Science Education Strategic Plan

Vision
Stafford County Public School students will graduate from high school positioned to succeed in post-secondary education and to complete successfully in an increasingly global workforce that requires 21st century math and science knowledge and problem solving skills. Stafford County Public Schools graduates will be well-informed citizens able to make responsible decisions in their personal and public lives regarding issues that will impact their lives.

Mission
To continuously enhance the quality of science teaching and learning in Stafford County Schools so that our students will excel in science and continue to grow to become scientifically literate students.

SCPS Division Goal 1 – Instruction: Advance student learning through rigorous instruction that meets the diverse needs of each student.

Science Goal One
Improve student achievement through standards-based science education.

1.1 Design and implement a standards-based curriculum program that supports inquiry-based and problem-based learning.
   a. Provide PD for a core group of teachers in inquiry-based instruction.
   b. Using a core group of teachers, design a standards-based curriculum map that supports inquiry-based science education.
   c. The core group of teachers provides leadership in implementation and professional training of the standards-based curriculum map.

1.2 Improve opportunities for students to take four years of science at the high school level.
   a. Provide standards-based curriculum, instruction, and assessment in all classrooms that reflect rigor and relevance.
   b. Provide opportunities for students to investigate science careers.
   c. Improve communication with students and parents regarding pathways to achieve a science career.

1.3 Identify administrative monitoring mechanisms that support standards-based science instruction
   a. Example – Science Look Fors training for administrators
   b. Curriculum and instruction monitoring instruments for science

Goal 2 – Employee Retention and Recruitment: Retain and attract quality, diverse employees dedicated to continuous learning and the pursuit of excellence.

Science Goal Two

Improve teacher satisfaction and sense of value by investing in teacher professional growth.

- 2.1 Provide high quality professional development that allows teachers to grow professionally during their career.
  - a. Examples – Summer symposium, SMV workshops, graduate courses
- 2.2 Identify teacher leaders and increase teacher leadership capacity.
  - a. Collaborate with principals to identify teacher leaders who are committed to science education reform.
  - b. Graduate level coursework through UMW or other institutions of high education.
- 2.3 Utilize SCPS science expertise rather than outside consultants for professional development.
  - a. Utilize teachers to provide on demand professional development that supports standards-based curriculum.

SCPS Division Goal 3 – Safety and Security: Ensure a safe and secure environment in which to learn and work.

Science Goal Three

Manage and reduce risk division-wide as it relates to science instruction.

- 3.1 Continue to train teachers in effective science safety methods for the classroom and laboratory.
- 3.2 Review and revise chemical hygiene plan on a biannual basis to ensure up to date compliance with the code.
- 3.3 Continue to complete chemical hygiene audits annually.

SCPS Division Goal 6 – Stakeholder Relations: Create a community vested in SCPS by providing opportunities for awareness and involvement to all stakeholders.

Science Goal Four

Engage parents in education programs designed to inform them about the importance of science education to 21st century skills and careers.

- 4.1 Develop a parent information/communication campaign to inform parents about the importance of science to 21st century skills and careers.
  - a. Examples – Division website, school programs, summer camps, etc.

4.2 Utilize Stafford human resources (parents and community members) to act as advocates for the proliferation of science career pathways.
   a. Mentorship programs.
   b. Business partnerships for placing apprentices.

Goal 4 – Planning: Manage resources efficiently through effective and continuous planning to prepare for a changing environment.

Science Goal Five

Ensure each school has adequate science instructional materials and equipment.

5.1 Investigate current science material and equipment inventory to establish trends in replacement need.

5.2 Develop a science material and equipment replacement cycle for such equipment as microscopes, electronic balances, probeware, etc.

5.3 Collaborate with the technology department to train teachers on current technology and identify emerging technologies that will allow our students to remain competitive in a global market.

After school programs that support the curriculum.