

6 Steps to Build Research into Cohesive Math Professional Learning

To increase the use of instructional practices that help students succeed in math, consider these six steps to integrate research and educator expertise into professional learning. Find resources from REL Appalachia and the Student Success in Mathematics partnership aligned with each step.



Discuss Priorities

Bring together math educators and instructional leaders to review data, discuss school and classroom context, and prioritize areas for improvement.

Resources:

- Ask the *Five Whys* to dig deeper into root causes and better understand a problem using the [Implementing an Improvement Initiative Participant Workbook](#) (see pages 8-9).
- Create a logic model to guide your work, such as this one for the [Student Success in Mathematics Partnership](#). Read this [blog](#) to learn more about why you should create a logic model and for resources on how to get started.



Identify Practices

Identify specific evidence-based instructional practices that address your priorities.

Resources:

- Access the [What Works Clearinghouse Practice Guides](#) for evidence-based instructional practices for educators.
- Review eight [mathematics teaching practices](#) that provide a research-informed framework for strengthening math teaching and learning.



Understand and Explore Practices

Engage with colleagues to better understand relevant instructional practices, considering your context and specific student populations. Identify concrete next steps for applying the practices in your classroom or school.

Resources:

- View the [Algebra for All webinar](#) and access materials from the [Preparing All Students for Algebra workshop](#) for information about how specific instructional practices can support all learners.
- Review this [presentation](#) for resources and strategies to facilitate virtual math learning (starting on slide 9).

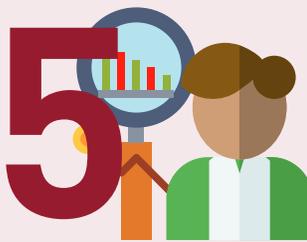


Implement Practices

Use the instructional practices in the classroom and follow up with observations, coaching, and reflection to determine if the practices are effective.

Resources:

- Check out the memo [A Continuous Improvement Approach to Mathematics Professional Learning Models \(PLM\)](#) for a Plan-Do-Study-Act approach to continuous improvement.
- Look at slides 43 to 46 in [Implementing an Improvement Initiative](#) to learn more about the “Do” phase in this continuous improvement approach.



Dig Deeper

Seek help from experts who can draw from a broad body of research and experience to address specific needs that arise during implementation.

Resources:

- Review [materials](#) from an expert on students who have mathematics disabilities to learn evidence-based instructional practices and a process for planning accessible math lessons.



Plan for Future Professional Learning

Use what you learn to design and facilitate future professional learning.

Resources:

- View the two-part webinar series, [Implementing a Professional Learning Model to Improve Mathematics Teaching](#), to see how data can inform the design of future professional learning.
- Use this [handout](#) to explore ways to assess learning outcomes from professional learning.