



About Core Progress Math

The National Math Panel recommends that mathematics courses provide a “focused, coherent progression of mathematics learning, with an emphasis on proficiency with key topics.” Core Progress Math is a research-based and empirically validated math learning progression that addresses key features of the National Math Panel recommendation.

A leading expert in the field of learning progressions notes, “A well-constructed learning progression presents a number of opportunities to teachers for instructional planning. It enables teachers to focus on important learning goals in the domain, centering on what the student will learn rather than what the student will do (i.e., the learning activity). In planning instruction the learning goal is identified first, and the sequence of activities or experiences that teachers will use to enable students to meet the goal is connected to the goal.” “A progression also helps teachers see connections between what comes before and after a specific learning goal, both in the short and long term.” (Heritage, 2008)

References

Heritage, M. (2008, February). *Learning progressions: Supporting instruction and formative assessment*. Washington, DC: Chief Council of State School Officers.

What Is Core Progress Math?

Core Progress Math is a learning progression that identifies the continuum of math concepts and skills needed for students to be successful in math. The continuum begins with early numeracy concepts and skills and progresses through the high-school level algebra and geometry skills required to be college and career ready.

Core Progress Math identifies core objectives—skills that are key building blocks at critical points in a student’s development path—and identifies the prerequisite math skills needed for success with the core objectives. Core Progress Math includes resources to support math development and guidance to help students become successful mathematicians. Core Progress Math illuminates the progression of skills in key skill areas such as patterns, whole numbers, fractions and decimals, variable equations and expressions, functions, and two- and three-dimensional geometry. The progression of math skills as presented in Core Progress Math is research-based and validated by student data, and was developed in consultation with leading experts in the field of mathematics instruction and learning progressions.

Core Progress Math gives you guidelines and information for providing your students with coherent, progression-based mathematics instruction and practice that emphasizes key math strategies and skills.

Key Features of Core Progress Math

Key features of Core Progress Math work together to identify the continuum, clarify the connections of concepts and skills, and support the development of mathematics learning. These key features are described below.

- ▶ **Skill areas**—Twenty-six skill areas of mathematics knowledge and understanding are identified. Each skill area presents the progression of skills within the specified area, such as Expressions and Equations, to more readily show the growth continuum in a specific area of math development.
- ▶ **Grade-level skill statements**—Specific statements identify the skill expectation from early numeracy through high-school level math.
- ▶ **Focus skills**—Focus skills are the most critical math skills for a student to learn at a grade level. They are key building blocks in a student’s mathematics ability. Students need to have proficiency with the focus skills to be successful at their grade levels and to progress in the grades that follow.
- ▶ **Skill elements table**—Each skill has information that supports teaching about and learning the skill. The information provided varies from one skill to another, and includes such elements as:
 - ▶ **Standards for Mathematical Practice**—Identifies the mathematical practices that most notably apply to the skill.
 - ▶ **Skill Area**—Identifies the area of mathematics the skill is associated with. Use this information to understand the full range of skills associated with a particular area of mathematics learning.
 - ▶ **Terminology and concepts**—Identifies the terms and concepts your students need for understanding the objective. Before assigning an objective, ask yourself, “Does my student understand these terms and concepts?”
 - ▶ **Skills needed for this objective**—Identifies the skills your students need for working with the objective. Before assigning an objective, ask yourself, “Is my student ready to practice these skills?”
 - ▶ **Prerequisite terminology, concepts, and skills**—Identifies the prerequisite terminology, concepts, and skills your students are expected to know before practicing this objective. Before assigning an objective, ask yourself, “Are these terms, concepts, and skills already part of my student’s math foundation?”
 - ▶ **ELL Support**—Provides strategies and suggestions for supporting students with English language learning needs.
 - ▶ **Prerequisite Skills**—Identifies the prerequisite skills for the core skills. Use this information to understand the prior learning a student needs and to focus re-teaching for students who may need intervention.

How does Core Progress Math learning relate to state standards?

The skills in Core Progress Math are not an additional set of skills to teach in addition to the skills in state standards. Generally, the skills identified in the progression are already indicated in your standards and curriculum materials. Core Progress Math provides a different view, a continuum of interrelated development of concepts and skills. Thus, Core Progress Math leads to an understanding of mathematics concepts and skills from their least to most sophisticated manifestation. Additionally, the identification of core objectives pinpoints key areas at each grade level.

How will you benefit from using the Core Progress Math learning progression?

Each day you are faced with decisions on how to help your students increase their proficiency with math skills. What area of learning should you focus on next? Are your students prepared for that new learning? What if a student is not successfully meeting grade-level expectations? What skills is the student missing? What if a student is capable of working ahead? Core Progress Math provides the information you need for making effective instructional decisions and differentiating for the needs of students at different achievement levels.

How to View Suggested Core Progress Skills in STAR Math

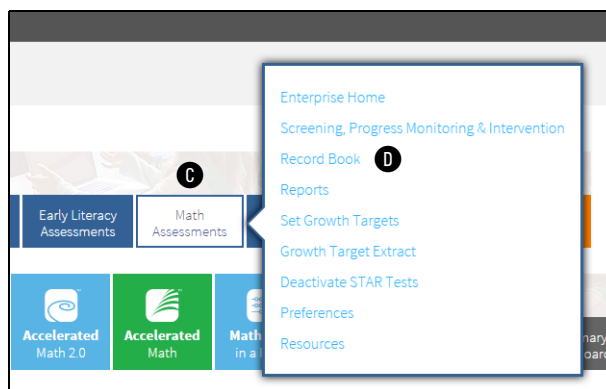
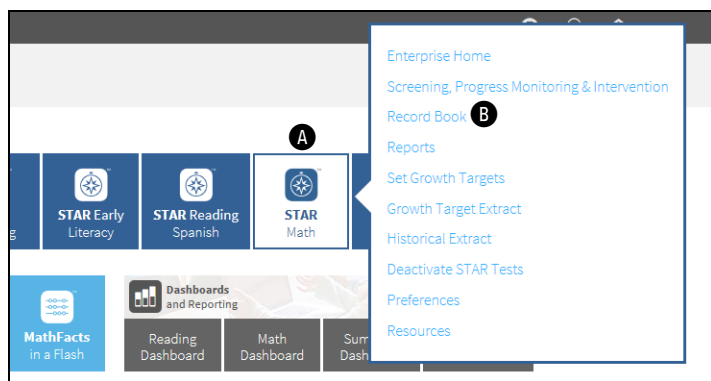
Once students have taken a STAR Math test, you can view suggested skills from the Core Progress Learning Progression within the Record Book.

For a single student, the suggested skills are based on the student’s Scaled Score; for an instructional group of students, the skills presented are based on the median Scaled Score of the students in that group.

There are two ways to view the suggested skills:

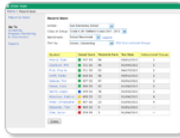
Method 1:

Select **STAR Math** **A** on the Home page, then select **Record Book** **B**. (If you are using STAR 360, select **Math Assessments** **C**, then select **Record Book** **D**.)



Method 2:

- ▶ On the STAR Math Enterprise Home page, select **Record Book** in the Important Features section at the top of the page **E**.



Record Book


Teachers can view students' test scores and progress, assign them to instructional groups, and see suggested skills to help with instructional planning

Contains:

- Student Scores
- Instructional Group Assignments
- Recommended Skills
- Instructional Activities

[Record Book](#) **E**

1. If you want to view suggested skills for an instructional group that you have set up in the Record Book, click the **Sort By** drop-down list **F** and choose **Instructional Groups**. Then, click **View Suggested Skills** above the table **G** for a specific group. (When you sort by instructional groups, the **View Suggested Skills** link is not available for students who are not in an instructional group **H**.)

 Some customers will be able to use *Instruct or Planner Trial* to view suggested skills. For these people:

- ▶ There will be a **Plan Class Instruction** button (*Instruct*) or **View Skills & Resources** button (*Planner Trial*) under the **Sort By** drop-down list **F**; this will take the user to *Instruct* or *Planner Trial*.
- ▶ The **View Suggested Skills** link above a table for a group **G** will instead be a **View Instructional Planning Report** link.

For more information about *Instruct* or *Planner Trial*, go to the following sites:

- ▶ **Instruct:**
<https://help.renaissance.com/instruct/GettingStarted>
- ▶ **Planner Trial:**
<https://help.renaissance.com/instruct-prev/prev-GettingStarted>

STAR Math

Home > Record Book

Record Book

School: (Only schools using the Enterprise model are included)

Class or Group:

Benchmark: [Legend](#)

Test Type:

Sort By: **F** [Edit Instructional Groups](#)

Group 1 - Median Scaled Score: 703 [View Suggested Skills](#)

Student	Scaled Score	Percentile Rank	Test Date	Instructional Groups
Clark, Andrew	721	96	9/21/2012	1
Johnson, Madison	636	66	9/21/2012	1
Moore, Matthew	747	96	9/21/2012	1
Thomas, Ashley	711	93	9/21/2012	1

Group 2 - Median Scaled Score: 577 **G** [View Suggested Skills](#)

Student	Scaled Score	Percentile Rank	Test Date	Instructional Groups
Martinez, Tomas	596	63	9/21/2012	2
Smith, Joshua	777	39	3/25/2013	2
Wilson, Emily	597	47	9/21/2012	2

Unassigned **H** [View Suggested Skills](#)

Student	Scaled Score	Percentile Rank	Test Date	Instructional Groups
Garcia, Matias	376	3	9/21/2012	--
Taylor, Abigail	469	9	9/21/2012	--

2. The next page shows suggested skills for the selected student or instructional group:

- I The **View** drop-down list shows the student or instructional group these skills are for. You can use the drop-down list to choose a different student or instructional group.
- J When one student is chosen, that student’s Scaled Score is shown here. When an instructional group is chosen, the median Scaled Score for the students is shown.
- K Trend scores can be used instead of a student’s most recent Scaled Score to determine which skills are shown.
- L The suggested skills from the Core Progress Learning Progression are shown here, sorted by grade. Focus skills have a double-angle quotation mark (») in front of them.
- M Select **Go to suggested skills** to see the skills the student or instructional group is most likely to be ready to learn (they will be highlighted in blue on the screen).
- N When you select the description of a skill, you will see information about that skill, such as instructional resources, terminology, prerequisite skills, and so on (the amount and type of information presented varies from one skill to another). If instructional resources are available, select **View Instructional Resources** O to see worked examples, skill probes, and other resources to help you teach the skill effectively.
- P Select the printer icon to print the list of suggested skills. The icon also appears on instructional resources, allowing you to print them as well.
- Q Select **Done** when you are finished.

Alternative View of Core Progress Skills

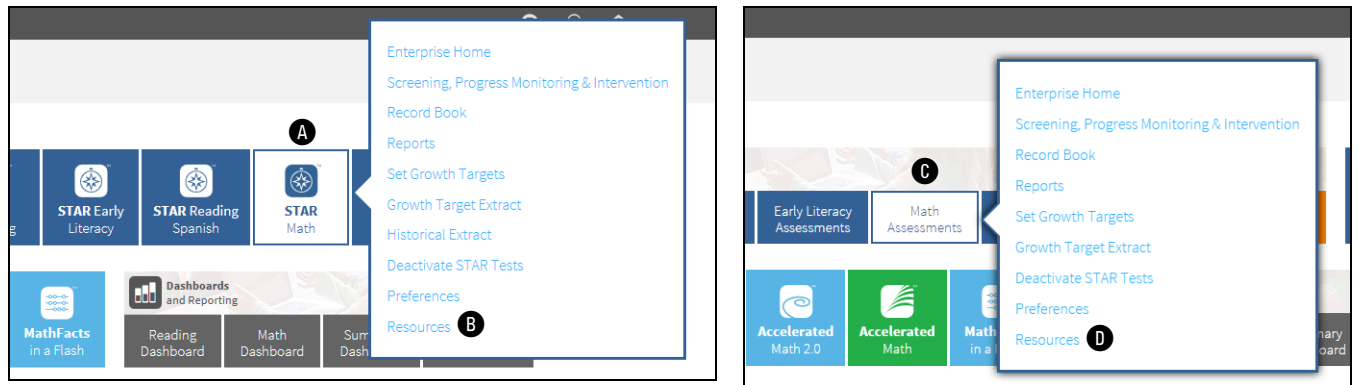
The previous section described how to use the Record Book to search for a particular student or instructional group and then view the suggested core progress skills for that student or group.

It is possible to view information about the skills (such as terminology, prerequisite skills, and so on) *without* going through the Record Book. When you do this, you will see all the skills and additional information about them, but none of them will be highlighted as a suggested skill for a specific student or group.

There are two ways to get to the alternative view:

Method 1:

Select **STAR Math** **A** on the Home page, then select **Resources** **B**. (If you are using STAR 360, select **Math Assessments** **C**, then select **Resources** **D**.)



On the Resources page, select **Enter Core Progress for Math** **E**.

Write Paper	
Definitions	Explains test scores.
Enter Core Progress for Math E	Go to a research-based progression of knowledge and skills. Helps you identify knowledge gaps, differentiate instruction, and determine next steps.
Enterprise Overview	Describes Enterprise features.
Enterprise Overview	Gives a definition and Functional Grade Level for

Method 2:

On the STAR Math Enterprise Home page, select **Enter Core Progress** **F** in the Important Features section at the top of the page.



Core Progress

Learning Progression for Math

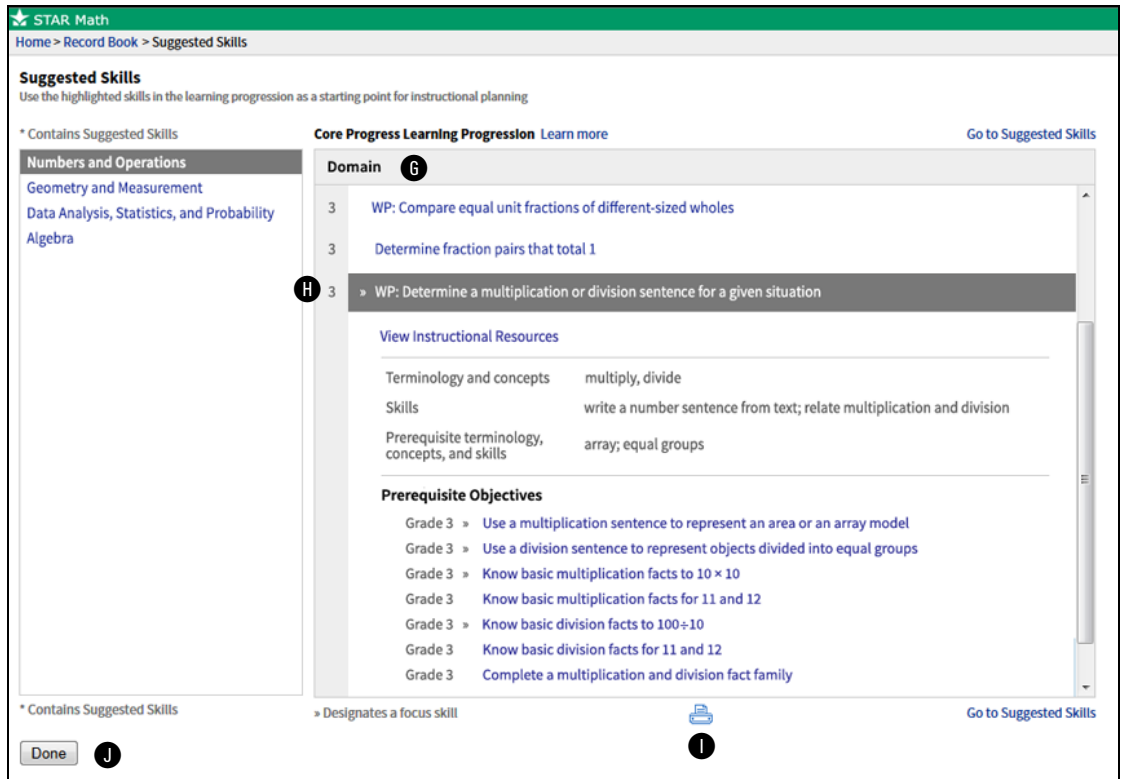
Go to a research-based progression of knowledge and skills. Helps you identify knowledge gaps, differentiate instruction, and determine next steps.

[Enter Core Progress](#) **F**

Provides:

- Definitions
- Sample items
- Prerequisite skills
- Instructional activities

The Suggested Skills page opens. It is identical to the Suggested Skills page opened via the Record Book, but some of the features are not present.



- Ⓒ The suggested skills from the Core Progress Learning Progression are shown here, sorted by grade. Focus skills have a double-angle quotation mark (») in front of them.
- Ⓗ When you select the description of a skill, you will see information about that skill, such as instructional resources, terminology, prerequisite skills, and so on (the amount and type of information presented varies from one skill to another). If instructional resources are available, select the links to see worked examples, skill probes, and other resources to help you teach the skill effectively.
- Ⓘ Select the printer icon to print the list of suggested skills. The icon also appears on instructional resources, allowing you to print them as well.
- Ⓙ Select **Done** when you are finished.