# Math Textbook Rubric

**THE SCHOOL DISTRICT OF PHILADELPHIA**  
**OFFICE OF CURRICULUM, INSTRUCTION, AND ASSESSMENT**  
**MATH TEXTBOOK RUBRIC**

<table>
<thead>
<tr>
<th>Network:</th>
<th>Date:</th>
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<tbody>
<tr>
<td>Name:</td>
<td><strong>Product:</strong> enVisionmath 2.0 Grades 6-8 ©2017</td>
</tr>
<tr>
<td>Vendor: (Please check off the Vendor from the list below)</td>
<td><strong>Content Area:</strong> Mathematics</td>
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<tr>
<td>Great Minds</td>
<td><strong>Targeted Area:</strong> Grades 6-8</td>
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<tr>
<td>Houghton Mifflin</td>
<td>IT/ETG Review:</td>
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<tr>
<td>McGraw Hill</td>
<td><strong>Publisher:</strong> Pearson</td>
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**X Pearson**

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<thead>
<tr>
<th>Category</th>
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<tbody>
<tr>
<td>3 = Extensive Meets all of the criteria</td>
<td>2 = Sufficient Meets most of the criteria</td>
<td>1 = Weak Meets some of the criteria</td>
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## I. Materials align to PA Common Core Standards for Mathematics

- Content Standards alignment to PA Common Core Standards has Common Core State Standards (CCSS) correlation
- Standards for Mathematical Practice are routinely reinforced with suggestions and resources provided for implementation
  - Make sense of problem and persevere in solving them; Reason abstractly and quantitatively; Construct viable arguments and critique the reasoning of others; Model with mathematics; Use appropriate tools strategically; Attend to precision; Look for and make use of structure; Look for and express regularity in repeated reasoning.)
- Standards for Mathematical Practice are connected to Reading, Writing, Speaking and Listening Standards

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Evidence:
Content Standards alignment to PA Common Core Standards has Common Core State Standards (CCSS) correlation

enVisionmath2.0 provides 100 percent alignment to both the Common Core and the PA Core Standards for Mathematics. Correlations are available at http://www.pearsonschool.com/pa.

In order to ensure complete coverage of the Pennsylvania Eligible Content, Pearson has developed three additional components specifically for Philadelphia:

- **enVisionmath2.0 Pennsylvania Core Companion**
  - At those grades where the existing enVisionmath2.0 does not have complete coverage of the Eligible Content, a Student Companion will be delivered that provides full enVisionmath2.0 lessons targeted to those standards. For those grades not requiring additional lessons there is not a Student Companion.
  - Each Student Companion is a consumable component and will be delivered with each Student Edition purchased.
  - Corresponding additional lessons will be included in the enVisionmath2.0 digital courseware.

- **enVisionmath2.0 Pennsylvania Teacher's Edition Program Overview**
  - Provides an overview of the enVisionmath2.0 program and how it supports the Pennsylvania Core Standards.
  - Includes correlations to the Pennsylvania Core standards.
  - Includes all teacher support and black-lined masters for those grades with the Pennsylvania Core Companion.

- **enVisionmath2.0 Pennsylvania Snap-In Tabs**
  - Provides point-of-use support for the Pennsylvania Core Standards with the two Teacher's Edition volumes.
  - Provided one per topic and will include the standards alignment to each lesson along with the detailed language for each standard.

**Standards for Mathematical Practice are routinely reinforced with suggestions and resources provided for implementation**

The Content Standards and the Standards for Mathematical Practice are evident and developed throughout every component of enVisionmath2.0. Throughout the program, students encounter multiple opportunities designed to help them build their proficiency with the math practices.
Categories

I. Materials align to PA Common Core Standards for Mathematics


**Math Practices in Lessons**

**Core Instruction Driven by a Marriage of Content and Math Practices.** Math practices are infused and explicitly highlighted in lesson instruction. First, comments related to math practices are given during problem-based learning. Look for Math Practices boxes throughout the lesson that model the thinking these practices embody.

**Math Practices in Exercises** Look for the red run-in heads on exercises. These highlighted exercises lend themselves to a discussion of a specific math practice.

**Try Its!** In each lesson, students are reminded to think about different practices as they are guided through the examples or complete the Try Its!

**3-Act Mathematical Modeling** lessons in each Topic presents an engaging, real world, high-interest situation for which students propose a mathematical model that can help them get to a resolution.

**Evidence**

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Program Overview Tab—pp. 24, 42-43.
- An overview of how math practices are connected to content standards in each Topic is found on the Math Practices page for each Topic. For example, Teacher’s Edition tab Grade 6 pp. 60E; Grade 7 pp. 78E; Grade 8 pp. 152E.

**Standards for Mathematical Practice are connected to Reading, Writing, Speaking and Listening Standards**

Reading strategies underlie many parts of the enVisionmath2.0 K–8 lessons. Not only is vocabulary featured during lessons that include reinforcement questions, reading is emphasized through a whole page of Vocabulary Review in each topic in the Student’s Edition, with a game
Categories

I. Materials align to PA Common Core Standards for Mathematics

in the online Game Center, and with the animated glossary available online. This spotlight on vocabulary means that students both understand and can use mathematical vocabulary in their writing.

Vocabulary Review at the end of each topic includes questions to reinforce understanding of the Topic’s vocabulary and asks students to use vocabulary in writing. Vocabulary in the Visual Learning Bridge and Visual Learning Animation Plus is explicitly emphasized. New words introduced in a lesson are highlighted in yellow in the Visual Learning Bridge and in the Visual Learning Animation Plus. Lesson practice includes questions to reinforce understanding of vocabulary used in the topic. Students are often asked to do writing in math in lesson practice to explain their thinking.

Reading skills and strategies are further supported through the Math Practices inherent in every part of enVisionmath2.0. In incorporating these skills, students are expected to clarify their thinking and put their understanding of various concepts into writing. They must present evidence and a persuasive statement detailing their process.

For grades 6–8, Problem-Based Learning Explain It! Focuses on communication, formal math vocabulary, and mathematical reasoning—an opportunity to talk about math, use mathematical vocabulary, use reasoning and construct arguments. Additional Vocabulary Activities at the end of each lesson offer vocabulary development support for all students, especially ELLs and struggling readers and Build Mathematical Literacy provides structured support to help all students build literacy strategies for mathematics. At the start of each Topic, a one-page activity includes various types of vocabulary, close reading, study, and organizational supports.

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.

II. Materials: (Please apply a score to each section A-E):

<table>
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<tr>
<th>A. Foundational Skills</th>
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<td>Coherence: New content is based on previous understandings and provides opportunities to connect knowledge and skills across standard clusters, domains and learning progressions</td>
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II. Materials: (Please apply a score to each section A-E):

A. Foundational Skills

Evidence:

**Coherence:** New content is based on previous understandings and provides opportunities to connect knowledge and skills across standard clusters, domains and learning progressions.

*enVisionmath2.0* was designed around a logical and coherent progression of concepts from grade to grade and clear connections among concepts within each grade. To achieve coherence across grades, new content is presented as an extension of prior learning. For example, the Solve & Discuss It found at the start of many lessons engages students in a problem-based learning experiences that helps them connect their prior knowledge to the new concepts they will encounter in Step 2 of the lesson: Develop Visual Learning. Coherence within a grade is the result of carefully designed visual cues that help students make connections across domains and clusters.

*enVisionmath2.0 Lessons Connect for Coherence.* Each lesson relates on-grade-level concepts explicitly to prior knowledge from earlier grades.

**Look Back and Look Ahead Connections** to content in previous grades and in future grades are highlighted in the Coherence page of the Topic Overview in the Teacher's Edition.
II. Materials: (Please apply a score to each section A-E):

A. Foundational Skills

**Connections Across Topics and Lessons.** The Lesson Overview in the Teacher's Edition describes connections between lessons in the topic and to other lessons that precede or follow the lesson.

**Evidence**
- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Program Overview Tab—pp. 22, 45.
- The *Math Background Coherence* and the *Lesson Overview Coherence* sections describe connections between lessons in the Topic and to other lessons that precede or follow the lesson. Please see *Math Background and Coherence* Teacher's Edition tab Grade 6 pp. 60C; Grade 7 pp. 78C; Grade 8 pp. 152C; and *Lesson Overview Coherence* in any lesson. For example Teacher’s Edition tab Grade 6 Lesson 1 p. 65A; Grade 7 Lesson 1 p. 83A; Grade 8 Lesson 1 p. 157A.

B. Text Complexity

- **Focus:** Lessons and units are grade appropriate with evidence of varying depths of knowledge required
- Lesson objectives and expectations are clearly detailed
- Examples are clear and concise with detailed steps and visuals that build from concrete to representational to abstract development of concepts
- Real-world applications require students to draw from prior knowledge as well as new knowledge
- Connections to college and career readiness are integrated throughout materials
- **Rigor:** Requires students to engage with and demonstrate challenging mathematics with appropriate balance among problem solving in application, conceptual understanding, and procedural skills and fluency
  - **Application:** Provides ongoing opportunities for students to independently apply mathematical concepts in real-world situations, solve challenging problems, and choose and apply appropriate strategies to new situations
  - **Conceptual Understanding:** Develops students’ depth of understanding through tasks, brief problems, questions, multiple representations and opportunities for them to write and speak about their understanding
  - **Procedural Skill and Fluency:** Provides guidelines for performing quick and accurate procedural skills, fluency and mathematical procedures

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**Evidence:**
Focus: Lessons and units are grade appropriate with evidence of varying depths of knowledge required

The program is organized specifically to provide students that important pathway to algebra by offering robust coverage of the major content clusters. Further, most of this important content is found early in the program to give students many opportunities to interact with these key concepts.

Throughout each topic and lesson are features to focus students on the content they will be studying. Each topic presents a focused Topic Essential Question, while each lesson opens with a Lesson Essential Question. At the end of each lesson and topic, students are tasked with responding to these essential questions.

- **Focus on CCSS Clusters.** Each major content cluster is the focus of at least one topic.
- **Focus of a Topic.** At the start of a Topic, one or more Essential Question help students focus on key ideas in the Topic. Students revisit the Essential Question at the end of the topic as they complete the Topic Review.
- **Focus of a Lesson.** Some of the elements of a lesson that help teachers focus students’ attention on the main math concepts of the lesson include the Lesson Essential Question, the Visual Learning Bridge and its digital counterpart, the Visual Learning Animation Plus, as well as Try It! that follows each example.

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Program Overview Tab—pp. 20-21, 44.
- The Math Background Focus and the Lesson Overview Focus sections describe connections between lessons in the Topic and to other lessons that precede or follow the lesson. Please see Math Background and Focus Teacher’s Edition tab Grade 6 pp. 60A; Grade 7 pp. 78A; Grade 8 pp. 152A and Lesson Overview Focus in any lesson. For example, Teacher’s Edition tab Grade 6 Lesson 1 pp. 65A; Grade 7 Lesson 1 pp. 83A; Grade 8 Lesson 1 pp. 157A.

Lesson objectives and expectations are clearly detailed

Lesson objectives are clearly labeled in both the Student’s Editions and the Teacher’s Editions through the “I can” statements and the corresponding Mathematical Practices and Content Standards on the first page of each lesson. Additionally, problems throughout the lesson are labeled with specific Mathematical Practices to help clarify expectations for students. Teacher support for each lesson begins with objectives...
B. Text Complexity

and expectations explained in the Teacher’s Edition Program Overview with mathematical background on the Standards, how and why they are important in the program.

Listen and Look For Videos for every lesson provide teachers with a quick, but detailed look at what student understanding of the Standard looks and sounds like in every lesson. Professional Development Videos for each topic present additional information about the content.

Examples are clear and concise with detailed steps and visuals that build from concrete to representational to abstract development of concepts

Step 2—Direct Instruction (Visual Learning). Increases the cognitive level of instruction by connecting concrete and pictorial representations to abstract symbols. Students have access to the Visual Learning Bridge and Visual Learning Animation Plus, which helps solidify students’ conceptual understanding of the new math problem. The questions provided in the Teacher’s Edition have students reflect on the work, make connections among ideas, and justify the steps. The Convince Me! feature in each lesson fosters communication during visual learning. The Try It! features in grades 6–8 allows students to practice the math they just learned. Lessons in grades 6–8 also feature additional examples in the Student Edition for more opportunities for explicit instruction to follow the visual learning. A library of additional digital examples for enVisionmath2.0 grades 6–8 is also available by lesson. Teachers can use these to give students another look beyond what is shown in the main student experience.

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8
- Teacher’s Edition Tab—Any Lesson.

Real-world applications require students to draw from prior knowledge as well as new knowledge

STEM Projects are multi-lesson projects that present situation that address real social, economic, and environmental issues for grades 6–8. These rich, high-interest projects incorporate math, science, and engineering.

Today’s Challenge online for grades K–8 presents a science factoid at the start of many sets of problems and science data are used in many problems.
B. Text Complexity

**enVisionmath2.0** offers an additional embedded learning opportunity for middle school students to connect what they are learning in class to real-world situations via 3-Act Mathematical Modeling lessons. These lessons present an engaging, high-interest situation for which students propose a mathematical model to help them get resolution. Unlike traditional real-world problems, the problems in 3-Act Mathematical Modeling lessons do not set up the problem for students to solve.

- **Act I**—A multimedia presentation hooks students, followed by a brainstorm of possible question/answer situations.
- **Act II**—Student-drive mathematical modeling to arrive at a solution.
- **Act III**—The resolution is presented via a multimedia presentation so learners can explain differences between their own conjectures and the actual solution.

Each 3-Act Mathematical Modeling lesson also includes a sequel for use as time permits.

**Evidence**

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.

**Connections to college and career readiness are integrated throughout materials**

**enVisionmath2.0** was built to fully implement the vision of the standards and address the knowledge and skills students need to be prepared for mathematics in college, career, and life. Mathematical understanding and procedural skill are equally important, and both are assessable using mathematical tasks of sufficient richness.

For example every lesson in **enVisionmath2.0** introduces concepts and procedures with a problem-solving experience. Research shows that conceptual understanding is developed when new mathematics is introduced in the context of solving a real problem in which ideas related to the new content are embedded (Kapur, 2010; Lester and Charles, 2003; Scott, 2014). Conceptual understanding results because the process of solving a problem that involves a new concept or procedure requires students to make connections of prior knowledge to the new concept or procedure. The process of making connections between ideas builds understanding. In **enVisionmath2.0** this problem-solving experience is called Solve and Share and begins every lesson in the program.
Rigor: Requires students to engage with and demonstrate challenging mathematics with appropriate balance among problem solving in application, conceptual understanding, and procedural skills and fluency

enVisionmath2.0 has a core instructional model that facilitates conceptual understanding. To begin, concepts emerge as students solve a problem in which new concepts are embedded (problem-based learning). Then, those concepts are made explicit through direct instruction (visual learning) that is supported by high-level, question-driven classroom conversations. Procedural skills are taught with understanding using concrete and pictorial representations, place-value concepts, and properties. Resources are provided to help all students achieve fluency. Applications include rich, cognitively demanding tasks and a variety of problem situations, as well as infused instruction and reinforcement of the Standards for Mathematical Practice.

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Program Overview Tab—pp. 23, 45.
- enVisionmath2.0 Grades 6–8 emphasizes the important elements of a rigorous curriculum: conceptual understanding, procedural skill and fluency, and application. Please see Topic Opener Teacher’s Edition tab Grade 6 p. 60D; Grade 7 p. 78D; Grade 8 p. 152D.
- Fluency Practice is provided at the end of each Topic. For example, see Teacher’s Edition tab Grade 6 p. 111; Grade 7 p. 129; Grade 8 p. 203.

Application: Provides ongoing opportunities for students to independently apply mathematical concepts in real-world situations, solve challenging problems, and choose and apply appropriate strategies to new situations

Practice and Problem Solving in grades 6–8 build proficiency as students work on their own and apply understanding in solving problems. Applications include rich, cognitively demanding tasks in a variety of problem situations, both real-world and mathematical found in the Differentiation Library with resources for all students.

Practice and Problem Solving features throughout each lesson build proficiency as students work on their own and apply understanding in solving problems.
B. Text Complexity

3-Act Mathematical Modeling Lessons Students encounter a rich, real-world situation for which they look to apply not just math content, but math practices to solve the problem presented.

**Conceptual Understanding:** Develops students’ depth of understanding through tasks, brief problems, questions, multiple representations and opportunities for them to write and speak about their understanding

The activity for each lesson—Solve & Discuss It!—is designed to engage students with a problem in which new math ideas are embedded. Coherence is facilitated as students connect prior knowledge to the new math ideas. Students solve the problem in any way they choose and are given time to struggle. As students think, conceptual understandings emerge. Solve & Discuss It! online uses the DrawPad to have students write and share their solutions on screen.

Students in grades 6–8 have two additional options to explore the problem-based learning:

- **Explore It!** Focuses on modeling mathematical concepts—taking data and representing it visually or simply using math to represent problems
- **Explain It!** Focuses on communication, formal math vocabulary, and mathematical reasoning—an opportunity to talk about math, use mathematical vocabulary, use reasoning and construct arguments

Visual Learning increases the cognitive level of instruction by connecting concrete and pictorial representations to abstract symbols. Students have access to the Visual Learning Bridge and Visual Learning Animation Plus which helps solidify student’s conceptual understanding of the new math problem. The questions provided in the Teacher’s Edition have students reflect on the work that is shown, make connections among ideas, and justify the steps. The Convince Me! feature in each lesson fosters communication during visual learning. The Try It! features in allows students to practice the math they just learned. Lessons also feature additional examples in the Student Edition for more opportunities for explicit instruction to follow the visual learning. A library of additional digital examples is also available—by lesson. Teachers can use these to give students another look beyond what is shown in the main student experience.

**Evidence**

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Problem-Based Learning (Solve & Discuss It!, Explain It!, or Explore It!) launches each lesson and offers rich opportunities for students to apply a range of Math Practices. For example, Teacher’s Edition tab Grade 6 p. 71; Grade 7 p. 89; Grade 8 p. 157.
**B. Text Complexity**

**Procedural Skill and Fluency:** Provides guidelines for performing quick and accurate procedural skills, fluency and mathematical procedures

*Developing Procedural Fluency Through Understanding* Students develop procedural fluency when the procedures make sense to them. So students develop these skills in conjunction with conceptual understanding through careful learning progressions.

*Practice and Problem Solving* exercises abound in both print and digital formats. In addition to the two pages of practice and problem-solving exercises found in the Student Edition, two more pages are available in the Additional Practice workbook. Students can complete these exercises online where they can take advantage of the built-in learning aids to support them in their work.

**Evidence**

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Each lesson contains Practice and Problem Solving that builds proficiency as students work on their own. Online Practice with MathXL for School is personalized practice for every lesson. Exercises are auto-scored with built-in Learning Aids including Help Me Solve This, View an Example, and Virtual Nerd videos. Two pages of Additional Practice is provided in a student workbook for students who need more practice and is also available as Online Practice powered by MathXL for School. For example: Teacher’s Edition tab Grade 6 p. 81-82, 82B; Grade 7 p. 87-88, 88B; Grade 8 p. 161-162, 162B.

**C. Quality Questioning**

- Develops students’ depth of knowledge through the presentation of complex problems and questions
- Misconceptions are identified and accompanied by strategies to address them
- Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking

**Rating**

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**Evidence:**
Develops students’ depth of knowledge through the presentation of complex problems and questions
In order to provide the rigor required by the standards and reflected in the Next Generation assessments, rich classroom conversations that promote deep understanding are required.

enVisionmath2.0 has a core instructional model that facilitates conceptual understanding. Through problem-based learning, concepts emerge as students solve a problem in which new concepts are embedded.

Classroom discourse refers to the interactions that take occur throughout a lesson. The goal of that discourse is to keep the cognitive demand high while students are learning and formalizing math concepts. The questions that teachers ask students can really make the difference in how well they internalize the math concepts being developed. enVisionmath2.0 provides the questions teachers need in order to teach through problem solving and orchestrate rich classroom conversations that challenge student thinking in every lesson.

In order to assist teachers in planning for higher level questioning strategies, enVisionmath2.0 provides suggested questions specific to each Solve and Share. Step 1 of the lesson features a Solve and Share problem that helps students connect what they know to new ideas embedded in the problem. When students make these connections, conceptual understanding emerges.

Since the student books are write-in texts at all grades 6-8, students explain their reasoning and communicating their understanding right in the student book during Solve & Discuss It. The activity is also available online as an interactive student activity through Pearson Realize as a part of the interactive workspace offered in print and in digital formats of the student learning experience.

Step 2 of each lesson is the Visual Learning Bridge. It provides a stepped-out visual example of the lesson concept for every lesson and makes the math ideas from the problem based learning more explicit and real for our learners.

Open the door for students to interact with the example through the Visual Learning Animation Plus. This allows for a rich exchange about the content between teachers and students. Teachers can pause and discuss; incorporate animated tools; as students further develop deep understanding that is necessary in order to be able to solve rigorous problems.
C. Quality Questioning

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- One of the strengths of the enVisionmath2.0 lessons is that teaching is grounded on rich questions and classroom conversations. Visual Learning Bridge and Visual Learning Animation Plus provide guided instruction of the math concepts in the lesson and encourage student thinking and response.
- All lessons include a wealth of point-of-use resources to modify lesson activities including Response to Intervention, Enrichment, English Language Learners, Prevent Misconceptions, and Error Intervention.
- Please see any lesson, for example Teacher’s Edition tab Grade 6 p. 72-76B; Grade 7 p. 90-94B; Grade 8 p. 158-162B.
Misconceptions are identified and accompanied by strategies to address them

enVisionmath2.0 provides strategies to assist teachers in identifying common errors and misconceptions:

- Response to Intervention is used with an example and offers a common error with remediation strategy.
- Error Intervention is provided in an “If/Then” format in the Teacher’s Edition to support Guided Practice (Do You Understand? Do You Know How?).
- Re-teaching is provided for follow-up prior to students engaging in Independent Practice.
- Error Intervention is provided to support remediation during the Practice and Problem Solving.

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Prevent Misconceptions teaching support has an if/then format within each lesson. For example: Teacher’s Edition tab Grade 6 p. 68; Grade 7 p. 86; Grade 8 p. 160.

Engages students in productive struggle through relevant, thought-provoking questions, problems and tasks that stimulate interest and elicit mathematical thinking

Problem-Based Learning Solve & Discuss It!, Explore It!, or Explain It! in the Student Edition and online introduces each lesson by engaging students with a problem in which new math ideas are embedded. Coherence is facilitated as students connect their prior knowledge to the new math ideas. Students solve the problem any way they choose. Students engage in productive struggle; as they think, conceptual understandings emerge.

Teachers' role in facilitating Problem-Based Learning includes the following tasks:

- Students know they are expected to do the thinking.
- Students share their thinking with a partner, small group, or the whole class.
- Students’ thinking is valued even when they struggle.
- The language of math practices is used during discussion.
C. Quality Questioning

**Evidence**

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Teacher’s Edition tab Grade 6 p. 65; Grade 7 p. 83; Grade 8 p. 157.

D. Writing

- Provides opportunities to write about mathematical understanding and applications
- Allows for written defense of mathematical concepts drawn by students

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**Evidence:**

**Provides opportunities to write about mathematical understanding and applications**

Practice and Problem Solving Exercises build proficiency as students work on their own; have opportunities to write about what they know; explain their thinking, and apply understanding in solving problems. Lesson practice includes questions to reinforce understanding of vocabulary used in the topic. And students are often asked to do writing in math in lesson practice to explain their thinking.
D. Writing

Allows for written defense of mathematical concepts drawn by students

The Visual Learning connects to the *Try It! Convince Me!* questions. Students again use the Standards for Math Practices in order to explain their thinking and justify their reasoning. The questions provided in the Teacher Edition have students reflect on the work, make connections among ideas, and justify the steps. The Convince Me! feature in each lesson fosters communication during visual learning.
D. Writing

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Teacher’s Edition Tab – Any lesson.

E. Speaking and Listening

- Provides opportunities for students to discuss mathematical thought processes
- Allows for the presentation of mathematical concepts and conclusions
- Strategies for communicating the language of mathematics are routinely presented and discussed

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Evidence:

Provides opportunities for students to discuss mathematical thought processes

Solve & Discuss it!, Explore It!, Explain It! The lesson launches offer rich opportunities for students to apply a range of math practices:

- **The Solve & Discuss It!** calls on students to draw on nearly all of the math practices, but especially sense-making and solution formulation as well as abstract and quantitative reasoning.
- **The Explore It!** focuses students on mathematical modeling, generalizations, and structure of mathematical models.
- **The Explain It!** emphasizes mathematical reasoning and argumentation. Students construct arguments to defend a claim or critique an argument defending a claim.

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8 p. 43.

Allows for the presentation of mathematical concepts and conclusions

Daily problem-based learning Solve and Share activities include sample student work. Teachers can easily project these on the whiteboard and engage students as they analyze and justify the student work. This focuses students’ attention and supports teachers as they facilitate rich, classroom discussions. Not only are students recording their thinking in their student books, but they are focused during the classroom conversation as teachers use the online Solve and Share on the interactive whiteboard.
E. Speaking and Listening

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8
- Teacher’s Edition Tab – Any lesson

Strategies for communicating the language of mathematics are routinely presented and discussed

The Solve and Share is a unique part of every lesson at every grade level that deepens student understanding of concepts through real-world problems. Teachers are provided with Before, During, and After questions and guidance that help make the most of the problem-based learning in every lesson at all grade levels. This guidance supports teachers in building year-long classroom conversation through suggestions and examples of student work, and this guidance continues throughout the lesson. Additionally, the Listen and Look For videos for every lesson highlight an element of the lesson explaining its relevance and what student understanding of the concept will sound like and look like in student work. This provides teachers with an understanding of the lesson prior to working with students that builds confidence with content.

Also available from Pearson, Language Central for Math supports English language learners with academic vocabulary necessary to master math. Oftentimes it’s the math vocabulary, not the mathematical concepts, that hinders student mastery. Language Central for Math is designed to directly address this issue and reinforce the core instruction given in the math classroom.

Author Dr. Jim Cummins and the team of ELL instructors from Fitchburg Public Schools created Language Central for Math around the Five Principles for Teaching English Language Learners. These principles support the needs of ELLs throughout the text:

1. Explicitly states content and language objectives in each lesson/module.
2. Lesson opener activities connect to and assess prior knowledge.
3. Hands-on activities utilize multiple modes of instruction: visual, verbal, aural, kinesthetic.
4. Group work enables practice with all language domains: listening, speaking, reading, and writing.
5. Students express understanding through language production and reflect on effective learning.

As a result, Language Central for Math provides students with lessons that focus on language development presented in multiple learning styles—hands-on, visual, and verbal.
III. Differentiation of instruction offers opportunities for all to participate:

- Text features accommodate students who may have difficulty reading
- Vocabulary is presented to address multiple learning modalities
- Suggestions for planning, preparation and delivery of instruction for students from diverse backgrounds are provided in teaching resources
- Allows for scaffolding (such as supports for use of manipulatives and graphic organizers)
- Resources and suggestions for students receiving specialized services (including mentally gifted are grade appropriate.
- Resources and suggestions for ELL students are grade appropriate

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Evidence:

**Text features accommodate students who may have difficulty reading**

Students are actively engaged, working independently, in pairs, and in small groups throughout the daily lesson. Engaging robots encourage students and provide help along the way.

Teachers are encouraged to set expectations to be sure students know they are to do the thinking; foster communication by having students share their thinking with a partner, small group, or the whole class; encourage students by valuing each student’s thinking even when they struggle; and use the language of the Mathematical Practices during discussions.

During the daily lesson, students are encouraged to share their thinking and provide multiple solution strategies to solving problems in Solve & Discuss It, Explore It, Explain It. Rich classroom conversations support active participation of students in order to make meaningful mathematical connections and develop understanding during Visual Learning.

Additional support for each lesson includes the following:

- **Additional Vocabulary Activities**—Offers vocabulary development support for English language learners to build mathematical understanding
- **Build Mathematical Literacy**—Provides structured support to help all students build literacy strategies for mathematics
Vocabulary is presented to address multiple learning modalities

**Literacy Support at the Start of Topics**
- One-page activity in the Student Edition
- Activities vary from topic to topic
- Includes vocabulary, close reading, study and organizational support

**Literacy Support in Lessons**
- Vocabulary in the Visual Learning Bridge and Visual.
- Learning Animation Plus New words introduced in a lesson are highlighted in yellow in the Visual Learning Bridge and in the Visual Learning Animation Plus.
- Writing in Lesson Practice Lesson practice includes questions to reinforce understanding of vocabulary used in the topic. And students are often asked to do writing in math in lesson practice to explain their thinking.
- Glossary in the Student Edition A glossary at the back of the Student's Edition can be used for reference at any time.

**Literacy Support at the End of Lessons**
- Additional Vocabulary Activities offers vocabulary development support for all students, especially English Language Learners and struggling readers.
- Build Mathematical Literacy provides structured support to help students build literacy strategies for mathematics.

**Literacy Support at the End of Topics**
- Vocabulary Review. At the end of each topic in the Student’s Edition is a page of Vocabulary Review. It includes questions to reinforce understanding of the vocabulary used in the topic and asks students to use vocabulary in writing.
- Animated Glossary. An animated glossary is always available to students and teachers at PearsonRealize.com or through the eTexts.
- Vocabulary Game Online. The Game Center at PearsonRealize.com includes a vocabulary game that students can access anytime.
Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8 p. 52-53.

Suggestions for planning, preparation and delivery of instruction for students from diverse backgrounds are provided in teaching resources

All levels of learners are included in every part of enVisionmath2.0 lessons. The Solve & Discuss It!, Explain It!, Explore It! brings students together through problem-based learning and classroom conversation that includes multiple levels of learners seamlessly. Because there is no required path to an answer, struggling students and advanced students have an equal opportunity to find a solution that makes sense to them.

The subsequent classroom discussion of the various solutions provides opportunities for students to see and hear other ideas that may deepen their understanding of the concept. Extension allows for additional challenge for advanced students. ELL guidance for every lesson can be utilized in any part of the lesson.

Visual Learning Animation Plus and the Visual Learning Bridge provide alternate ways for students to understand the lesson concepts, while additional resources available online offer support for all types and levels of learners.

enVisionmath2.0 meets a variety of student needs and provides Response to Intervention during each lesson, at the end of each lesson, at the end of each Topic, and anytime.
### Math Diagnosis and Intervention System

Helps teachers diagnose students’ needs and provide effective intervention that is on or below grade level. The MDIS offers the following resources:

- **Diagnosis.** Teachers can use the diagnostic tests in the system as well as the item analysis charts given with program assessments at the start of a grade or topic, or at the end of a topic, group of topics, or the year.

- **Intervention Lessons.** These two-page lessons include guided instruction followed by practice. Teachers can assign lessons that are below grade level if needed.

- **Teacher Support.** Teacher Notes provide the support needed to conduct a short lesson. The lesson focuses on vocabulary, concept development, and practice. The Teacher’s Guide contains individual and class record forms and correlations to Student Edition lessons.
Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- **enVisionmath2.0** offers comprehensive differentiation instruction and intervention support that addresses the needs of all learners. This support provides both system-driven opportunities to personalize learning for students and a library of resources to support the teacher in personalizing instruction. Please see Program Overview tab p. 56-59 for a comprehensive overview. See also lesson-level support Teacher's Edition tab Grade 6 p. 76A-76B; Grade 7 p. 94A-94B; Grade 8 p. 162A-162B.

Allows for scaffolding (such as supports for use of manipulatives and graphic organizers)

Physical manipulatives are used throughout the program to explore mathematical concepts, develop conceptual understanding, and to make connections. Please refer to the “Preparing for a Topic Math Background” in the Teacher’s Edition for detailed support of how manipulatives are used.

The start of each topic in the Teacher’s Edition provides vocabulary activities for vocabulary words in the topic and/or for the vocabulary words in Review What You Know. Some of the activities use graphic organizers in the Teacher’s Resource Masters.

Solve and Share and scaffolded teaching actions in the Teacher Edition are given for before, during, and after this problem-based learning.

- **Before**: Use Teaching Actions #1 and #2 to start understanding. This is whole-class discussion.
- **During**: When students are stumped, use #3. Students should be working together as you facilitate.
- **After**: This is another whole-class discussion. Use #4 and #5 to discuss students’ thinking and work, and to make math ideas explicit. Use #6 as needed.

In the **enVisionmath2.0** program, daily formative assessments occur after instruction and before practice, with student-specific differentiated intervention provided. As follow-up, students have an opportunity to work through the math concept with scaffolded support built right into the Reteach to Build Understanding lesson.

Practice and Problem Solving Exercises build proficiency as students work on their own. In some lessons, leveled practice with scaffolding is included.
III. Differentiation of instruction offers opportunities for all to participate:

Intervention Lessons in grades 6–8 are designed to be completed by students independently. They can also be completed with the guidance of a teacher. The lessons have these parts:

- Introduction reviews the main concepts.
- Examples provide explicit instruction, an opportunity to try a problem with scaffolding a solution, and a Got It! exercise to assess understanding.
- Practice exercises offer opportunities to reinforce the concepts from the lesson.

**Resources and suggestions for students receiving specialized services (including mentally gifted are grade appropriate; Resources and suggestions for ELL students are grade appropriate)**

Pearson supports and complies with the Individuals with Disabilities Act of 2004 and the terms and conditions of the National Instructional Materials Access Center (NIMAC). In accordance with IDEA 2004, Pearson will upload any K–12 textbook or core related student print material published after 19 July 2006 to the NIMAC. Please note that Pearson routinely uploads most eligible materials to the NIMAC at the time of the first classroom-ready printing, often before receiving a request.

Online accessible Student’s Edition provides text enlargements and speech-to-text functionality is supported through Kurzweil and other popular screen and text readers. All program interactivities and assessments include text-to-speech feature. Print is available from NIMAC for special needs. All student videos include both text on screen and matching audio.

**enVisionmath2.0** meets a variety of student needs and provides Response to Intervention during each lesson, at the end of each lesson, at the end of each Topic, and anytime as indicated. Opportunities to challenge high-achieving students are also varied and meaningful. Many of these resources support developing and strengthening reading, writing, speaking, and listening skills. Lesson adaptations are provided for above-level students, challenge extensions, higher order thinking problems, and enrichment activities.

Today’s Challenge Online shows five problems using the same data on five different days. Problems apply prior knowledge and reinforce the kind of thinking students need for success on high-stakes tests. Problems increase in difficulty within a set. Today’s Challenge Teacher’s Guide includes teaching actions organized under Before, During, and After in addition to Vocabulary Review, ELL Support, and Extension.

Each lesson in the Teacher’s Edition provides instructional support for English language learners (ELL). These features were developed by renowned ELL consultants Janice Corona and Jim Cummins.
III. Differentiation of instruction offers opportunities for all to participate:

SDP teachers can use the ELL support with a specific part of the lesson, such as Solve & Discuss It!, Visual Learning Bridge, or Do You Understand? Leveled instruction includes suggestions for students at Beginning, Intermediate, and Advanced levels of English language proficiency.

**ELL Toolkit.** Contains professional development articles with ideas for supporting English Language Learners as well as blackline masters of graphic organizers.

Also available from Pearson, *Language Central for Math* supports English language learners with academic vocabulary necessary to master math. Oftentimes it’s the math vocabulary, not the mathematical concepts, that hinders student mastery. *Language Central for Math* is designed to directly address this issue and reinforce the core instruction given in the math classroom.

Author Dr. Jim Cummins and the team of ELL instructors from Fitchburg Public Schools created *Language Central for Math* around the Five Principles for Teaching English Language Learners. These principles support the needs of ELLs throughout the text:

1. Explicitly states content and language objectives in each lesson/module.
2. Lesson opener activities connect to and assess prior knowledge.
3. Hands-on activities utilize multiple modes of instruction: visual, verbal, aural, kinesthetic.
4. Group work enables practice with all language domains: listening, speaking, reading, and writing.
5. Students express understanding through language production and reflect on effective learning.

As a result, *Language Central for Math* provides students with lessons that focus on language development presented in multiple learning styles—hands-on, visual, and verbal.

**Evidence**

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- Program Overview Tab: Supporting English Language Learners pp. 54-55.
- In addition to all the resources cited earlier, Math Tools, Math Games, and Today’s Challenge provide ways for students to interact with math with increased levels of cognitive demand. An example of Today’s Challenge can be found in the Teacher’s Edition tab Grade 6 p. 71A; Grade 7 p. 89A; Grade 8 p. 157A.
IV. Technology for Instructional Supports:

- Online access to textbook
- Online teaching resources for interactive whiteboard
- Online student supports for remediation, practices and enrichment
- Grade appropriate supports for the implementation of handheld technology

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Evidence:

**Online access to textbook**

With rich and engaging content, embedded assessment with instant data, and flexible classroom management tools, Pearson Realize™ provides the power to raise interest and achievement for every student. Realize is our newest learning management system (LMS). It is the online destination for standards-aligned content, flexible class management tools, and embedded assessments that deliver data to teachers instantly. enVisionmath2.0 on Pearson Realize provides premium content to help teachers enhance their instructional materials. Teachers can search by keyword, browse by a table of contents, or browse by the Pennsylvania Academic Content Standards. enVisionmath2.0 on Pearson Realize also encourages teachers to customize the content reports and student usage data give you the power to target your teaching to improve student outcomes.

enVisionmath2.0 on Pearson Realize offers the following benefits:

- **Standards-Aligned Content.** Content includes material aligned to both the Common Core and to the PA Core Standards
- **Powerful Search Tools.** Search by keyword, skills, topic or standards helps teacher quickly find lessons, lesson plans and instructional resources
- **Integrate Open Source.** Teachers can search open source education assets using Gooru and integrate the results directly into their lesson
- **Customizable Curriculum.** Teachers can reorder the table of contents, upload files and media, add links, and create custom lessons and assessments
- **Flexible Class Management Tools.** Teachers can create classes, organize students by groups, and create assignments targeted to those groups, individual students or the entire class.
IV. Technology for Instructional Supports:

- **Digestible Student Progress Data.** Teachers can instantly access student and class data that shows standards mastery on assessments, online activity and overall progress.

**Online teaching resources for interactive whiteboard**

The following resources are available for interactive whiteboard:

- Online Solve & Discuss It (Explore It, Explain It) promotes classroom discussion during Teaching Action #4 Share and Discuss Solutions.
- DrawPad feature allows students to write their solutions on the Whiteboard, Computer, or Tablet
- Sample student work is provided as a digital file to share and discuss.
- Solve & Discuss It (Explore It, Explain it) is assignable to individual students.
- Online Visual Learning Animation Plus provides animation and audio to enhance learning.
- Pauses throughout the animation encourage student thinking and responses.
- Interactivities are included to keep young learners engaged in exploring new ideas.
- Math Tools links are always available.
- Convince Me! is an opportunity for whole-class discussion.
- Animated Glossary with audio build understanding and support oral language development.
- Additional Examples online

Digital resources for teachers include the following. Additional interactive whiteboard resources are listed in online student supports:

- **eText Teacher’s Edition (in English and Spanish; Spanish has English notes with Spanish Student Edition pages).** This provides the entire contents of the print Teacher’s Edition and Resource Masters. It can also be downloaded for offline use on a tablet.
- **PearsonRealize.com.** This site offers flexibility in planning, teaching, learning, discussing, and progress monitoring. To save teachers valuable time, it is easy to navigate, assign resources, search, customize, plan, assess, and analyze data.
- **Online Assessments.** Auto-scored online assessments keep students on track for understanding of math concepts and skills and help them gain experience using next generation assessment technologies. These include the following:
  - Placement text
IV. Technology for Instructional Supports:

- Quick Check
- Topic Assessment
- Cumulative/Benchmark Assessment
- End-of-Year Assessment
- ¾-Year Practice Performance Tasks
- Next Generation Assessment Practice Test (in English only)

- **Daily Common Core Review Editable Files (in English and Spanish).** These are also available in Resource Masters, and the online version is editable and provides ongoing review in free response and selected response format.

- **Topic Overview Professional Development Videos.** These videos feature the authors of the program sharing their expertise and information on each topic.

- **Listen and Look For Videos.** These short professional development videos use examples of student work to prepare teachers for what students’ understanding of the Standards in the upcoming lesson will sound and look like.

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**Online student supports for remediation, practices and enrichment**

**enVisionmath2.0** offers comprehensive differentiation instruction and intervention support that addresses the needs of all learners. This support provides both system-driven opportunities to personalize learning for students and a library of resources to support the teacher in personalizing instruction.
IV. Technology for Instructional Supports:

System-Driven Differentiated Instruction and Intervention
Teachers can take advantage of a variety of opportunities to have the Pearson Realize system auto-adapt assignments based on an individual student’s needs.

**Topic Level**
- An Adaptive Study Plan is generated based on a student’s scores.
- Differentiation can be auto-assigned based on results from the Topic Assessments. Remediation or enrichment can include:
  - Visual Learning Animation Plus
  - Digital Math Game
  - Digital Math Tool Activity
IV. Technology for Instructional Supports:

- Reteach to Build Understanding
- Print and digital intervention lessons
- Online Practice powered by MathXL for School

Lesson Level
- Students take the Lesson Quiz online at the end of the lesson instruction.
- Personalized practice is automatically assigned based on each student’s score.

Teacher-Driven Differentiated Instruction and Intervention
Through reports and data analytics, teachers can have the information they need to adapt their instruction and assignments for students:
- Flexibility for teachers to choose from a library of differentiation and intervention resources:
  - Reteach to Build Understanding
  - Additional Vocabulary Support
  - Build Mathematical Literacy
  - Digital Intervention Lessons
  - Math Diagnosis and Intervention System Lessons
  - Enrichment Activities
  - Digital Math Tools Activities
  - Digital Math Games
  - enVisionSTEM Activities
  - Additional Practice in print and through MathXL for School

Adaptive Study Plan
Topic Readiness Assessment screens every student on his or her understanding of pre-requisite content for the topic.
IV. Technology for Instructional Supports:

Adaptive Study Plans are generated from the results of the Topic Readiness Assessment. Each student receives a study plan with additional instruction and practice tailored to his or her specific learning needs.

Intervention Lessons are designed to be completed by students independently. They can also be completed with the guidance of a teacher. The lessons have the following parts:

- Introduction reviews the main concepts.
- Examples provide explicit instruction, an opportunity to try a problem with scaffolding and a solution, and a Got It! exercise to assess understanding.
- Practice exercises offer opportunities to reinforce the concepts from the lesson.

MathXL for School enVisionmath2.0 embeds the power of MathXL for School directly into the lesson through Pearson Realize, offering an alternative to the lesson practice in the Student’s Edition. This seamless integration of personalized practice and problem solving occurs twice per lesson. Online Practice and Problem Solving exercises are auto-scored with built-in Learning Aids including Help Me Solve This, View an Example, Virtual Nerd videos, Glossary, Math Tools, and Print functionality. Additional Practice is also auto-scored and supported with built in Learning Aids, providing the help each student needs so they are successful doing homework.

Grade appropriate supports for the implementation of handheld technology

enVisionmath2.0 on Pearson Realize is built in HTML5, which allows students and teachers to access content on desktops and tablets. Student’s and Teacher’s Edition eText contains the entire print Student’s Edition, Teacher’s Edition, and Resource Masters online and can be downloaded for offline use on a tablet through the Pearson eText for School app.

Students interact with Visual Learning Animations Plus step-by-step representation of the lesson concept, which helps to make the mathematics explicit. They can bounce directly to the video from the Visual Learning Bridge in every lesson using the free BouncePages app.

Virtual Nerd Videos are available for every lesson allow students to dig down in content and provide approachable explanations delivered by on-screen instructors. Students access through the Virtual Nerd App and are available for smartphone use.

Office of Curriculum, Instruction and Assessment, Christopher Shaffer, Deputy Chief
V. Assessment:

- Designed to elicit observable evidence where students can independently demonstrate the targeted standard(s)
- Assesses student proficiency using methods that are accessible and unbiased
- Includes aligned rubrics, answer keys and scoring guidelines that provide guidance for interpreting student performance
- Uses curriculum-embedded assessments such as pre-, formative, summative and self-assessment measures
- Requires understanding of appropriate terminology and symbolic representation in order to read, write to explain, and interpret the language of mathematics
- Activities allow for remediation, practice, and enrichment
- Culminating activities/projects require students to research outside of immediate text and rely on prior and new knowledge

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Evidence:

**Designed to elicit observable evidence where students can independently demonstrate the targeted standard(s)**

Assessing students’ understanding of Common Core translates into measuring student’s conceptual understanding, procedural fluency, and ability to apply concepts to solve problems. It also means assessing their proficiency with the Math Practices. A range of item types can be useful in providing reliable data on students’ levels of understanding of the standards. These item types include performance tasks and technology enhanced items.

The program offers a comprehensive and balanced assessment system that includes diagnostic, formative, and summative assessments. This comprehensive system helps teachers to monitor student progress throughout each topic and to prescribe appropriate intervention to keep student learning on track. Students have experiences with various types of assessment items in the formal assessments. In addition, the probing questions found in the Teacher’s Edition allow for many opportunities to informally assess and monitor student learning.

**Assesses student proficiency using methods that are accessible and unbiased**

Assessment items and procedures across grades K–8 are culturally, linguistically, and individually non-biased and were constructed to meet the needs of every learner. Word problems share and reflect cultural information responsibly in both the instructional content and in assessments.

**Includes aligned rubrics, answer keys and scoring guidelines that provide guidance for interpreting student performance**

enVisionmath2.0 provides report resources to provide a comprehensive description of students’ current skill level and ability. Item analysis and scoring guides are available for every lesson in every grade level with accompanying diagnosis and intervention. Online assessments at
V. Assessment:

PearsonRealize.com generate a variety of helpful reports and provide ways to edit information about students as well as prescribe differentiation. Individual and class views of progress are provided in an easy-to-view format. Standards mastery reports show individual students’ mastery or class wide mastery for each standard.

**Uses curriculum-embedded assessments such as pre-, formative, summative and self-assessment measures**

Assessments are embedded throughout the enVisionmath2.0 program. Daily formative assessments occur after instruction and before practice, with student-specific differentiated intervention provided, as well as during the Mid-Topic assessment in grades 6–8. Summative Assessments are at the end of each Topic and unit to determine student understanding of each concept, while Readiness Assessments inform intervention. Benchmark and End-of-Year Assessments include performance tasks that students will find on high-stakes assessments.

Students can self-assess throughout the program. They receive positive feedback and gentle correction when using a number of online offerings for enVisionmath2.0 for grades K–8. The interactivity within the Visual Learning Animations Plus, a feature available for every lesson, often offers low pressure correction and positive feedback. Students will encounter this when using the digital Math Games at all grade levels, where they are encouraged to adapt their play to achieve the goals of the game and stretch their math understanding as they try for additional rewards within the game. Additionally, various features in the online MathXL for School that accompanies Practice & Problem Solving and Additional Practice (grades 6–8) offer positive feedback and personalized help features.

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|                                      |  - **Beginning-of-the Year Assessment**                                                                     
|                                      |   Diagnose students’ areas of strength and weakness; results can be used to prescribe differentiated intervention                                          |
| **At the start of a topic**          |  - **Topic Readiness Assessment**                                                                          
|                                      |   Diagnose students’ proficiency with topic pre3requisite concepts and skills; results can be used to generate personalized study plan                       |
|                                      |  - **Review What You Know**                                                                                 
|                                      |   Students check their understanding of key math concepts they previously learned.                                                                            |
V. Assessment:

| Formative Assessment | During a lesson | • Try It! and Convince Me! Assess students’ understanding of concepts and skills presented in each example; results can be used to modify instruction as needed  
• Do You Understand? and Do You Know How? Assess students’ conceptual understand and procedural fluency with lesson content; results can be used to review or revisit content. |
| Summative Assessment | At the end of a lesson | • Lesson Quiz Assess students’ conceptual understanding and procedural fluency with lesson content; results can be used to prescribe differentiated instruction. |
| Summative Assessment | At the end of a topic | • Topic Assessment, Form A and Form B  
  ○ Assess students’ conceptual understanding and procedural fluency with topic content  
  ○ Additional Topic Assessment with ExamView CD  
• Topic Performance Task, Form A and Form B Assess students’ ability to apply concept learned and proficiency with math practices. |
| Summative Assessment | After a group of topics | • Cumulative/Benchmark Assessment Assess students’ understanding of and proficiency with concepts and skills taught throughout the school year; results can be used to prescribe intervention. |
| Summative Assessment | At the end of the year | • End-of-Year Assessment Assess students’ understanding of and fluency with concepts and skills taught over the full school year. |
| Self-Assessment Tool | Ongoing | • Teaching Tool Master in Teacher’s Resource Masters |

Comprehensive Assessments. Teachers can assess students’ current skills and abilities.

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
V. Assessment:

- Overview of enVisionmath2.0 assessments in the Program Overview tab p. 60-61. End-of-Topic Assessments can be found in the Teacher’s Edition tab Grade 6 p. 111A-111D; Grade 7 p. 129A-129D; Grade 8 p. 203A-203D.

Requires understanding of appropriate terminology and symbolic representation in order to read, write to explain, and interpret the language of mathematics

The formats of the assessment items, which help prepare students for high-stakes PSSA, include the following:

- Selected response, e.g., single response, multiple response
- Constructed response, e.g., short or extended responses, sometimes using an on-screen symbols palette
- Technology-enhanced items, e.g., drag and drop, drop-down menus, graphing, or on-screen tools
- Performance tasks, hand-scored, or machine-scored items

Every lesson includes CCSS practice items in formats that help prepare students for PSSA. Math Practices and Problem Solving lessons include opportunities for students to engage specific math practices as they solve problems in performance-based assessments. Performance Tasks measure students’ understanding of concepts and skills across standards and incorporating the practices.

Activities allow for remediation, practice, and enrichment

The new enVisionmath2.0 program lets teachers collect and use assessment data quickly and easily to inform, plan, and adjust instruction for learners. enVisionmath2.0 provides resources to facilitate data-driven decision making.

Data from online assessments at PearsonRealize.com include a variety of class and individual reports that show results for an item, an assessment, or a group of assessments. Standards mastery is also available for individual or class reports.

Data from other assessments can include more than students’ scores. SDP teachers can examine and discuss students’ work on assessments to gain and record valuable insights into what individual students and the class understand and where they are still struggling.

Teachers can form groups based on assessment data to plan instruction or assign differentiated resources. Differentiation is also auto assigned after online Quick Checks/Quizzes, Topic Assessments, and Cumulative/Benchmark Assessments.
V. Assessment:

For grades 6–8, enVisionmath2.0 offers a Topic-level Readiness Assessment. These results are used to automatically generate an adaptive study plan based on each student’s needs, for completion during the Topic. Differentiation can also be auto-assigned or teacher-assigned using materials from the Differentiation Library based on results from the Topic Assessments. At the lesson level, students take the lesson quiz online (or on paper) and personalized practice is automatically assigned based on each student’s online score.

Culminating activities/projects require students to research outside of immediate text and rely on prior and new knowledge

STEM Projects are multi-lesson projects that present situation that address real social, economic, and environmental issues for grades 6-8. These rich, high-interest projects incorporate math, science, and engineering.

Today’s Challenge online for grades K-8 presents a science factoid at the start of many sets of problems and science data are used in many problems.

enVisionmath2.0 offers an additional embedded learning opportunity for middle school students to connect what they are learning in class to real-world situations via 3-Act Mathematical Modeling lessons. These lessons present an engaging, high-interest situation for which students propose a mathematical model to help them get resolution. Unlike traditional real-world problems, the problems in 3-Act Mathematical Modeling lessons do not set up the problem for students to solve.

- Act I—A multimedia presentation hooks students, followed by a brainstorm of possible question/answer situations
- Act II—Student-drive mathematical modeling to arrive at a solution
- Act III—The resolution is presented via a multimedia presentation so learners can explain differences between their own conjectures and the actual solution.

Each 3-Act Mathematical Modeling lesson also includes a sequel for use as time permits

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8.
- 3-Act Mathematical Modeling lessons in each Topic is a rich, real-world situation for which students look to apply not just math content, but math practices to solve the problem presented. Teacher’s Edition tab Grade 6 p. 91A; Grade 7 p. 109A; Grade 8 p. 177A.
V. Assessment:

- *enVisionSTEM Projects* are multi-lesson projects that present situations that address real-social, economic, and environmental issues. 
  
  **Teacher's Edition** tab Grade 6 p. 62; Grade 7 p. 80; Grade 8 p. 154.

VI. Parent Connections:

- Suggestions for improving study habits
- Online parent homework help center
- Activities for ongoing practice (such as: interactive notebooks, study cards, flashcards, vocabulary reinforcement, games)

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Evidence:

**Suggestions for improving study habits**

The Math Practices and Problem Solving Handbook at the front of the Student’s Edition includes the following features that help students improve study habits:

- **Math Practices** provides a page for each math practice as a resource for students and teachers to use throughout the year when discussing math practices. Math Practices student pages include:
  - A clarifying statement about what good math thinkers do when they engage the math practice.
  - A sample problem that lends itself to engaging the math practice.
  - Thinking Habits questions that help students engage the math practice when solving problems.

Evidence

- Please see Program Sampler and Review Guides for grades 6, 7, or 8
- Program Overview Tab p. 42

**Online parent homework help center**

The Visual Learning Bridge and the Visual Learning Animation Plus provide a clear resource for parents to understand the lesson concepts. The interactive Visual Learning Animation Plus videos provide students and parents with the opportunity to review what has been learned in class anytime, anywhere. The Visual Learning Animation and Visual Learning Bridge connect students’ thinking and solutions from the problem-based...
VI. Parent Connections:

Learning to the new mathematical ideas of the lesson. Students and parents can bounce directly to the video from the Visual Learning Bridge in every lesson using the free BouncePages application.

These two key elements of the enVisionmath2.0 program make the mathematics of each lesson explicit to students, confirming deep conceptual understanding that is key for success with the next generation assessments.

A wealth of Examples provide support for the Practice and Problem-Solving and Additional Examples are available online for students in need of more instruction. Key Concept presents a summary of the main math concepts presented in the lesson.

Student assignments are available online for parents to review. Additional Practice includes Virtual Nerd video online through Pearson Realize to remind students and parents about important ideas in the lesson. Students and parents can bounce directly to the video using the BouncePages application.

Parent Letters are provided for each topic to encourage math discussion and activities for home use to reinforce what students are learning in class.

Evidence

- Please see any lesson, for example Teacher’s Edition tab Grade 6 p. 78-82A; Grade 7 p. 96-100A; Grade 8 p. 164-168B.

Activities for ongoing practice (such as: interactive notebooks, study cards, flashcards, vocabulary reinforcement, games)

The enVisionmath2.0 offers engaging digital courseware to appeal to 21st century learners.

Math Games (in English and Spanish). These online thinking games motivate students and enhance learning. Intelligently interactive, each game challenges students to apply previous math learning and to build more complex concepts. These games include a fluency game for each CCSS fluency standard and a vocabulary game.

- Math Practices Animations enVisionmath2.0 features short videos for each of the eight Mathematical Practices. Videos explain and demonstrate each Mathematical Practice in student-friendly language.

- Virtual Nerd Videos are available for every lesson allow students to dig down in content and provide approachable explanations delivered by on-screen instructors. Students access through the Virtual Nerd App and are available for smartphone use.
VI. Parent Connections:

- **Visual Learning Animations Plus.** Students interact with this step-by-step representation of the lesson concept, which helps to make the mathematics explicit. They can bounce directly to the video from the Visual Learning Bridge in every lesson using the free BouncePages app.

- **Today’s Challenge.** This feature provides five problems with increasing difficulty using the same data to reinforce the kind of thinking students need for success on next generation assessments.

- **Solve & Discuss It, Explore It, Explain It.** Each lesson opens with a rich problem for students to discuss and share solution strategies. Students begin every lesson with the power of problem-based learning and classroom conversation.

- **MathXL for School** Seamless integration of personalized practice and problem solving occurs twice per lesson. **Online Practice and Problem Solving** exercises are auto-scored with built-in Learning Aids including Help Me Solve This, View an Example, Virtual Nerd videos, Glossary, Math Tools, and Print functionality. **Additional Practice** is also auto-scored and supported with built-in Learning Aids, providing the help each student needs so they are successful doing homework.

- **Math Tools and Digital Math Tools Activities.** This suite of digital math tools is designed to reinforce lesson content and previously taught content. Students have access to a wide range of interactive digital tools anytime and anywhere. For every lesson, there is a Digital Math Tools Activity (online blackline master) provided or a reference to an Online Math Game.

- **Animated Math Glossary.** This online program glossary for students includes sound and animation.