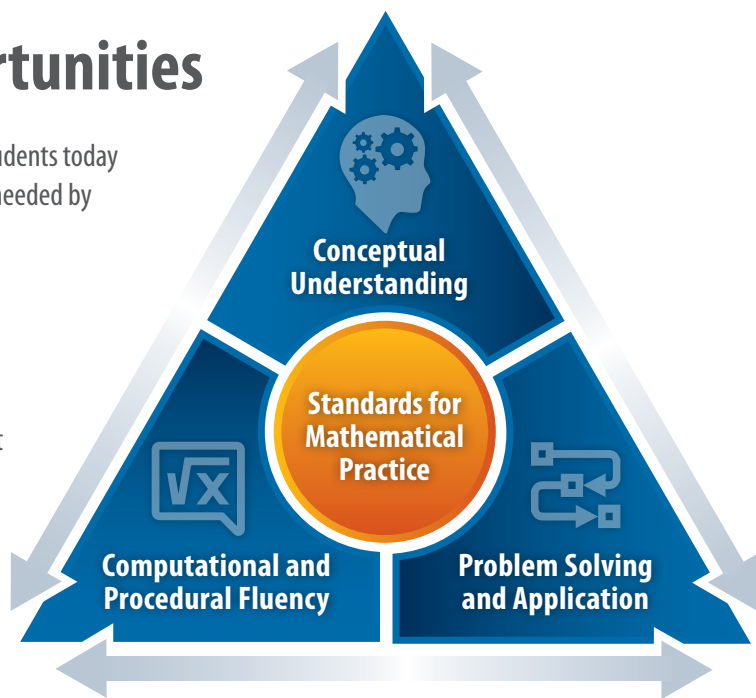
Foundation for accessing opportunities

Strong math skills have never been more important than they are today. For students today to succeed in careers of tomorrow, they need math skills far beyond what was needed by students of the past.

This is why the district's math curriculum begins in pre-school – and each year learning builds upon the previous years.

At the heart of district math teaching and learning is the district's Balanced Math Model. This structure of teaching and learning math ensures each student gains a solid math foundation. Teaching and learning math this way builds each student's understanding of concepts, procedures and mathematical problem-solving. These understandings are a foundation for student success in college, career and life.

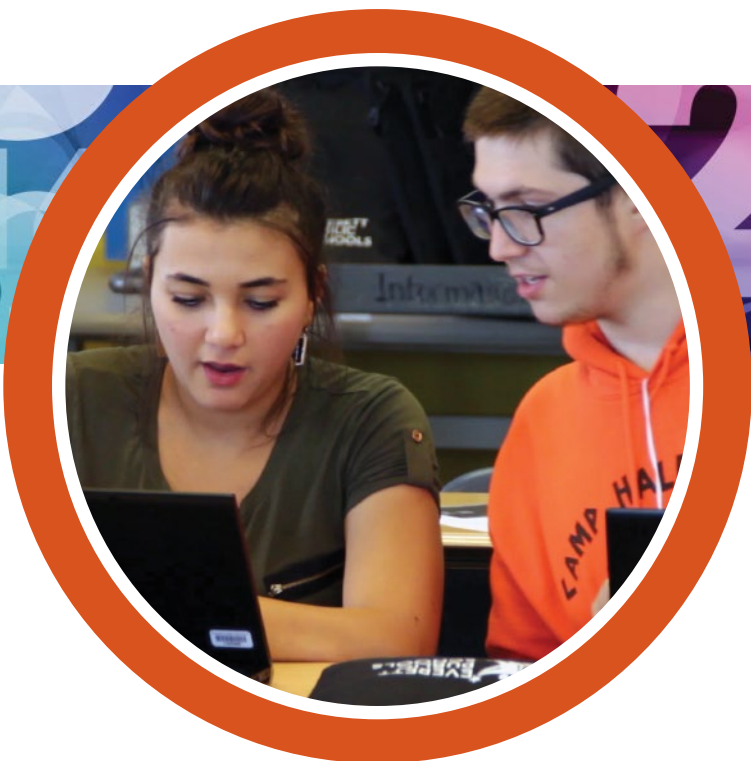
The curriculum in our schools aligns with the Common Core State Standards, which are also Washington's mathematics K-12 learning standards.



Mathematics in STEM » Solid math education helps grow scientists and engineers – and it is an essential skill for a citizenry that thinks creatively and critically.

The district's math curriculum aligns with Career and College Ready Standards, preparing students for:

- **Mathematics for life**
- **Mathematics for the workplace**
- **Mathematics for the scientific and technical community**



Career Connected Learning

College, career and life ready



Our district's graduates are college, career and life ready. They have the academic knowledge, attitudes and skills to successfully transition to life choices after high school. These choices may include college, workforce training or careers. Their learning and experiences in the district prepare them to adapt to an ever-changing world as they pursue life goals.



Career Awareness

Learning about work » Students build awareness of the variety of careers available and the role of postsecondary education.

Career Exploration

Learning for work » Students explore career options for the purpose of motivating and informing their high school and postsecondary education decisions.

Career Preparation

Learning through work » Under the supervision of industry/community professionals, students apply learning through practical experience and continue to develop knowledge and skills necessary for success in careers and postsecondary education.

Career Pathways

Program vision » After completing core high school coursework, students have the opportunity to enter a career pathway and gain the academic, technical, and workplace knowledge and skills allowing for seamless continuation to postsecondary credentials.



**Aerospace
& Advanced
Manufacturing**



**Energy &
Sustainability**



**Medical &
Health Careers**



**Information &
Communication
Technology**



**Education
Careers**

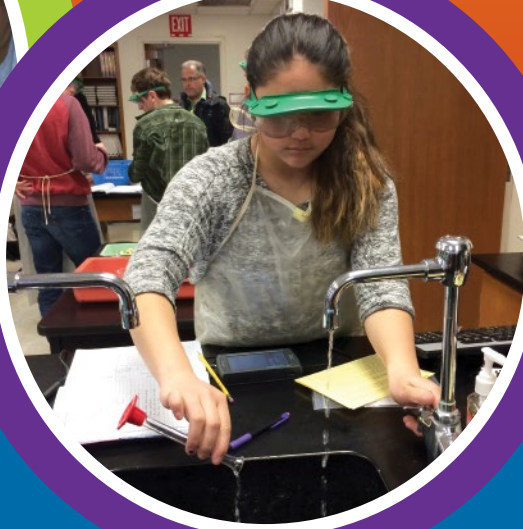


**Business and
Professional
Services**



The solution to our economy and social challenges is the same: creating a viable and sustainable economy that creates good jobs. And there is a general agreement as to what that new economy must be based on. One word: Innovation."

AUTHOR TONY WAGNER, CREATING INNOVATORS



Everett Public Schools
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www.everettsd.org

Mission – *Inspire, educate, and prepare each student to achieve to high standards, contribute to our community, and thrive in a global society.*

Vision – *Our students will lead and shape the future.*

The district shall provide equal educational opportunity and treatment for all students in all aspects of the academic and activities program without regard to race, color, national origin, creed, religion, sex, sexual orientation, gender expression, gender identity, veteran or military status, the presence of any physical, sensory or mental disability or the use of a trained dog guide or service animal by a student with a disability.

Designated to handle inquiries about nondiscrimination policies are:

- **Affirmative Action Office** – Randi Seaberg, rseaberg@everettsd.org, 425-385-4104
- **Title IX Officer** – Mary O'Brien, MO'Brien@everettsd.org, 425-385-4106
- **504 Coordinator** – Becky Ballbach, rballbach@everettsd.org, 425-385-4063
- **ADA Coordinator** – Becky Clifford, rclifford@everettsd.org, 425-385-5250