

Accelerated Math[™] Implementation Guide

Powerful Practice

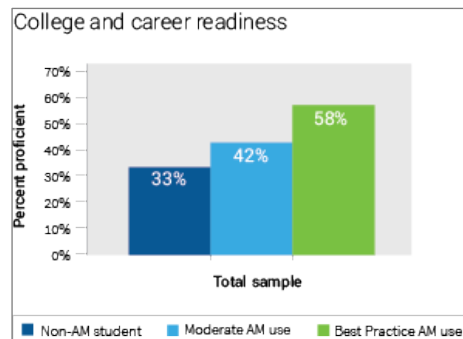
Practice is essential to learning. Research has shown that practice builds the very neurological connections we need for deep understanding. Practice even alters the neurons in the brain so we can perform skills automatically, without having to think about them. Moreover, when students practice—and practice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

Renaissance Accelerated Math is all about practice. Whether your students are learning grade-level mathematics or need help closing knowledge gaps, Accelerated Math lets you connect students with the right math concepts, at the right level of challenge, and at the right time. As students practice, Accelerated Math provides data on their progress and growth so you can quickly adjust instruction and practice right in the moment, and as needed 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.

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LET'S GET GOING

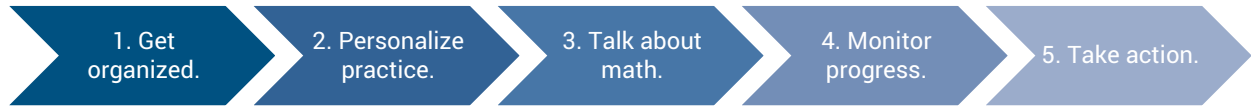
On the following pages, we explain the basics of an effective Accelerated Math implementation. If you are new to Accelerated Math, this information will get you off to a good start. If you've been using Accelerated Math for a while, you'll discover exciting capabilities that will enrich your math practice program and energize your students.

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 in this endeavor. Contact your Renaissance representative or call (800) 338-4204 for information.



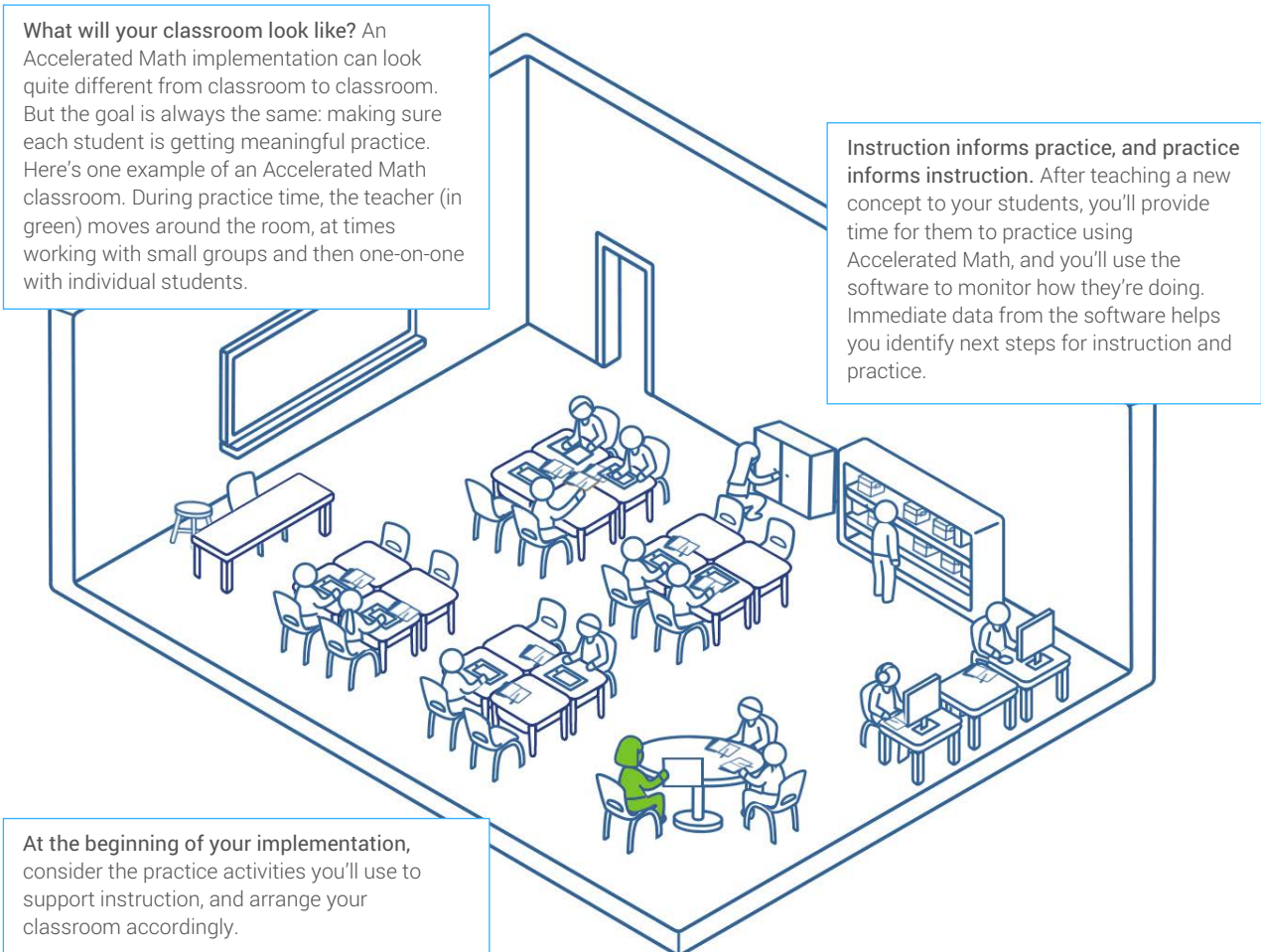
For software instructions, click the question mark in Accelerated Math.

Five Steps to a Powerful Math Practice Program



As with all math practice programs, the results you and your students achieve with Accelerated Math 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 thoughtfully and consistently, students get excited about math, math anxiety fades, and achievement accelerates.

The five 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. The daily checklist at the end of this guide will help you plan day-to-day instruction and practice and keep your implementation going strong.



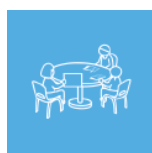
STEP 1: GET ORGANIZED

Just about everything goes more smoothly when we do a bit of preparation. Below are essential tasks for getting your math-practice program off to a good start. If you are already using Accelerated Math 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 testing.</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 provide initial grouping recommendations.</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>Help students create folders or binders to store their math materials.</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 testing. Here are some tips for setting up these areas.



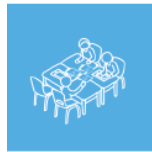
Whole-Class and Small-Group Instruction

Accelerated Math supports whole-class and small-group instruction. If you'll do both, you might want desks in paired rows, small groups, or perhaps 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 without fuss.



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.

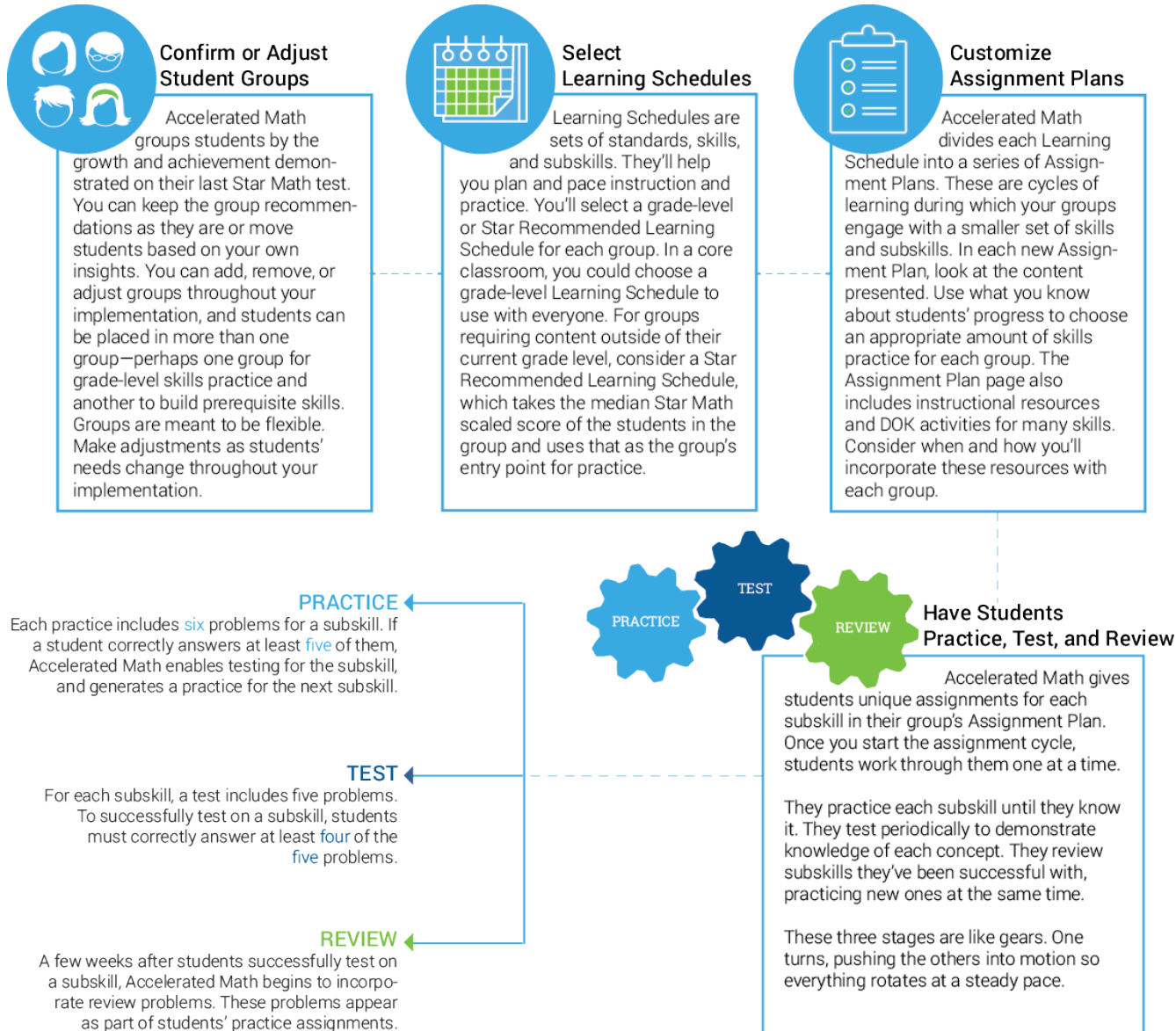


Testing

You decide when student groups test in Accelerated Math, which means they may test at different times. Set up a quiet area where those who are testing can work confidently and without distractions.

STEP 2: PERSONALIZE PRACTICE

To help you differentiate efficiently, Accelerated Math groups students who appear to have similar needs. You'll first confirm or adjust these recommendations in the software. Then you'll select a set of standards-based skills—called a Learning Schedule—for each group and customize Assignment Plans so each group has a workload that meets their needs. Finally, you'll start the assignment cycle for each group, and Accelerated Math will begin generating assignments that give students the chance to practice the skills they're ready for. Thinking through these decisions early on will help you plan and deliver targeted instruction and practice throughout your implementation. And it will prepare you for making adjustments when students' needs change.



STEP 3: TALK ABOUT MATH

Talking about math encourages students to take ownership of their practice. They reflect on their understanding of the math 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.

Students' Accelerated Math assignments are ideal for facilitating discourse. Students work out 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

Use worked examples from the software to walk students through the steps to a solution. Ask if they know other ways to solve the problem, and have them share their methods.

Share sample problems from the software and work through them as a class.

Have students work in teams on rich problems, like the depth-of-knowledge (DOK) activities in the software. 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 engage with each other's thought processes.



Peer Collaboration

The Peer Help feature in Accelerated Math shows students which peers they might benefit from working with during practice. Consider having students work in pairs. As they explain their thinking, their peers listen and share ways they've approached their own unique problems for this subskill.

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, 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	Reteach. 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.

Group 1
Total Assignments: 640
Completed: 205
Remaining: 435

Check the **Progress Dashboard** daily to see whether groups are on pace to complete their work by the end of the Assignment Plan. You can also monitor the status of individual students' work, including scores for specific assignments. You'll see right away who needs help, and when students are ready to test.

Math Overview

I am viewing all students in 3rd Grade CC Demo Class at East Elementary School for School Year

STAR Math: Growth and Achievement

Student Comparison (practice, by grade)

Scaled Score: 440 Phonics, 623 Trigonometry, 594 Algebra

The **Math Dashboard** gives an at-a-glance view of students' growth and achievement data from Star Math. You'll also see information about students' Accelerated Math assignments.

Accelerated Math
Done Pamela Britton Print

Practice Summary for Pamela Britton
M Bench
Gr5 Class 2
Tiger Elementary 360

Number Correct: 5/6 (83%)

1 (D) 2 (D) 3 (C) 4 (B) 5 (B) 6 (A)

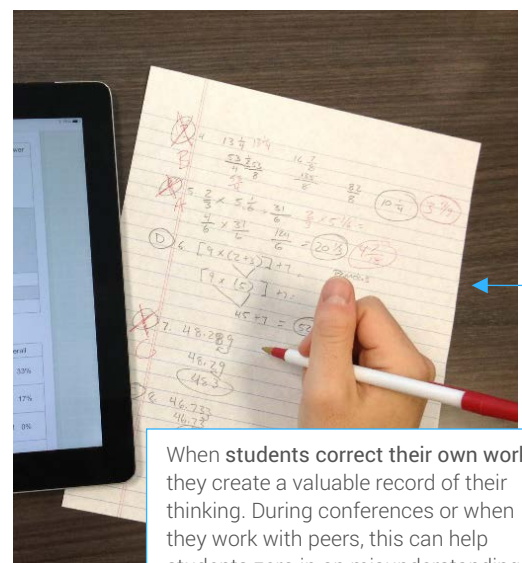
Subskills (1)

Subskill	Results	Overall
» Multiply a 2-digit whole number by a 1-digit whole number Problems: 1, 2, 3, 4, 5, 6	5/6 83%	5/6 83%

» Designates a core subskill, which are the most critical subskills to learn at each grade level.

Done

After completing assignments, students immediately receive an **assignment summary**. They can use this feedback 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, this can help students zero in on misunderstandings—so you'll be well-poised to confirm whether they've "got it" or need more guidance.

STEP 5: TAKE ACTION TO DRIVE GROWTH

Regularly monitoring progress helps you see when and how to adjust students' practice. Use data from Accelerated Math—along with students' written work, your conversations with them, and your own insights—to identify when to take action, and with whom. Be sure to test students periodically with Star Math to confirm changes in growth and achievement. Here are some common issues you may need to address during your implementation.



Am I assigning the right amount of practice to each group?

Ask yourself ...

Is the group currently on pace to complete their assigned workload?

Actions

Check the Progress Dashboard. If a group is behind, you could reduce the number of subskills on their Assignment Plan to match their pace. If a group is moving quickly, consider how you'll help them extend their thinking on the concepts they're learning.



Do any students need attention right away?

Ask yourself...

Which subskill caused trouble?

Actions

On the Progress Dashboard, the red Intervene symbol alerts you when a student is struggling. If you see this symbol, the student likely needs assistance from you in order to move forward with a particular subskill.

How can I help the student be successful with that subskill?

Conference with the student to assess the situation. Teach self-correction strategies, reteach the concept, or remediate as necessary. If several students are having trouble with the same subskill, pull them together to reteach. After meeting with students, generate new assignments to give them another chance to successfully practice or test on the subskill.



Are students ready to try a subskill again?

Ask yourself...

Should I generate a new test for the subskill?

Actions

On the Progress Dashboard, the blue circle alerts you that a student is ready to reattempt a subskill they were previously unsuccessful with. Meet with the student to confirm her readiness to try again. If she seems to be ready, generate a new test.



Are students approaching the end of an Assignment Plan?

Ask yourself...

Have students successfully tested on all of the subskills in their group's Assignment Plan?

Actions

On the Progress Dashboard, check whether all students in the group have successfully tested on all of the subskills in this Assignment Plan. If not, consider moving the remaining subskills to the group's next Assignment Plan. If no groups have completed testing on all of the subskills, add days to their Assignment Plans to give them time to complete the scheduled work.

Over the course of this Assignment Plan, did any students push ahead or lag behind the rest of their group?

Before the next Assignment Plan begins, consider moving or copying these students to another group. Retest with Star Math to confirm how students have grown. Adjust groups accordingly.

Have students engaged deeply with this set of skills and subskills?

The Assignment Plan page includes rich problems (DOK activities) for many skills. Before the next Assignment Plan begins, consider using these resources to give students a chance to connect the new skills they've learned.

Using Accelerated Math Every Day

Once you begin implementing Accelerated Math, you'll quickly see there is a daily rhythm to the program. While the five steps described in this guide explain how you'll use the program over the full course of your implementation, you'll find there are some things you'll need to do on a daily basis.

Use the checklist below to keep yourself and your students on track day-to-day. You could print and post it near your desk to refer to throughout the math period.

Accelerated Math Daily Checklist

- ❑ **Using your preferred instructional materials, teach a concept** to the class, small groups, or individual students. Use your Assignment Plans and the Progress Dashboard to see which subskills groups are ready to learn about and practice next.
- ❑ **Set aside 30–40 minutes for math practice**, as part of your regular math period or in addition to it.
- ❑ **Have students access their Accelerated Math assignments and begin working.** Be sure they work out each problem on paper. Encourage them to access resources and collaborate, following routines you establish.
- ❑ **Review the progress of groups and individual students.** Check the Progress Dashboard. Are groups on pace to complete their assigned workload? Do any students need attention right away? Plan how you'll address their needs.
- ❑ **Check in with students one-on-one** to catch problems early, offer self-correction strategies, and decide when they are ready for something new.
- ❑ **Generate tests** for your groups when students are ready to test on three to five subskills from their Assignment Plan.