



DATE: January 10, 2018
TO: Sumner School District Board of Directors
FROM: Dr. Lindsay Lombardo - Director of Secondary Curriculum
RE: Science Board Report

Purpose: The purpose of this report is to inform the Board of Directors regarding Secondary Science in the Sumner School District.

Vision 2020: Science is included in Academics Goal 1 in Vision 2020. In 2017, students were assessed on the Washington State Learning Standards for Science by the Science MSP in 8th grade and the Biology End of Course Exam (EOC) in 11th grade. Beginning in spring 2018, students in 8th and 11th grade will take the Washington Comprehensive Assessment of Science (WCAS). Test and item specifications for the assessment are expected to be released in January 2018. WCAS at 11th grade will be used for federal accountability in 2018-2020. Class of 2021 will need to meet standard on WCAS for graduation.

Background and Current Reality:

- The majority of our current science texts and resources have a copyright that dates between 1995-2005, with some newer texts available for 6th and 7th grade.
- Washington State Learning Standards (WSLS) for Science were adopted in 2013, meaning that most of our texts and resources are not aligned to current standards and best practice in science instruction.
- In the 2016-2017 school year, the science program in the SSD began the adoption process.
 - A planning team, consisting of one teacher representative from each secondary school, investigated current resources and best practices.
 - An adoption team consisting of teachers, classified staff members, and administrators was assembled.
- The purpose of the adoption team in 2016-2017 was to build background knowledge that provided capacity to make a decision regarding recommended materials during the current school year (2018-2019).
 - Major areas of learning and study for both teams included an investigation of the following:
 - Next Generation Science Standards (Performance Expectations and the three dimensions of Disciplinary Core Ideas, Crosscutting Concepts, and Science and Engineering Practices)
 - 5E model for science instruction
 - Ambitious Science Teaching Practices
 - Elmore's Instructional Core
 - Current models for secondary science course alignment.



- During the current school year (2018-2019), the Secondary Science Adoption Team has participated in an extensive review of curricular resources for 6th, 7th, and 8th grade science as well as Biology, Chemistry, Physics, and Physical Science.

How does this relate to board policy? The process for selection and adoption of core curricular materials is specifically addressed in Board Policy 2020 and 2020P.

Budget: The budget for the secondary science work during the 2017-2018 school year, including the partial science curriculum adoption, is \$458,000. Since the curriculum is being phased in over two years, we will need to budget for the remainder of the adoption cost for 2018-2019.

Student Performance: High quality science instruction has the potential to have a meaningful impact on student learning across content areas. The skills that students learn in science give them leverage in their other courses and help students make connections between school and community. These skills include, but are not limited to, the ability to work both independently and collaboratively, to explore, to design, and to think critically. In order for this to happen, course frameworks and sequence must be intentionally aligned and collaboratively developed.

Relationship to Equity: One of the foundations upon which the Washington State Learning Standards for Science were built is the concept of “all standards, all students.” When students experience an intentional and aligned science curriculum, each should have equitable preparation to access advanced courses at BLHS and SHS. Furthermore, equitable access in this area supports our work within the STEM Vision.

Benefiting parties: The current work in secondary science benefits teachers who feel confident in a guaranteed and viable curriculum and course sequence as well as students, who will experience engaging and aligned courses. The community also has a vested interest in creating well educated citizens who utilize the critical thinking skills developed through the three-dimensional approach to science learning.

What is working well? The adoption cycle and process provide guidelines for a meaningful and predictable system. Secondary science teachers are doing an exceptional job collaboratively learning about, and applying, best practice in science instruction. Our science teacher leaders have demonstrated themselves to be competent, inspirational guides in this work.

Where are opportunities for improvement? Communication between grade levels and schools could be significantly improved to facilitate greater alignment and a guaranteed/aligned experience for all students in the Sumner School District. The selection of new materials, as well as additional professional learning for teachers, will give us the opportunity to align to



Washington State Learning Standards while simultaneously providing new instructional materials and support in grade levels 6-12.