

MATH SYSTEMS IMPROVEMENT FRAMEWORK

BACKGROUND

Improving math and science achievement is one of the SBE's five strategic plan goals. The state continues to strive to make significant gains in achievement, but the results to date have not been encouraging; student performance on the 2010 math and science High School Proficiency Exams did not show marked improvement. As the state looks for ways of supporting change that will show meaningful improvement in students' achievement in mathematics and science, three important questions warrant consideration:

- How are we leveraging current resources to make a positive difference in the system now?
- How are we learning from past initiatives to inform systemic improvements in mathematics and science?
- What are we learning from new research in mathematics to inform systemic improvements in mathematics and science?

During difficult fiscal times, resources available must be targeted and aligned to create the largest impact. As states and school districts struggle to improve student learning outcomes in mathematics and science, many district administrators are looking toward the state and Educational Service Districts (ESDs) to provide guidance in sustaining and prioritizing these improvement efforts.

The focus for this meeting's presentation is an overview of a system-wide mathematics improvement strategy. The SBE will hear about state science initiatives at its November meeting, and will explore more deeply policy strategies to consider as part of its role in providing system oversight and advocacy for math and science achievement.

Mathematics Improvement. The **Mathematics Systems Improvement Framework** is one response to the requests for state guidance—an umbrella under which all coordinated improvement efforts will fall.

The Mathematics Systems Improvement Framework is a collaborative venture involving expert representatives from the Office of Superintendent of Public Instruction (OSPI), ESDs, higher education, and school districts. Based on a recommendation from the Washington State Mathematics Leadership team, a committee was formed to develop this project in spring 2009. The team now serves as an advisory panel for the project. OSPI District and School Improvement and Accountability (DSIA) is piloting the Mathematics System Improvement Framework in its current work with districts and schools. The framework provides DSIA the foundation to define and differentiate supports, services, and professional development planning.

Building off the successful implementation of the K-12 reading model, the Mathematics Systems Improvement Framework provides Washington's school districts actionable steps and guidance around which a comprehensive and effective K-12 mathematics system can be built. Anchored in current mathematics education research, implementation of the Mathematics Systems Improvement Framework will provide clarity and vision for school districts to improve mathematics teaching and learning. These improvement efforts can be focused and aligned state-wide through the Mathematics Systems Improvement Framework.

The Mathematics Systems Improvement Framework is organized in five components that interact over a multi-year period:

- 1) Mathematics Leadership
- 2) Core/Tier I Mathematics Program
- 3) High Quality Mathematics Instruction
- 4) Mathematics Assessment System
- 5) Tier II and Tier III Mathematics Intervention

Schools such as Crownhill Elementary School, recently featured in a case study¹ on the SBE website for winning three 2009 Washington Achievement Awards, have already implemented the above five components of the framework, finding considerable improvement in mathematics achievement. The Mathematics Systems Improvement Framework provides guidance to all districts working towards gains in mathematics and gives the state and ESDs common language and structure to support teachers and districts.

EXPECTED ACTION

No action needed. The SBE may want to suggest discussion questions for the November meeting when a deeper discussion of ways to improve math and science achievement will be on the agenda.

¹ <http://www.sbe.wa.gov/documents/2010.08.29%20Crown%20Hill%20Elementary%20narrative.pdf>