

# *enVisionmath2.0* Grade K-5 Response to EdReports Evaluation

**enVisionmath2.0** is based on years of research on how students learn and what teachers want and need to effectively help their students. The authors of **enVisionmath2.0** wrote the program to reflect the latest in high-quality standards in the United States, which includes the Common Core State Standards for Mathematics (CCSS-M). The authorship team includes members of the Common Core State Standards for Mathematics K-12 development and review teams and a member of the mathematical progressions writer/reviewer team. All are widely published in books, professional journals, and articles; conduct extensive field research; and are recognized thought leaders in how children learn, teacher education, and professional development. Please see an open letter from the **enVisionmath2.0** author team at

<http://envisionmath.com/edreports>

After an in-depth analysis of the EdReports review of **enVisionmath2.0**, the author team and their editors determined that the review included

- Factual errors,
- Misunderstandings of the instructional model,
- Misinterpretations of the CCSS-M and the Publisher's Criteria, and a lack of understanding of effective curriculum development and pedagogy.

The **enVisionmath2.0**, the author team and their editors provided EdReports with over 60 pages of comments and concerns around these three areas, however EdReports made only minor corrections to their review and determine that our concerns were "philosophical differences about our indicators and their interpretation, rather than actual errors or accuracy issues." The author team and editors have provided access to detailed documentation on their analysis of the review along with our important materials at <http://envisionmath.com/edreports>.

## Factual Errors

Factual errors and inaccuracies can be found throughout the review. A few of these errors and inaccuracies were removed only after they were pointed out; however the majority of them remain in the review. One or more examples for each category are listed below.

**Example: Indicator 1d - The amount of content designated for one grade level is viable for one school year in order to foster coherence between grades.**

While developing **enVisionmath2.0**, the authors spent a great deal of time and effort researching the appropriate number of lessons for each grade level. The authors worked with teachers and administrators to identify their curricular needs to enable them to teach with focus, depth, and coherence. This includes ensuring that the depth of understanding of key concepts is accomplished before any year-end assessments, which can occur as early as March or April. Across Grades K-5 the reviewers determined that the 106-112 lessons (depending on the grade) were not viable and that the program would require significant “modification by teachers.”

The EdReports Evidence Guide indicates that the material should fit into a standard school year of 140-190 days. This is not a realistic guideline given all that teachers must do in a school year and given that end-of-year assessments can take place as early as March or April. Keeping in mind teacher feedback noting that there was too much material to teach in a year if one cares about conceptual understanding, real attention to the mathematical practices, and supporting all students, the **enVisionmath2.0** team very purposely decided on a smaller number of lessons supplemented by a significant array of support material to enhance success for all students. Technology experiences, powerful diagnosis and remediation materials, in-depth assessments, and intervention materials are some of the resources teachers can use to ensure success for all. Our response to this error was ignored and no points were awarded as part of this indicator.

## Misunderstanding of the enVisionmath Instructional Model

A reviewer of any curriculum needs to know the goals and philosophical base for that curriculum before examining and critiquing any aspect of it.

**Example: Reviewer Comment - “Some of the lessons start with a problem, which could develop conceptual understanding, but quickly transition to simply filling out a worksheet.”**

This is factually inaccurate as EVERY lesson in **enVisionmath2.0** begins with problem-based instruction (*Solve & Share*). This comment shows a fundamental misunderstanding of the instructional model in **enVisionmath2.0** and specifically the role of the *Solve & Share* and the importance of the corresponding Teacher Edition’s support. The importance of problem-based instruction is one of the strongest research findings in the field of mathematics education. The *Solve & Share* is the first and a key instructional step in teaching **enVisionmath2.0** and developing conceptual understanding. The *Solve & Share* is one of many key places in **enVisionmath2.0** for developing the mathematical practices and it is critical to providing rigorous instruction. This program component was completely overlooked in the EdReports review.

In the final review EdReports removed specific references to instruction being through worksheets based on our feedback, however the inclusion of that phrase for what is a consumable work-text where students are meant to work through the problem-based

task still indicates the instructional model and the role of the *Solve & Share* were not understood at the time of the review.

## **Misinterpretations of the CCSS-M and the Publisher’s Criteria and a lack of understanding of effective curriculum development and pedagogy.**

Some comments show a very limited understanding of mathematics content and instructional strategies that lead to significant misunderstandings of CCSS-M. Many of the evidence statements are invalid because of these limited understandings and misinterpretations.

**Example: Reviewer comment - “In lesson 10-7 (grade 1), the sole lesson addressing addition of two-digit numbers, the worksheet begins with three problems written vertically that stress addition using place value. However, the next four problems...[lose] the focus on place value.”**

The CCSS-M at Grade 1 for addition and subtraction call for the development of strategies for doing addition and subtraction that are based on place value, properties, and number relationships. EVERY lesson in Topic 10 does exactly that. The fact that this reviewer does not recognize the other lessons as place-value based shows a limited understanding of mathematics content and instructional strategies that lead to significant misunderstandings of CCSS-M.

The Publisher's Criteria, although not part of the original release of the CCSS-M, attempt to provide additional guidance on how the standards should be taught. The Publisher’s Criteria states:

**Careful Attention to Each Practice Standard: Materials attend to the full meaning of each practice standard.** For example, MP.1 does not say, “Solve problems.” Or “Make sense of problems.” Or “Make sense of problems and solve them.” It says “Make sense of problems and persevere in solving them.” Thus, students using the materials as designed build their perseverance in grade-level-appropriate ways by ***occasionally solving problems*** that require them to persevere to a solution beyond the point when they would like to give up.

However in the EdReports Evidence Guide, reviewers are tasked to make sure that wherever MP.1 is marked, students are tasked to both make sense of problems and persevere in solving them. The Publisher’s Criteria do not indicate that every aspect of every Practice needs to be a focus of every learning opportunity where the practice is referenced.

Furthermore, it is unrealistic to expect that every task in which students are engaged would embrace the “full meaning” of a Mathematical Practice. This would depend on both the Practice and the tasks in which the students are involved. So, an exercise

labeled with a particular Mathematical Practice is there because that exercise involves at least one aspect of a Mathematical Practice, not all aspects of that mathematical practice.

A student's understanding of the full meaning of a Practice does not develop in one lesson and certainly not in one task. A look at these standards in the CCSS-M highlights the iterative and recursive nature of these standards -- these standards are the same standards for all grades and courses. The **enVisionmath2.0** philosophy and approach relative to the Standards for Mathematical Practice aligns to the intent in the CCSS-M: throughout every lesson are opportunities to highlight and discuss a particular aspect of one of the eight practices and these opportunities are identified with a mathematical practice label.

Mathematical Practice lessons provide an opportunity to dig deeply into the meaning of a mathematical practice and pull together all aspects of that mathematical practice. These two elements combine so that over the instructional year (and continuing throughout each grade level) students continue to grow in their mathematical maturity as they extend and refine their understanding of and utility with each of the Standards for Mathematical Practice.