

**Report from Ad Hoc Committee on the
Research Base of the *Math Explorations* Curriculum
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Summary: The research base for the *Math Explorations* (ME) curriculum strongly shows that SMCISD's adoption of ME satisfies NCLB's requirement of being developed on scientifically based research that has been shown to be effective for student learning. The readability level of ME is at the appropriate level, based on a readability study of the reading level.

San Marcos CISD convened the ad hoc committee to discuss the research base upon which the curriculum was developed and to determine if the No Child Left Behind (NCLB) requirement for research based programs and resources had been met. Important factors in the discussion and final determination included the developers' expertise in mathematics, the outside evaluator's report, and the readability report.

The *Math Explorations* (ME) curriculum is based on research, and incorporates the best ideas from research about the pedagogical approach it supports. The ME framework is based on a collection of guiding principles supported by leading research in mathematics education that appears in nationally and internationally recognized journals.

Gerald Kulm, an outside independent evaluator of the curriculum, endorsed the curriculum, pointing to data "that attests to its effectiveness in preparing Texas students for further mathematical success." He observed, that "not only is it based on research, it incorporates the best ideas from research in the way that it allows students to investigate and explore ideas before they are given procedures, and then encourages the students to reflect on what they are learning. These are the critical hallmarks of the best and most effective curricula, and two of the greatest strengths of the Mathworks program." He continued by writing, "My evaluation found that the *Math Explorations* textbook is impressive in its preparation of students for Algebra I."

The *Math Explorations* curriculum has been pilot tested in various sites with different populations of students. The data from pilot studies, analyzed by Dr. Gail Ryser, Larry Price, and Phil Vaughan, Texas State University, as well as by Dr. Gerald Kulm, Texas A&M, about ME indicates that the schools that have used the curricula improved their Algebra Readiness (as indicated by Orleans-Hanna scores) without detrimental effects on their TAKS scores. A pilot study of Midland sixth graders showed that the group using *Math Explorations* had improved performance in TAKS versus a comparison group that did not use the curriculum.

Gerald Kulm summarized his findings by observing: "The great thing I like about the Math Explorations and what encourages me and what interests me in following it as an evaluator is that it's an example of something that's *not* a mile-wide and an inch-deep. It is very deep, the exercises, the examples, the development - gets at mathematics in a deeper way. It conforms with, and aligns with, many of the better ideas, and more recent ideas, about mathematics curriculum." From looking at the data, he concluded, "The notion that this program can close this achievement gap is probably one of the most exciting things for the future of math education!"