Understanding
ESSA EVIDENCE

In 2015, as part of the reauthorization of the Elementary and Secondary Education Act (ESEA), Congress passed and the President enacted the Every Student Succeeds Act (ESSA), which replaced No Child Left Behind. ESSA encourages local and state educational agencies and schools to place a strong emphasis on evidence-based interventions, strategies, or approaches when purchasing and adopting solutions and services.

Within the law, evidence-based solutions are described as programs showing evidence of producing positive results on student outcomes. Specifically, the type of evidence backed by formal research and studies.

ESSA defines four tiers of evidence:

Tier 1—Strong:
Supported by one or more experimental studies.

Tier 2—Moderate:
Supported by one or more quasi-experimental studies.

Tier 3—Promising:
Supported by one or more correlational studies.

Tier 4—Demonstrates a Rationale:
Practices that have a logic model, are supported by research, and have some effort of study underway.

Vmath® Third Edition is a targeted math intervention for struggling students in **grades 2–8** that provides additional opportunities to master critical math concepts and skills. **Vmath** delivers essential content using strategies proven to accelerate and motivate at-risk students.

Vmath:
- Delivers focused, standards-based instruction, while also providing foundational skills necessary for grade-level success
- Wraps around any core math program
- Provides conceptual development, procedural skill and fluency practice, and application activities
- Delivers explicit support in the skills expected by new, more rigorous standards

TIER 2 — MODERATE Criteria as Defined by ESSA	How *Vmath* Meets the Moderate Criteria
• Demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes • Based on at least one well-designed and well-implemented quasi-experimental study.	✓ Quasi-experimental study examined the impact of an integrated learning system, **Vmath**, on students considered at risk of academic failure on the state outcome assessment of mathematics. ✓ Two groups of students were evaluated to determine the effectiveness of **Vmath**. The treatment group received computed-assisted math support in addition to an Algebra I class where the control group received an Algebra I class only. ✓ Sample for the study included 1,676 ninth grade students from a large, suburban Texas school district. ✓ Findings showed statistically significant differences on achievement in mathematics between the treatment and control groups. ✓ Study concluded students considered to be at-risk of academic failure in mathematics improved on the Texas Assessment of Knowledge and Skills (TAKS) test with remediation and support from **Vmath**.

*Study used for ESSA classification: Harris, T. D. (2011). An integrated learning system: Impact on at-risk students' ninth grade TAKS mathematics achievement (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3483143)

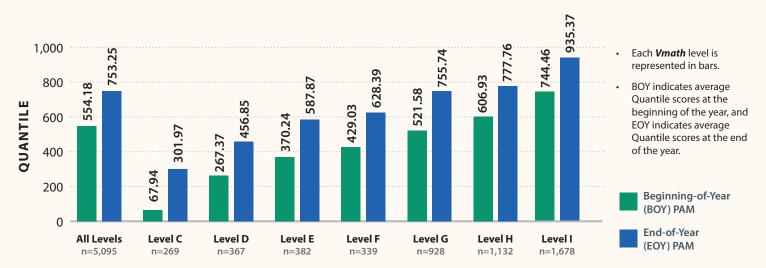**Research & Evidence:** **_Vmath_** Research Summary: Independent Articles
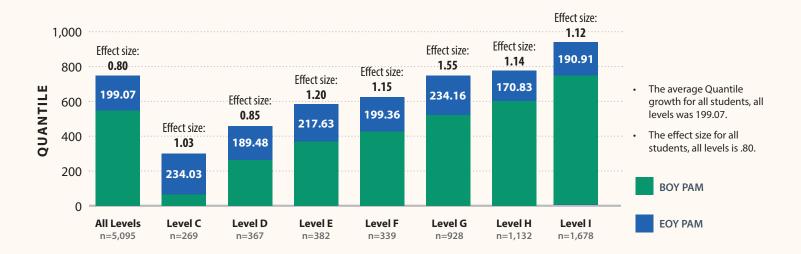**_Vmath_** Research Foundation
Results: **_Vmath_** Third Edition 2015–2016 Results

Voyager Sopris Learning® Data Summary

Vmath Third Edition results show students are making significant progress toward closing the achievement gap with peers. Results from the 2015–2016 National Summary are represented in the graphs below. Data comes from the Progress Assessment of Mathematics (PAM) created by MetaMetrics®, developer of the Quantile® Framework for Mathematics. All students, at all levels had an average Quantile growth of 199.07. Effect sizes across all levels are regarded as large and educationally meaningful.

Vmath Third Edition 2015–2016 Results by Program Level

- Each **_Vmath_** level is represented in bars.
- BOY indicates average Quantile scores at the beginning of the year, and EOY indicates average Quantile scores at the end of the year.

Legend: **Beginning-of-Year (BOY) PAM**, **End-of-Year (EOY) PAM**

- The average Quantile growth for all students, all levels was 199.07.
- The effect size for all students, all levels is .80.

Legend: **BOY PAM**, **EOY PAM**

According to Cohen (1988), effect sizes (for differences expressed as means) of 0.2 are considered small, 0.5 are medium, and 0.8 are large. An effect size of 0.3 is considered educationally meaningful.