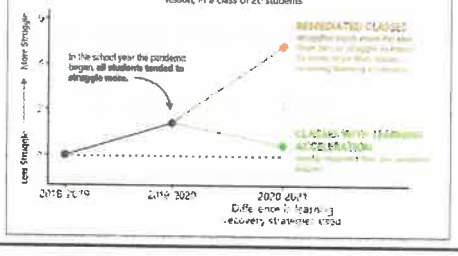
Acceleration vs. Remediation

How can we help students with gaps from the past succeed today?

Effectiveness of Learning Acceleration vs. Remediation

Classes receiving learning acceleration struggled less this year...

Typical change since 2019 in total number repeated struggle alerts per grade-level lesson, in a class of 20 students



... And made it farther in this year's grade-level curriculum.

Classes receiving learning acceleration completed

27%

more grade-level lessons than remediated classrooms

REMEDIATION	ACCELERATION
Spending significant time in below-grade level content before moving into new learning	*Connecting unfinished learning into the context of new learning*
... covering many objectives or standards from prior grades/units (usually extending to month or more of instruction)	... integrating a few lessons from prior grades/units
... isolated from grade-appropriate learning	... just-in-time to grade-appropriate learning (whether in core or extended time)
... usually with greater than 50% of time on procedural fluency	... always with an appropriate balance of fluency, conceptual understanding, and application work

Betsy had never tackled the Cement Mixer before. Although many fears cycled through her mind, her two main concerns were handling the backdoor and the lip. Her confidence rose, however, as she reminded herself that if she could just get into the barrel she had a good chance of winning, especially if conditions were cooking. She stared out at the horizon, shook her fist triumphantly in the air, and shouted, "I'm ready for you, Meat Grinder! I can handle the biggest Macker you can deliver!"

The Acceleration Framework

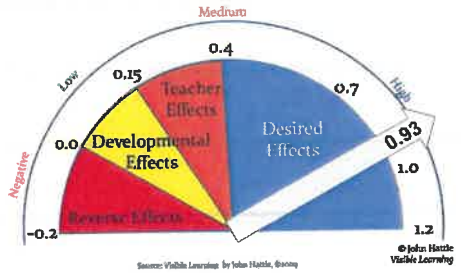
JIGSAW

- Take 3 minutes to read your assigned "step" silently to yourself
- Mark any key ideas or concepts in the text you read
- Take 7 minutes to share with your group what you marked
- Choose a spokesperson to share out the key ideas and concepts so that everyone has a common understanding of your assigned "step"

The Acceleration Framework

1. Generate thinking, purpose, relevance, and curiosity
2. Clearly articulate the learning goal and expectations
3. Scaffold and practice essential prerequisite skills
4. Introduce new vocabulary and review prior vocabulary
5. Dip into the new concept
6. Conduct formative assessment frequently

Effect Size of Strategy to Integrate with Prior Knowledge



Influence on Student Achievement	Effect Size
Strategy to integrate with prior knowledge	0.93
Teacher expectations	0.43
Appropriately challenging goals	0.59
Concentration/persistence/engagement	0.54
Perceived task value	0.46

Where do I start?

1. Leverage your role
2. Eliminate deficit language
3. Use extra time wisely
4. Use what works
5. Focus on implementation
6. Seek evidence of impact
7. Engage stakeholders

Resources

- Almarode, J., Hattie, J., Fisher, D., & Frey, N. (2021). Rebounding and reinvesting. Where the evidence points for accelerating learning. A GOLD paper. Thousand Oaks, CA: Corwin. Retrieved from https://us.corwin.com/sites/default/files/vln21296_vl_accelerating_learning_white_paper_final_rev3.pdf
- Hattie, J. (n.d.). *Global research database.* Visible Learning Meta^{x}. https://www.visiblelearningmetax.com/Influences
- Rollins, S. P. (2014). *Learning in the fast lane: 8 ways to put all students on the road to academic success.* ASCD.
- TNTP, The New Teacher Project. (2021, May). Accelerate, Don't Remediate: New Evidence from Elementary Math Classrooms. Retrieved from https://tntp.org/assets/documents/TNTP_Accelerate_Dont_Remediate_FINAL.pdf

share the single purpose of helping students master standards the first time.

The acceleration model includes several crucial components, which I have developed as six steps over time, first through my work with my own students and later through my work with numerous schools tweaking the acceleration model. Each step is essential to student learning and motivation.

Step 1: Generate Thinking, Purpose, Relevance, and Curiosity

One or two days before the core class begins the concept or standard, acceleration begins with a thought-provoking, hands-on activity that encompasses the big idea of the standard. Typically working in small groups or pairs, students explore the new concept by generating their own formulas, developing ideas, discovering patterns, discussing observations, or examining the content's real-world relevance. In math or science, the teacher can use some of this time to develop concrete representations before embarking on abstract ideas. In all content areas, this step speaks to students' need to answer the question "What does this have to do with me?"

Success starters, which vary by standard and content area, are a good way to get students to plunge into the new content and gain curiosity and confidence. Here are some examples (see Chapter 3 for a more in-depth discussion of success starters).

In math, students could

- Use string to measure the circumference of a jar lid, then discuss the relationship of the circumference and the diameter using the string as a guide.
- Go on a scavenger hunt for items with surface area.
- Sort angles by similarities or differences.
- Read a picture book about fractions.
- Spin a game spinner and then discuss why the game may not be fair and determine what would make it fair. In science, students could
- Draw items from bags, determine which ones they believe are renewable and which ones are nonrenewable, and explain their reasoning.
- Choose a pretend animal from a grab bag and brainstorm how their animal may adapt physically and behaviorally to changing environmental conditions, such as a drought or flooding.
- Respond in writing to pictures of earthquake damage.
- Watch the weather report and jot down vocabulary used.
- Tour the school as environmentalists searching for evidence of the building's carbon footprint.

In social studies, students could

- Develop their own Bill of Rights.

- Create a rapid-fire list of everything they know about government at any level.
- Examine websites of local banks and list common characteristics.
- Respond to a slideshow of images from World War I using just adjectives.

In language arts, students could

- Watch a short clip of a cartoon that uses alliteration and jot down examples.
- Identify elements of a story in a piece of literature similar to one that will be studied in class.
- Piece together a sort of the parts of an essay.
- Create a sort on tricky verb conjugations.

Why step 1 should never be skipped: Students who struggle academically are more likely to shut down on concepts that they perceive as irrelevant. Their motivation to work increases in direct correlation with their perception of the content's value and interest level. Right out of the gate, success starters create value, relevance, and interest and foster both motivation and long-term retention of content.

Step 2: Clearly Articulate the Learning Goal and Expectations

The placement of this step is quite purposeful. Step 1 showed students the real-world relevance of the new concept and triggered their curiosity. By step 2, their brains should be primed for the teacher's introduction of the learning goal—for example, "What we just explored is actually the first part of the standard we'll be learning" or "In 40 minutes, you will be able to compare and contrast the core, the mantle, and the crust."

Explicit learning expectations are essential, but students often lack clarity about what they are studying. Learning goals are the basis of student learning, and this step is too important to rely on a wordy posted standard. Leahy, Lyon, Thompson, and Wiliam (2005) concur that simply posting a standard is rarely successful because standards tend not to be written in student-friendly language. Stiggins (2007) holds that standards should be deconstructed into classroom targets that unfold into opportunities for daily formative assessment. Personally, I advocate for standards walls (discussed further in Chapter 2), which provide a visual avenue for articulating the patterns of standards. Standards walls help clarify for students the progression of learning—how separate goals crescendo into an understanding of the big picture of a concept. Providing these patterns for learning has an additional benefit: Willis (2006) explains that delivering new information to students in a way that builds connections to other learning enhances brain cell activity, leading to improved long-term memory and retrieval.

Why step 2 should never be skipped: All students, but particularly those at risk of failure, benefit from explicitly stated, student-friendly learning goals. Vague references to academic expectations have little value. Without

specific goals, students can lose sight of the purpose of learning, and class becomes a blur of papers and exercises to complete rather than a logical progression of learning that leads to an important goal.

Step 3: Scaffold and Practice Essential Prerequisite Skills

(*Note: steps 3 and 4 can be switched in sequence or taught in tandem.*)

After step 2, acceleration pauses as students briefly move backward to remediate the deficits that would present a barrier to learning the new standard. To edit a potentially long list of gaps, complete the following statement:

> Students could master the new standard if they just knew _____.

Next, start filling in the high-priority gaps you identified. For example, if knowledge of integer rules is essential, have students create bookmarks listing integer rules and then provide guided practice reviewing integers. If students need to be able to multiply decimals, shore up their skills and develop a scaffolding device, such as a cheat sheet with an example. You can create these scaffolding cheat sheets with examples of anything students need reinforcement in, such as parts of speech or types of sentences (simple, compound, and complex). If a separate teacher is providing acceleration, the regular teacher should communicate these essential prerequisite skills so that students can shore up these areas before the lesson.

Figure 1.2 demonstrates judicious use of scaffolding: if students do not remember all of their multiplication facts, you can create a chart that includes just the ones they do not know. As students learn facts, take them off the chart. The purpose of scaffolding devices is to enable students to access the rigor of the standard. Without them, students can get mired in their gaps, and frustration sets in. It's just as important not to provide too much scaffolding, however; keep tabs on each student's progress to get an idea of when you need to reduce or withdraw support.

FIGURE 1.2. Scaffolding Example: Partial Multiplication Table

Chapter 1. Acceleration: Jump-Starting Students Who Are Behind - table 2

	6	7	8
6	36	42	48
7	42	49	56
8	48	56	64

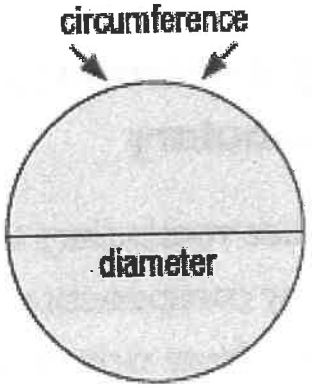
Why step 3 should never be skipped: Without this step, students may embark on their work with enthusiasm but use the incorrect integer signs on every answer, or the decimal may somehow fall in the wrong place. All that work

and no payoff! Scaffolding prerequisite skills in context allows students to realize success on new content.

Step 4: Introduce New Vocabulary and Review Prior Vocabulary

Because vocabulary understanding is developed over the course of time and is a key component of prior knowledge, acceleration students in particular benefit from rich vocabulary experiences. An effective starting point is to create a TIP: a continually growing anchor wall chart that includes vocabulary *terms*, *information* on those terms, and *pictures* of the terms. As words are introduced, they are added to the TIP. The TIP provides a constant reference point for students, so when a student is asked, for example, "What part of a cell is most like the water boy on a football team?" she can glance over at the TIP for guidance. Figure 1.3 shows an example of the TIP process for an acceleration math class. Once the term *circumference* has been introduced and defined, the class would come up with the picture together, with the teacher suggesting, "Circumference is the distance around a circle, so how about we draw a circle with arrows showing circumference?"

FIGURE 1.3. TIP Chart: Math Vocabulary

Term	Information	Picture
Circumference	Distance around a circle	
Diameter	Straight line passing through the center of a circle	

The TIP is a good start, but multiple representations are crucial to build students' deep, sustained knowledge of vocabulary. Jenkins, Stein, and Wysocki (1984) contend that students' sixth exposure to a word is around when they begin to truly internalize and be able to use it. Acceleration gives students a head start on this process.

A key to vocabulary retention is immersing students in hands-on, playful, multisensory vocabulary experiences. During acceleration classes, vocabulary development practices should be memorable, hands-on, and interactive. In Chapter 5, I discuss powerful vocabulary strategies to use in acceleration instruction.

Why step 4 should never be skipped: Providing targeted students with advance knowledge of new vocabulary reaps major benefits in the core class. As the heterogeneous group begins the new unit, acceleration

students realize success and gain confidence: "Oh, I know what that word means!"

Step 5: Dip into the New Concept

During the first four steps, students have already begun work on the new concept. They have established the concept's relevance and purpose and have a clear idea of the learning goals. They are shoring up their gaps in prerequisite skills in the context of new learning, and vocabulary development is under way. Now students are poised for going a bit deeper into the new content. This is the part they really appreciate: they get to do some things that their classmates have not even seen yet!

In math, this "dipping in" may amount to some guided practice on whiteboards (used individually or in pairs) calculating perimeter, or a scavenger hunt to locate different angles. In language arts, students may score sample papers using a writing rubric. The science acceleration class might examine pictures of the circulatory system. These activities will not be duplicated in the core class; the repetition would lead to boredom. Instead, the acceleration time sets students up for mastering standards in the core class, so that when a new concept is introduced, students can say, "I know something about that!"

Why step 5 should never be skipped: Students' self-efficacy and enthusiasm soar as they are, possibly for the first time in their lives, ahead of the class.

Step 6: Conduct Formative Assessment Frequently

Because the goal of acceleration is to help students learn content in their core class the first time, it is essential to collect ongoing data of student progress. There should be a continual flow of formative assessment information between the core teachers and the "more" teachers, although the same teacher may serve both roles.

Acceleration lends itself beautifully to ongoing, transparent formative assessment that yields timely, detailed feedback from teachers and peers. Having students hold up their answers on individual whiteboards fits perfectly, as do strategies like sorts and problem solving on sticky notes. Or students can work on chart paper on the floor or at their desks. Essentially, anything that will help teachers continually "see" what students know provides valuable information on where students are and where they need to go. Formative assessment strategies are further explored in Chapter 4.

Why step 6 should never be skipped: Instructional adjustments in acceleration are immediate and ongoing based on student data. This is not a class in which papers are scored traditionally and returned days later. Students targeted for acceleration have an urgent need for real success right now. For that to occur, teachers must use primarily "soft" formative assessment to provide descriptive feedback.

Reflections on Acceleration