

Accelerated Math™ Instructional Practice Implementation Guide

Powerful Math Practice

Practice is essential to learning. Research has shown that practice builds the very neurological connections we need for deep understanding. Practice even alters the neurons in the brain so we can perform skills automatically, without having to think about them. Moreover, when students practice—and practice effectively—teachers benefit from numerous opportunities to check for understanding, address individual needs, and take action to drive growth.

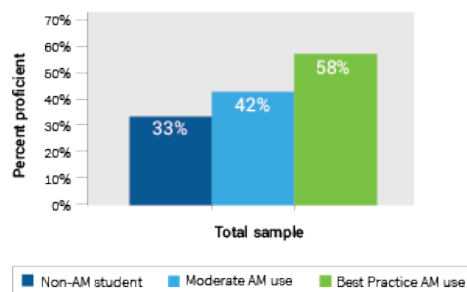
Renaissance Accelerated Math Instructional Practice helps you provide students with powerful practice personalized to their needs—and yours. Whether your students are focused on grade-level mathematics or need help closing knowledge gaps, Accelerated Math helps you connect students with the right math concepts so they can engage in productive struggle with just the right amount of practice. As students practice, Accelerated Math provides them with ample opportunity to engage in mathematical discourse, and provides you with the data you need to adjust instruction and practice right in the moment, and throughout the school year.

Students who use Accelerated Math are nearly twice as likely to be college and career ready.

Differentiating practice with Accelerated Math dramatically affects achievement. A study of 2.7 million students found that those using Accelerated Math realized more growth than their peers. **The more effectively the program was implemented, the better the outcomes were for students.**

[Download Report](#)

College and career readiness



Let's get going.

On the following pages, we explain the basics of implementing Accelerated Math Instructional Practice effectively. If you are new to the program, this information will get you off to a good start. Since Accelerated Math Instructional Practice is part of Renaissance Flow, you'll likely want to read the Renaissance Flow Implementation Guide to get a better sense of how other Renaissance products might fit with your use of the math program.

Remember, we are here to help. Schools that achieve the levels of growth described above monitor how well they are using Accelerated Math and look for ways to improve. We offer a variety of professional learning opportunities to support you. Contact your Renaissance representative or call (800) 338-4204 for information.



Four Steps to a Powerful Math Practice Program



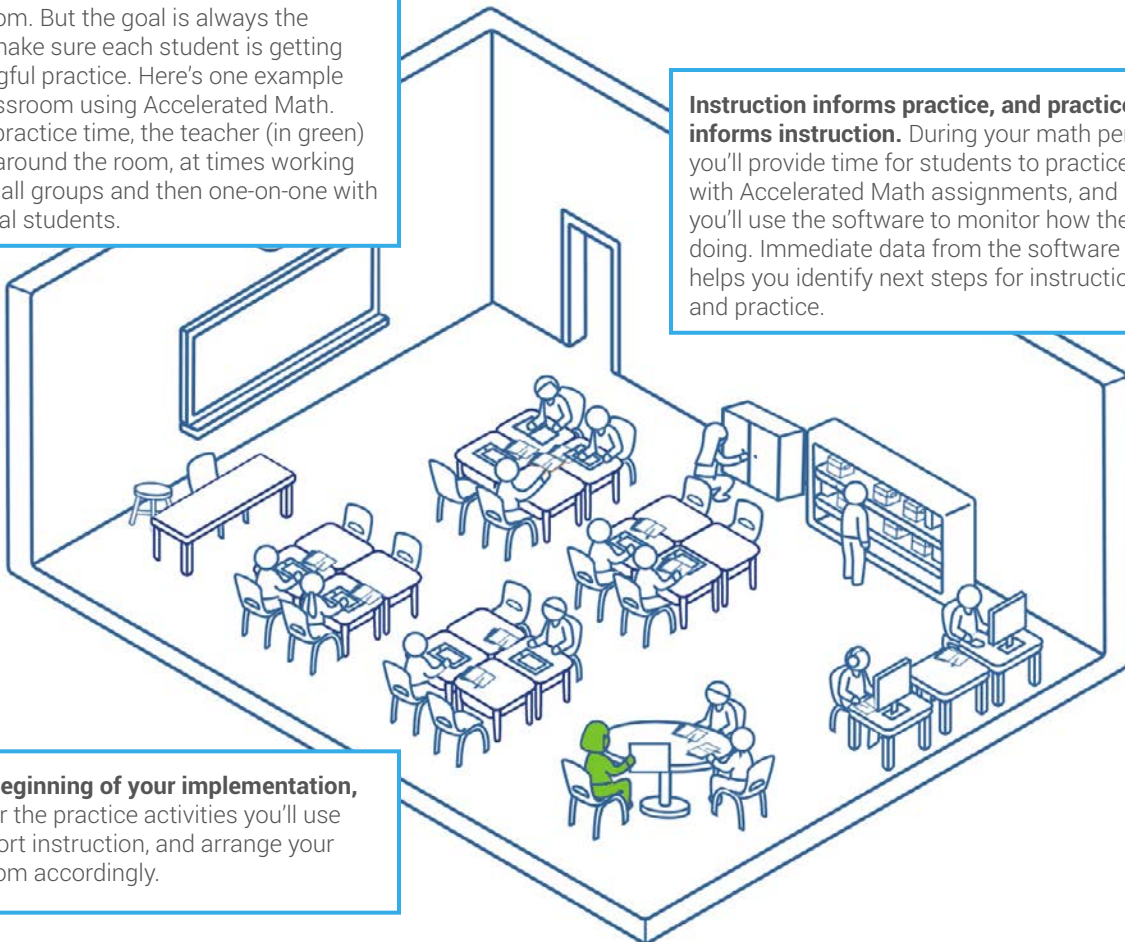
As with all math practice programs, the results you and your students achieve with Accelerated Math Instructional Practice will depend on how you use it. When used casually, Accelerated Math provides practice to reinforce the math concepts you're teaching. When it is used consistently, students get excited about math, math anxiety fades, and achievement accelerates.

The four steps described in this guide will help you understand the basic shape of an Accelerated Math implementation. The steps are recurring, and they often overlap. Use your expertise to decide when each step is needed over the course of your implementation.

What will your classroom look like? An Accelerated Math implementation can look quite different from classroom to classroom. But the goal is always the same: make sure each student is getting meaningful practice. Here's one example of a classroom using Accelerated Math. During practice time, the teacher (in green) moves around the room, at times working with small groups and then one-on-one with individual students.

Instruction informs practice, and practice informs instruction. During your math period, you'll provide time for students to practice with Accelerated Math assignments, and you'll use the software to monitor how they're doing. Immediate data from the software helps you identify next steps for instruction and practice.

At the beginning of your implementation, consider the practice activities you'll use to support instruction, and arrange your classroom accordingly.



Step 1: Get organized.

Just about everything goes more smoothly when we do a bit of preparation. Below are essential tasks for getting your math-practice program up and running. If you are already using Accelerated Math Instructional Practice but want to energize your implementation, check to see that you have all of the following in place.

Get Your Classroom Ready	Get Your Routines Ready	Get Your Students Ready
<p>Take stock of your available computers, laptops, and tablets. If necessary, create a system for students to share devices.</p> <p>Be sure each device has a reliable Internet connection and access to Renaissance Place.</p> <p>Set up your classroom to support your instructional methods. Plan a mix of whole-class and small-group instruction and one-on-one conferences.</p> <p>Plan space for independent and collaborative practice, and create a quiet area for students to complete quizzes.</p>	<p>Decide how you will let students know what to do during the math period.</p> <p>Think about how students will organize and access their materials.</p> <p>Assemble resources so students can get help independently, and decide how and when students will use them.</p> <p>Plan for how students will communicate that they're ready to meet with you.</p> <p>Plan routines for how students will collaborate with each other and conference with you.</p>	<p>Test students with Star Math. Accelerated Math will use this growth and achievement data to sort students into initial groups.</p> <p>Explain to students how Accelerated Math works and why math practice is important.</p> <p>Teach students how to access, complete, score, and correct assignments.</p> <p>Communicate your expectations for how students will show their work. Provide students with examples that meet your standards.</p>

Tips for Classroom Setup

Independent practice is a key component in any math classroom. But it's not the only way students learn essential concepts. Think through the combination of instructional strategies and practice activities you'll use with your students. You'll likely need space for whole-class and small-group instruction, one-on-one conferences, and collaborative practice activities. You'll also need an area for students to take quizzes. Here are some tips for setting up these areas.



Whole-Class and Small-Group Instruction

Accelerated Math supports whole-class and small-group instruction. If you'll do both, you might want desks in rows, small groups, or a "U" shape to facilitate discussions. For small-group instruction, a back table may be useful. In any case, teach routines that help students transition between arrangements.



Conferencing

Designate an area where you'll meet with students one-on-one. This could simply be at your desk or a small table, or you could check in with students at their own desks. In any case, let students know how they should communicate to you that they're ready to meet.



Collaborating

Decide on a seating arrangement that facilitates collaboration. You might have students pull their desks together, or dedicate a classroom area for this purpose. Students should be able to see each other while they talk and shift their gaze quickly from their group to the board or other focal point.



Taking Quizzes

Once a student successfully practices a subskill, Accelerated Math will automatically generate a quiz. Students will likely quiz at different times and should work on each quiz without peers or resources. Set up a quiet area where those who are working on quizzes can work confidently and without distractions.

Step 2: Personalize practice.

Based on your Star Math data, Accelerated Math Instructional Practice can help you differentiate efficiently to meet the needs of your class. You'll first create an Assignment Plan by selecting skills for each group to practice, and assigning work on those skills to each group. Finally, you'll generate practice assignments that engage students with the math skills they are ready to learn. Let's see how this looks for two of many approaches to using Accelerated Math.



For a more information on creating groups, read:

[Managing Groups in Accelerated Math Instructional Practice](#)



Whole class, same skills

If you're seeking to provide your **whole class with practice on a set of skills that you select for them**, consider initially following the work flow below.



Small groups, different skills

If you're planning on breaking your class into **small groups to provide practice on content targeted to their needs**, consider initially following the work flow below.



Manage Student Groups

Since you're planning to assign all students work on the same skills, initially you may choose not to group students within Accelerated Math. As your students' needs change, you can create groups based on their growth and achievement data for more precise differentiation.

You can use Accelerated Math to group students by their growth and achievement demonstrated on their last Star Math test or by benchmarks for your school, district, or state. You'll want to confirm the groups suggested by the software and make adjustments where necessary. As your students' needs change, you'll likely adjust groups or create new ones for more precise differentiation.



Select Skills for Practice

When creating an Assignment Plan, you'll want to select the same skills for the whole class. Using your curriculum or pacing document as your guide, you'll search for the skills you'd like to assign. You'll review the standards and subskills associated with the skill. You'll also see how ready your class is to practice that skill based on their median Star Math scaled score. Then, you'll select the skills you intend to have students work on that week.

When assigning content at the group level, you'll create an Assignment Plan for each group. Accelerated Math will recommend skills for each group based on the median Star Math scaled score for the students in that group. You'll review the recommended skills and their related standards and subskills. Then, you'll select the skills you intend to have students work on that week.



Assign Student Practice

Next, you'll assign the practice that students in each group or your whole class will work on during the week. Since each assignment focuses on a single subskill, the number of assignments for each skill will vary, and you might want to assign more or fewer skills based on what you see. Once you've determined what students in each group will work on, select those assignments and schedule when students will work on each.



Provide Students with Practice

Once you've created a weekly Assignment Plan for your whole class or small groups, you'll be ready to provide instruction and have students work on practice assignments for their skills. Assignments will appear in your students' Assignment List on the days you scheduled them. Students get a unique set of problems for each assignment so you can encourage them to collaborate without worrying about them copying answers.

Students work on each assigned subskill one at a time until they know it. Once they've successfully practiced a subskill, they'll be given a quiz for that subskill. Once they pass the quiz, the subskill is considered completed and they'll move on to their next assigned subskill.



Monitor Student Practice

As students work, you'll monitor their progress through regular check-ins, students' recorded work, and the data provided by Accelerated Math. Since you and your students receive immediate feedback upon completing a practice or quiz, you'll be able to correct minor misunderstandings or identify more significant issues before they derail a student's success.

Each day, you'll review the Assignment Plan screen to check whether students are ready for new skills and if any individuals are struggling. You'll use this data to inform your instruction during the next math period, and possibly inform your next Assignment Plan.

Step 3: Talk about math.

Talking about math encourages students to take ownership of their practice. They reflect on their understanding of the concepts they are learning. They make sense of and critique their peers' ideas. And they create deep, connected math knowledge that will prepare them for the rigors of college and the workplace. Throughout the math period, give students time to talk about the math concepts they're learning.

Accelerated Math Instructional Practice assignments are ideal for facilitating discourse. Students work unique problem sets on paper, creating a record of their reasoning they can use to communicate with others. Here are some other ways you can use Accelerated Math to facilitate discourse with the whole class, among peers, and one-on-one. Make note of other strategies that work well for your students, and share them with your colleagues.



Whole-Class Discourse

Work through a problem with students before having them practice on their own. Model your thinking aloud as you share your solution strategy. Ask if they know other ways to solve the problem, and have them share their methods.

Have students work in teams on rich problems related to the skills you've assigned them. Then bring everyone together to discuss how their approaches relate or contrast.

As students share and discuss, ask strategic, open-ended questions that encourage them to exchange their thought processes.



Peer Collaboration

Consider having students work in pairs. As they explain their thinking, their peers listen and share ways they've approached their own unique problems on their practice assignments.

Model protocols for questioning, listening, and responding to others. Provide students with a list of sentence starters to get them familiar with how to start and sustain a math conversation.

Ask groups to collaboratively write out the steps they took to solve a particular problem and discuss whether their answer made sense.



One-on-One Conferences

After students work, score, and correct their Accelerated Math assignments, plan to check in with them individually. Ask guiding questions and let your students do most of the talking so you can get a sense of their thought processes and the strategies they used. This interaction will help you determine next steps.

How frequent are the student's mistakes?	What do I observe during the conference?	How long will this conference likely last?	What should I do next?
Sporadic	The student can identify and correct errors without prompting.	1–5 minutes	Teach self-correction strategies. Ask students to note the problem steps in their math journal.
Roughly half of the answers are correct	The student can identify and correct errors with verbal cues and other support from me.	5–10 minutes	Briefly reteach or assign a peer tutor for the student to work with on the concept. If other students are struggling with the same subskill, pull them together to reteach.
Few (if any) answers are correct	The student has no understanding of their errors.	1–5 minutes	Remediate. Identify missing skills. Create a plan to close the learning gap quickly. You may need to intervene, teach prerequisite skills, and monitor progress.

Step 4: Use data to monitor progress.

Immediate reporting in the software provides detailed information to help you evaluate instruction, identify students' needs, and intervene quickly and effectively. Make it a habit for you and your students to check progress regularly. That way, your students can get the help they need exactly when they need it. To learn how to access this data in the software, click the question mark in Accelerated Math Instructional Practice.

Instructional Practice
I am viewing data for all students in Mr. Roberts' Class at East Elementary

Order decimal numbers through the hundredths place
Assigned on 4/11/16 to Mr. Roberts' Class

Student	Overall Score	Last Action	Practice
Average	79.5% (7.7 pts)	4/11/16	87.9% (5.3 pts)
Anderson, John	--	4/11/16	100% (8 pts) In Progress
Barley, Josh	--	4/11/16	In Progress Pending
Johnson, Jacob	67% (4 pts)	4/11/16	67% (4 pts) Pending
Lewis, David	90% (10 pts)	4/11/16	100% (8 pts) 90% (4 pts)
McDonald, Rob	--	4/11/16	In Progress Pending
Rodriguez, Mario	61.9% (9 pts)	4/11/16	67% (5 pts) 88% (4 pts)

You'll check the **Assignment Plan screen** daily to see whether your students are ready for instruction and practice on a new skill. You can also monitor the status of individual students' work—including scores for specific assignments—and take appropriate action directly from the screen. You'll see right away who needs help, and who is ready to move forward.

Math Mastery

Results on STAR Math English compared to Benchmarks
11/18/2015

Domain Mastery Percentage for Grade 4*
English Score: 582 (11-15-2015)

Domain	Mastery
Numbers and Operations	80%
Counting And Cardinality	100%
Algebra	80%
Operations And Algebraic Thinking	80%
Expressions And Equations	80%
Seeing Structure In Expressions	80%
Geometry	80%
Geometry	80%
Congruence	80%
Similarity, Right Triangles, And Trigonometry	80%
Measurement and Data	80%
Measurement and Data	80%

The **Math Mastery screen** gives you an at-a-glance view of students' mastery of mathematical domains and standards, based on Star Math assessment and Accelerated Math practice data.

Practice Score
Matthew Childress

Congratulations! You've finished Practice: Multiply two-digit multiples of ten
Completed on 4/25/2016 for Mr. Jones - Mt. Jones Gr4 at Eagle Creek Elementary

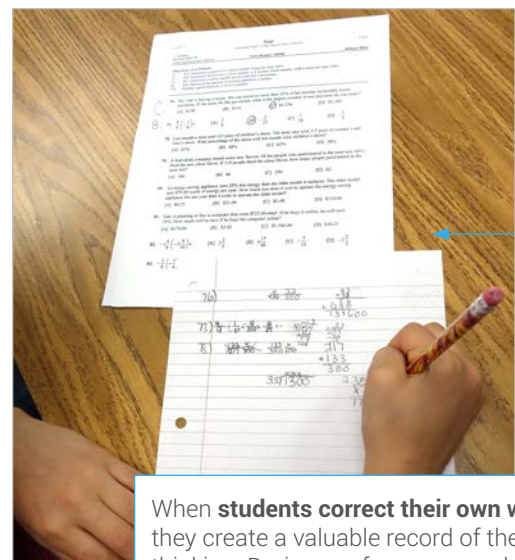
2 questions correct out of 3 (66%).

Review your mastery level for the subskills.

Add up to four 2-digit numbers using strategies based on properties of operations

Progress bar: 66% (Developing)

After completing assignments, students receive immediate feedback on the **students results page**. They can use this data to reflect on their performance and correct errors to the best of their ability.



When **students correct their own work**, they create a valuable record of their thinking. During conferences or when they work with peers, students can use this record to zero in on misunderstandings—and you'll be poised to confirm what they know and decide your next steps.