



## Washoe County School District Effective Teaching and Learning: A *Vision* for K-5 Mathematics

A coherent mathematical program is guided by the Nevada Academic Content Standards for Mathematics yet is grounded in a shared vision of teaching and learning. It is the interweaving of these two elements that together build powerful mathematical learning experiences for our students that result in high level of mathematical understanding. This is applicable within the school setting and beyond with application in daily life and college and career readiness.

While curriculum, materials, professional development, and assessment all play a critical part of systemic support for teachers and instruction, they have little impact unless they are effectively enacted in all classrooms.

Research supports the following elements of effective mathematics instruction.

### **Effective mathematics instruction:**

- is thoughtfully planned with teachers taking the time to make sense and understand the mathematics they are teaching.
- places an emphasis on problem solving, reasoning, and sense-making balancing conceptual understanding, procedural fluency and application.
- incorporates on-going use of the formative assessment processes consistently utilizing practices that result in adjustments to instruction.
- is constructed using alternative approaches and multiple representations leading to more efficient and sophisticated methods for solving problems.
- uses contexts and connections to engage students and increase the relevance of what is being learned.
- provides frequent opportunities for students to communicate their reasoning engaging in productive discourse and written justifications.
- incorporates on-going cumulative review and distributed practice.
- employs technology to enhance learning where appropriate.
- results from individual and collaborative teacher and student reflection.