Pittsburgh Public Schools Goal Monitoring Report: Status Update
3rd Grade Mathematics Proficiency

Introduction and Goal

This report provides an update on the progress District Leadership has made in improving 3rd Grade Mathematics Proficiency at Pittsburgh Public Schools (PPS). In alignment with best practices established by the Council of Great City Schools, our goal monitoring report seeks to communicate both the current data regarding 3rd Grade Math Proficiency rates and our plan for targeted strategic responses. By the end of the 2024-2025 school year, we aim for 33.3% of our 3rd-grade students to meet proficiency on the Pennsylvania System of School Assessment (PSSA) and Pennsylvania Alternate System of Assessment (PASA) in Mathematics. We surpassed our goal in 2022, 2023, and 2024; we are working to keep progressing in the right direction (SEE ATTACHMENT A). This continued progress reflects our commitment to early academic achievement and data-driven improvement. In 3rd grade, students use mathematical models and strategies to solve multi-step problems, and literacy and mathematics work together to build competence, confidence, and a positive math identity. This grade is crucial for applying mathematical concepts in real-world settings.

At the end of the 2020-2021 school year, our 3rd grade math proficiency rate was 21.2%, which established the baseline for our 5-year goal of achieving a 39.4% proficiency rate at the end of the 2026-2027 school year. In January 2025, we introduced three strategies to increase our 2025 3rd grade math outcomes: building positive math identity, curriculum-based professional learning, and Math Language Routines.

Reminder: Our Instructional Shift in Mathematics

As shared during our initial goal monitoring report, Pittsburgh Public Schools adopted the Illustrative Mathematics curriculum to support our long-term vision and goals for 3rd-grade math proficiency and the development of strong mathematical identities in students. This adoption marked a significant instructional shift from our previous curriculum, Go Math, which emphasized direct instruction and repetitive practice. In contrast, Illustrative Mathematics focuses on conceptual understanding, discourse, and real-world problem solving, aligning closely with the district's mission to equip students for success in both academic and everyday contexts. This shift set the foundation for how we now approach math instruction and assess student understanding throughout the year.

This change was rooted in a commitment to research-based, standards-aligned instruction. Using guidance from EdReports, an independent nonprofit that evaluates instructional materials, the District selected a curriculum that met the highest benchmarks for quality and alignment. This shift not only reflected a new way of teaching math, but also represented a deeper investment in student-centered learning—fostering critical thinking, persistence, and a sense of belonging in the world of mathematics. To measure the success of this new approach, the District aligned its assessment strategy with our instructional vision.

The Data
To track progress toward the 3rd grade math goal and support its achievement, Pittsburgh Public Schools (PPS) uses the Classroom Diagnostic Tool (CDT) as a key assessment. The CDT is administered three times a year and is a computer adaptive assessment designed to provide diagnostic information to guide instruction that supports intervention and enrichment. The initial 3rd Grade Math goal monitoring presentation was delivered to the Board of Directors on January 14, 2025 and outlined the District's strategy for achieving the goal.

Classroom Diagnostic Tool (CDT) Results
The CDT is given three times a year, serving as an indicator of how many students are mastering grade-level academic standards and eligible content. At the beginning of the year, we expect students' CDT data to show a higher concentration in the "red range," indicating areas of needed growth, since it is a grade level assessment and students have not yet mastered the grade level's content. However, as the school year progresses, we anticipate measurable improvement, with more students moving into higher performance ranges. This progression reflects the impact of instruction, intervention, and student growth over time.

The third administration 3rd-grade CDT data shows overall improvement in student performance from the Winter to the Spring assessment window. The percentage of students performing at or above grade level increased from 12.4% in the Winter (2nd administration of the CDT) to 21.4% in the Spring (3rd administration of the CDT), reflecting a 9-percentage point gain. Black students, English Language Learners, and Economically Disadvantaged students showed improvement, with increases of 4.5, 9.0, and 5.3 percentage points, respectively, in students performing at or above grade level. White students demonstrated the highest growth, with a 14.2 percentage point increase in students performing at or above grade level. Students with IEPs also seen a 4-percentage point gain in the number of students performing at or above grade level.
Despite these improvements, a significant number of students remain in the "Red Range," particularly among Black (91.4%), IEP (91.6%), and ELL (83.5%) students (SEE ATTACHMENT B). This suggests that while progress is being made, continued focus on providing quality, engaging Tier 1 instruction is necessary to create conditions for all students to thrive.

Superintendents Evaluation of the Data
While the data from the CDT assessments show some positive trends, such as measurable improvement in the percentage of students performing at or above grade-level expectations, it also highlights significant challenges that remain. The progress made from winter to spring is promising, but achievement gaps, particularly among Black students and students with IEPs, persist and require continued focus. These results emphasize the need for continued work related to cultivating positive and inclusive mathematics classroom communities and for implementing high-quality, engaging instruction to ensure all students have the support they need to achieve long-term

success. Continuous, focused support, development, and reflection on the impact of newly introduced strategies will be essential to improving student outcomes moving forward.

When we expand our lens beyond this year and evaluate trends in CDT data over the past three school years, we observe some modest declines that provide important context for this year's anticipated results. The most recent 3rd Grade CDT results show that 8.1% of students scored "Likely Proficient or Advanced," representing a slight decrease from 9.1% in 2023–24 and 11.4% in 2022–23. Similarly, the percentage of students performing "On Grade Level" dropped to 21.4%, down from 23.1% and 24.2% in the previous two years. These trends suggest that while PSSA proficiency rates may see a slight dip this year, we remain on track to exceed our annual goal. Overall performance remains relatively stable, and we are leveraging these insights to make timely instructional adjustments that ensure we maximize student growth through the end of the school year (SEE ATTACHMENT C).

Continuous Improvement Approach

In January, we outlined our strategy for achieving 3rd Grade mathematics proficiency by adopting continuous improvement cycles, centered around the "Plan, Do, Check, Act" (PDCA) model. This approach is highly effective for educational enhancement, as it promotes ongoing progress through evidence, reflection, and refinement. By integrating this model, Pittsburgh Public Schools seeks to address achievement gaps systematically and implement practices that are responsive to real-time data and adaptable to students' changing needs. The PDCA framework ensures that every step taken toward the math goal is driven by data, grounded in evidence, and focused on students, fostering sustainable improvements throughout classrooms.

Strategic Responses and Plan

Our strategic responses within implementation of continuous improvement cycles focuses on three critical areas designed to address gaps revealed by our assessment data: building positive math identity, curriculum-based professional learning, and math language routines. These critical areas are essential for delivering grade-level instruction that actively engages and affirms our students, empowering them to become confident thinkers and effective problem solvers.

Timeline for Implementation

Since the January 2025 presentation, Pittsburgh Public Schools has implemented a series of targeted strategies aimed at increasing the 3rd grade math proficiency rate. This timeline follows a structured, data-driven approach that integrates building positive math identity, curriculum-based professional learning and math language routines (SEE ATTACHMENT D).

Between January 2025 and May 2025, key initiatives have included:

- Leading & Learning Institute for Principals focused on Curriculum-Based Professional Learning (1/7 & 1/9)
- Districtwide Professional Learning Day to support strategy rollout (1/26)
- Launch and continuation of Grade 3 Coaching Cycles to reinforce instructional practices

- Professional Learning sessions for unpacking Grade 3 Units 5 and 6 (2/7 and 2/21)
- Leading & Learning Institute for Principals with a focus on implementing Math Language Routines (2/11 & 2/13), supporting the strategic goal of deepening student understanding and discourse in math classrooms
- EOY Administration of CDT to measure mid-implementation progress and inform next steps
- Distribution of Math Norms Posters to all 3rd grade classrooms, reinforcing math identity and expectations
- Sharing of Family Math Night Resources to extend learning supports beyond the classroom

Implementation of Strategies

1. **Building Positive Math Identity**

Plan: The key components of this strategy included creating and implementing universal math norms across all 3rd-grade math classrooms, providing targeted mini-lessons aligned with the universal norms, intentionally modeling identity-building strategies during professional learning sessions, and utilizing student survey data to refine teaching practices and promote positive and inclusive learning environments. This strategy was designed to help students—especially those from historically marginalized backgrounds—develop a strong, positive sense of themselves as capable math learners.

Do: We ensured that universal math norms were developed and introduced in March during third-grade unit unpacking sessions. Mini-lessons aligned to the norms were shared through the Schoology curriculum group and modeled for teachers during the professional learning sessions. A middle-of-year student survey was administered to gather feedback on students' experiences in math. In addition to the unit unpacking sessions, Mathematics Academic Coaches delivered job-embedded professional learning focused on supporting teachers in cultivating a positive and inclusive classroom culture. Coordinators also facilitated professional learning for principals to help them support teachers in creating inclusive math environments.

Check (Challenges): Mid-year math walks showed positive movement in the implementation of indicator C2.1: Cultivating a Positive and Inclusive Classroom Community. Third-grade teachers demonstrated the most significant growth in this indicator across all grade levels, increasing from 29% at the beginning of the year to 66% at mid-year. Across grades K-8, teacher implementation of the indicator rose from 36% to 50%. Additionally, student survey responses showed a modest increase in positive feelings about math, with 85% of third-grade students responding "yes" to the question "Do you like math?", compared to 82% at the beginning of the year. However, there were several challenges in implementation. Despite targeted professional learning, classroom application of identity-building practices was inconsistent. The survey used to gauge students' math identity relied on a single, broad question, which may not have fully captured the complexity of students' perceptions of themselves as math learners. Furthermore, the number of survey responses declined significantly from the beginning to the middle of the year, which affected the reliability of comparative analysis. Finally, the absence of disaggregated demographic data limited the ability to measure progress in math identity development among specific student groups.

Act (Next Steps): To address these challenges and strengthen implementation, the district will enhance survey tools to more accurately capture students' evolving math identities, including items that allow for disaggregation by demographic group. Academic Coaches will continue to provide targeted, job-embedded support focused on inclusive instructional practices and the consistent integration of identity-building strategies. Principals will be expected to monitor the implementation of this strategy through more deliberate classroom observations, and professional learning opportunities will further emphasize the critical connection between math identity and student achievement.

2. Curriculum-Based Professional Learning
Plan: This strategy focused on helping teachers and school leaders effectively implement the district's new problem-based math curriculum. The plan included professional learning for principals, unit unpacking sessions for teachers to better understand upcoming content, train-the-trainer models during PLCs and school-based sessions, and support from math coaches through ongoing professional development, targeted coaching cycles, and flexible, individualized assistance.

Do: Throughout January and February, principals participated in three professional learning sessions designed to help them support curriculum implementation in their schools. To boost teacher participation, third-grade unit unpacking sessions were moved to district-wide half-days, which led to a significant increase in attendance. Math coaches concentrated their efforts on third grade, providing job-embedded coaching and collaborating closely with teachers. A range of planning and instructional resources were made available in the district's Schoology platform, and middle-of-year math walks were conducted to assess how well the problem-based curriculum was being used in classrooms.

Check (Challenges): Results from the math walks and coaching cycles showed clear improvements, particularly in third grade. Teachers who attended more professional learning sessions tended to demonstrate stronger instructional practices aligned to the new curriculum. In fact, 93% of coaching cycle goals were met, and third-grade math walk data showed meaningful growth across all tracked areas—often surpassing other grade levels. For instance, the percentage of classrooms where students had time to share their math thinking jumped from 32% to 71%, and effective use of the problem-based lesson structure rose from 35% to 66%. However, the strategy faced some obstacles. Training on Math Language Routines originally planned for later in the year had to be postponed due to other district priorities. In addition, with only five math coaches serving over 400 elementary teachers, each coach currently supports between 80 and 95 educators. This limits the amount of individualized attention that can be provided, especially given how much support many teachers need to grow in their math content knowledge and curriculum use.

Act (Next Steps): Looking ahead, the district must find creative and sustainable ways to meet the diverse learning needs of both teachers and school leaders. Strengthening math instruction will require consistent support structures and the strategic use of existing resources. Future plans to reorganize schools may also create opportunities to expand the math coaching team, which would allow for more teachers to receive the targeted, math-specific support that leads to lasting improvements in student learning.

3. Math Language Routines

Plan: This strategy focused on helping teachers and families better support students' understanding of mathematical language and communication. Key efforts included creating visual tools to explain the eight Math Language Routines (MLRs), offering professional learning to help teachers feel confident using them in the classroom, and sharing resources with schools to engage families—especially around the "Three Reads" routine—during Family Math Nights.

Do: In March, all teachers received posters illustrating the eight MLRs to use as classroom references. Between January and March, teachers and principals participated in professional learning sessions that introduced and modeled these routines. Facilitation guides and ready-to-use slides for each routine were also made available on Schoology, enabling math leaders to bring this work into team meetings and PLCs. Additionally, schools were equipped with handouts and slides to support MLR activities during Family Math Night events.

Check (Challenges): While some Math Language Routines were modeled in person, limited professional learning time meant not all eight routines could be fully introduced. To maximize impact, we shifted toward embedding the MLRs directly into upcoming curriculum units during coaching and training, allowing for a more practical and timely application. Principal exposure to the full set of routines was also impacted by scheduling constraints. Although resources for Family Math Nights were provided, we do not yet have data on their use, as each school hosts these events on its own timeline—some occurred before the monitoring strategy was in place, and others are scheduled for later in the year.

Act (Next Steps): Going forward, math coaches will continue to incorporate the Math Language Routines into professional learning and coaching as they align with the curriculum. Principal learning on MLRs will resume as time permits. For the 2025–26 school year, we plan to improve how Family Math Night resources are shared and introduce a process to track their use across schools. The planning and materials developed this year have laid a solid foundation for stronger, more consistent implementation moving forward.

Conclusion

Overall, Pittsburgh Public Schools has made measurable progress toward it's 3rd Grade Mathematics proficiency goal, demonstrating clear momentum in both student performance and instructional practice. The adoption of the Illustrative Mathematics curriculum, coupled with strategic investments in teacher development, inclusive classroom culture, and identity-affirming practices, has contributed to gains across multiple student groups. While the data show encouraging trends—such as increased proficiency rates and growth among historically underserved populations—significant challenges remain, particularly in closing achievement gaps for Black students, English Language Learners, and students with IEPs. Sustained progress will depend on our collective commitment to continuous improvement, strategic support for educators, and an unwavering belief in every student's capacity to succeed in mathematics.