

A DERIVITA GUIDE TO

Increasing Math Scores School-Wide with Real-Time Analytics & Targeted Coaching

A practical guide to implementing a Derivita-powered school-level instruction model to improve math scores with data-driven PLC collaboration and prescriptive, targeted coaching.

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Introduction: The Challenge of Scaling High-Quality Math Instruction

Math instruction is one of the most difficult subjects to scale effectively. To begin with, unlike other subjects, high-quality math instruction is yet more rigorous to create, differentiate, provide individual feedback, and grade—tasks that quickly become unmanageable for a teacher with 25+ students. Without the assistance of technology to automate common tasks and provide real-time insights, teachers are forced to rely on broad-stroke instruction, leaving many students behind.

At the school and PLC levels, these challenges are even more pronounced. Administrators and instructional coaches are tasked with ensuring consistent, high-quality instruction across multiple classrooms, but without real-time performance data, they often rely on lagging indicators like end-of-term assessments. This results in missed opportunities for timely intervention, leaving teachers without the actionable insights they need to adjust instruction at the moment. To truly drive improvement, schools and PLCs need tools that provide immediate, data-driven feedback to inform targeted professional development, instructional adjustments, and student interventions.

With math scores at historic lows, as reported by the National Assessment of Educational Progress (NAEP) 2022 Mathematics Report and the Programme for International Student Assessment (PISA) 2022 Report, schools and PLCs must leverage technology-driven solutions to streamline instruction, personalize learning, and drive measurable improvement.

The Opportunity: Data-Driven Insights That Enable Targeted Coaching Opportunities When They Will Have the Greatest Impact

The key to improving math outcomes in your school is leveraging real-time data to gain the insights you need to inform instructional improvements when you have time

to make an impact before end-of-year testing. Technology is uniquely equipped to support these needs. When implemented correctly, it enables:

- **Real-time performance tracking** – At the classroom, grade, and school levels, educators and PLCs can collaborate, assess student progress, and identify instructional gaps early to intervene before high-stakes assessments.
- **Targeted professional development** – Rather than more general coaching, teachers receive data-driven coaching tailored to their actual classroom needs, addressing specific gaps in standards proficiency that will have the greatest impact on end-of-year scores.
- **Alignment across instruction and assessment** – Schools ensure that classroom instruction directly supports district-level math goals and addresses state standards without increasing teacher workload.
- **Automation of common tasks** – By automating grading, feedback, and differentiation, teachers gain back valuable time to receive coaching, implement best practices, and deliver targeted interventions.

By using Derivita, schools, and PLCs gain a powerful support, assessment, and analytics platform that provides continuous, real-time insights across the classroom, school, and district levels—driving targeted improvements without increasing teacher workload.

The PLC Workspace within Derivita further enhances collaboration by providing a centralized digital workspace where PLC members can view shared reports, create and distribute common assessments, and share best practices—ensuring instructional strategies are data-driven and aligned across classrooms.

A Day in the Life of a Data-Driven Math School & PLC

How does Derivita help a school and PLC optimize math instruction? Let's walk through a practical application of Derivita's tools at the school leadership and PLC level.

Morning: School & PLCs Review Performance Data

Administrators and PLC leaders begin their day by reviewing Derivita's real-time data dashboards. Instead of waiting weeks or months for standardized test results, they immediately see:

- Which math standards students may require additional instruction
- Which teachers may need additional support in specific content areas.
- Which student groups may require targeted interventions.

Within the PLC Workspace, educational teams can collaborate on instructional strategies, create and share custom assessments, and analyze automated, aggregated reports to inform next steps. This ensures that PLC meetings are focused on actionable data, leading to more effective interventions and instructional planning.

Implementation Example: During a PLC meeting, math teachers analyze school-wide data to identify common opportunities for improvement, such as fractions in middle school or quadratic equations in high school. They collaborate on a targeted intervention strategy, adjusting pacing and assigning Derivita practice sets to reinforce these concepts.

School Impact: PLCs use real-time data to drive weekly, targeted coaching conversations, ensuring immediate adjustments instead of waiting for summative assessments.

Classroom Instruction: Teachers Implement Adjustments in Real Time

Teachers, informed by PLC-driven data insights, make targeted instructional changes. With Derivita, they assign dynamic practice sets and formative assessments to reinforce problem areas identified during PLC discussions. Steps a teacher might take using Derivita to address PLC feedback:

- A teacher logs into Derivita and selects questions from the library of 150,000+ high-quality questions that align with and support the day's lesson to create practice and formative-assessment activities to address concepts requiring improvement.
- With Derivita's Smart-Randomization feature (with millions of variations), teachers can engage students in personalized practice without ever receiving the same problem twice. This ensures:
 - Deeper conceptual mastery
 - Elimination of answer-sharing and cheating
 - Real-time feedback and auto-grading by guiding students toward proficiency or signaling when teacher intervention is needed.
 - If students still need assistance after practicing with Derivita, the teacher can provide timely personal 1:1 assistance.

Implementation Example: After discovering in PLC discussions that students require additional support with factoring polynomials, an Algebra teacher integrates SpotCheck sessions at the beginning of each lesson to address polynomials and track student mastery.

Classroom Impact: Instead of reteaching entire concepts to the whole class, teachers use PLC-driven insights to target instruction where it matters most. This ensures personalized learning at scale and maximizes instructional time.

End-of-Week: Measuring Impact, & Refining Strategy

At the end of the week, school leaders, and PLCs revisit Derivita's analytics to assess the effectiveness of instructional interventions. If new insights reveal that certain student groups still struggle, additional interventions—such as small group instruction, tutoring, or curriculum adjustments—can be planned for the following week.

Implementation Example: An assistant principal reviews student performance trends across multiple grades. They notice that students who received targeted Derivita

practice had a 10% improvement in assessment scores, confirming that the intervention strategy is working. They encourage other teachers to implement similar strategies.

School Impact: School leaders and PLCs continuously refine their math instructional strategies based on real-time, measurable results. This, in turn, improves student outcomes more effectively.

The Outcomes: What Happens When Schools & PLCs Use Derivita?

When schools and PLCs integrate Derivita into their instruction, they experience:

- **Data-driven decision-making**—schools and districts make informed curriculum adjustments based on real results.
- **More effective PLC meetings**—real-time data leads to strategic coaching and collaboration.
- **Higher student achievement**—targeted interventions close learning gaps faster.
- **Reduced teacher workload**—automated practice, feedback, grading, and analytics free up teacher time for coaching, improving instruction, and individualized teaching.

Conclusion: Take Math Instruction to the Next Level

Improving math instruction at the school and PLC levels requires the right tools, the right insights, and the right strategy. With Derivita, schools can use real-time data to drive instructional improvements, provide meaningful professional learning, and accelerate student outcomes.

Schedule a demo today and see how Derivita can help your educators and students succeed at: <https://www.derivita.com/request-a-demo>.

About Derivita

Derivita enables high-quality, rigorous math instruction at scale, from individual students and classes to school and district levels. Derivita uniquely streamlines your math workflows, content, and data, automating common tasks, and seamlessly integrating it all within your LMS.

Our holistic design reduces teacher workload, enables collaboration, and connects data to provide real-time analytics that drive instructional improvements—from student and class levels to school- and district-wide. No other math platform offers more comprehensive support for educators to deliver personalized pathways to math proficiency for every student.

To learn how Derivita can support your efforts to improve student math outcomes, schedule a conversation with your local Derivita representative at:

<https://www.derivita.com/request-a-demo>.