OTTAWA-CARLETON DISTRICT SCHOOL BOARD

Learning Well-being Social Responsibility

COMMITTEE OF THE WHOLE (PUBLIC) **20 May 2025**
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UPDATE #3 ON THE 2024-2025 MATH ACHIEVEMENT ACTION PLAN

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PURPOSE:

1. This update provides trustees with the latest information on the implementation and progress of the Mathematics Achievement Action Plan (MAAP) for the Ottawa-Carleton District School Board (OCDSB).

STRATEGIC LINKS:

2. The 2024–2025 Math Achievement Action Plan, outlined in Appendix A, supports the Learning pillar of the 2023–2027 Strategic Plan, and aligns with Ministry priorities and the Board Priority Learning Plan (BPLP). It focuses on strengthening math instruction, building educator capacity, and ensuring instruction and support are responsive to the diverse needs of all students. The MAAP aims to improve math outcomes for all students, including Indigenous, multilingual and underserved learners, by expanding access to high-quality instruction and fostering meaningful engagement in learning.

CONTEXT:

3. Key goals for 2024–2025 include: reducing the number of students performing below Level 2 in grades 3, 6, and 9; strengthening number sense in elementary grades and algebraic thinking in secondary; and, embedding inclusive instructional practices like Universal Design for Learning (UDL), Differentiated Instruction (DI) and Culturally Relevant and Responsive Pedagogy (CRRP) to support engagement, belonging and success for all students.

   The District continues to implement evidence-based strategies and use key performance indicators (KPIs) to monitor progress and enhance instruction, reflecting a system-wide commitment to continuous improvement and equity in math education. This update highlights the actions taken, the impact of these initiatives, and ongoing efforts to strengthen math instruction throughout the year.

KEY CONSIDERATIONS:

4. **Professional Learning Update**

Over 800 educators participated in 115 professional learning sessions focused on strengthening math content and instruction. Elementary sessions emphasized number sense, while secondary focused on algebraic thinking. All sessions integrated CRRP, UDL, DI and Indigenous ways of knowing (emphasizing relationships and experiential learning) to promote inclusive classrooms and holistic student support. Educators also explored strategies to support multilingual learners and students with special education needs, aiming to reduce program modifications and increase access to the full curriculum.

Aligned with the MAAP priority of "knowing the learner", resources such as *CRRP in the Math Classroom*[1], and targeted assessment tools were provided to help educators reflect on their instructional practices, prioritize student needs, and create responsive learning environments. These efforts reflect the District's commitment to creating meaningful learning experiences that are responsive to the needs of all students and grounded in inclusive and equitable practices. Exit surveys show that educators are strengthening their math content knowledge, building confidence in using manipulatives, and developing greater skill in student-centered instruction. There is a noticeable shift away from traditional, algorithm-based methods toward more accessible, relevant, and responsive teaching practices that emphasize hands-on learning, visual representations, and inquiry-based approaches. As a result, students are demonstrating increased confidence, deeper engagement, and improved achievement in mathematics. Classroom observations show increased use of visual aids and concrete materials to deepen understanding and boost engagement, though implementation varies by school. In Ministry-identified schools, principals reported effective use of these tools to strengthen number sense in 95 of 120 classrooms observed. Classrooms demonstrating practices aligned with CRRP and UDL grew from 51 in November 2024 to 83 in March 2025. While awareness of culturally responsive and student-centered strategies is increasing, continued efforts are needed to ensure consistent implementation across the District and to improve student outcomes.

5. **Student Engagement and Achievement**

As reflected in the student mindset data in Appendix B, grade 3 students reported strong confidence and enjoyment in math, with a slight decline by grade 6. However, grade 9 students showed improved confidence and enjoyment by mid-year. A strong growth mindset was observed across all grades, with students believing in their potential to improve in mathematics. Students identified peer discussions, explaining their thinking, and using hands-on tools as key supports for building understanding, boosting confidence, reducing anxiety, and staying

[1] The CRRP in the Math Classroom resource was developed by the OCDSB Math team and offers practical guidance to integrate CRRP into math instruction, fostering a learning environment where every student feels valued, engaged, and empowered to succeed.

motivated. They felt more willing to take risks, persevere, and engage in problem-solving. This growth, driven by student engagement and supported by targeted instruction, is leading to accelerated progress, improved achievement, and a more positive learning experience.

Data from the OCDSB Numeracy Assessment Tool (ONAT), detailed in Appendix B reveals positive growth in foundational number sense skills for grade 3 and 6 students between the beginning (BOY) and middle (MOY) of the school year. Grade 3 students made substantial progress in understanding whole numbers and place value with over 12% growth in each area. Grade 6 students showed consistent growth of more than 7% across all assessed areas, with notable progress (9.4% growth) in reading and representing decimals.

Report card data from Ministry-identified schools shows numeracy gains for 1,119 students in grades 3, 6, and 9. Specifically, 57% of grade 9 students improved their math marks from midterm to final in semester one.

These findings show that professional learning is positively impacting educator practices and student outcomes. Educators are increasingly focused on aligning curriculum, assessment, and instruction, with an emphasis on concrete tools and visual aids. By monitoring students' progress regularly and adjusting instruction, they are proactively addressing learning gaps and maximizing individual student growth. This is resulting in improved understanding, instructional shifts, and better student learning. Continued support and differentiated professional learning are essential for sustaining consistent implementation across the District.

6. **Digital Math Tools**

Student engagement with digital math tools remains steady, with Knowledgehook used by 1,010 educators to support 25,600 students across 151 schools. Usage is strongest in grades 3, 4, and 6, with lower engagement in grade 10, highlighting opportunities for growth in secondary. To date, 2,135 parents have accessed Knowledgehook to support learning at home. Digital tools like Knowledgehook, Mathia, and MathUp also help teachers gather real-time data, target interventions, and address student needs.

7. **Math Instructional Coaches**

With targeted funding from the Ministry's Responsive Education Program (REP), the District doubled its Math Instructional Coach team to 14, enhancing support for grades 3, 6, and 9 students in Ministry-identified schools. These instructional coaches play a vital role in improving instruction by directly supporting students in 140 classrooms, facilitating professional learning, modeling effective teaching, and strengthening culturally responsive practices, all of which are advancing the MAAP and addressing equity gaps.

Math instructional coaches also supported implementation of the ONAT in grades 3 and 6, to monitor student progress and inform instruction. The tool offers clear insights into number sense development, helping promote data-informed teaching. By March 2025, 245 of 442 students initially performing below Level 2 showed measurable growth following targeted support. Ongoing professional

learning will continue to strengthen educators' capacity to use assessment data to drive student achievement.

8. **Principal Learning**
Monthly professional learning sessions support principals in using data to drive improved math outcomes. These sessions offer practical tools such as the ONAT digital dashboard and classroom indicators (including CRRP, UDL, tools and representations), to guide decision making and monitor progress. As a result, principals are better equipped to identify student needs, plan next steps, support effective math instruction and lead staff learning. The sessions have also strengthened their ability to analyze data, monitor School Priority Learning Plans (SPLP), and align instruction with curriculum expectations and student needs.

9. **Math Additional Qualification Courses**
Now in its seventh year, the District's partnership with the University of Ottawa, continues to support elementary educators' growth in math. With Ministry grant funding, 115 elementary educators received subsidies to complete Additional Qualification (AQ) math courses (53 educators completed Part 1 and 62 completed Part 2). Educators indicated growth in confidence, subject knowledge, and the use of inclusive, student-centered instructional strategies. This ongoing partnership has now supported over 450 educators, building teacher capacity and positively impacting student learning experiences.

10. **Parent Engagement in Math Achievement**
Feedback from the fall Parent Conference helped shape MAAP strategies and resources to better support families. A dedicated parent-facing web page provides regular updates and tools to assist with at-home math learning and explain how math is taught across the District. In addition, math instructional coaches facilitate Family Math Nights at schools, offering interactive activities to strengthen families' understanding and engagement. These initiatives are designed to empower parents as partners in supporting their children's math achievement and to foster stronger connections between home and school.

11. **Next Steps: MAAP 2025-2026**
Building on this year's progress, a key focus of the 2025–2026 Math Achievement Action Plan will be to strengthen the consistent, system-wide use of effective and culturally responsive math instruction. This will be supported through expanded, differentiated approaches based on each school's context, student needs, and achievement data. The OCDSB Numeracy Assessment Tool will be refined, and the use of digital dashboards will be broadened to better support responsive and targeted instruction. Cross-school collaboration and mentorship will also be enhanced to share effective practices and build internal capacity across the system. These coordinated efforts aim to create more equitable learning opportunities and improve student outcomes, District-wide.

RESOURCE IMPLICATIONS:

12. The OCDSB received a one-year Ministry of Education grant of $76,305 for the 2024-2025 MAAP, along with $836,900 to support seven Math Instructional

Coaches and funding for a Superintendent of Numeracy. Additional support is provided through existing District resources.

COMMUNICATION/CONSULTATION ISSUES:

13. The MAAP is informed by District, school, classroom, student, and community input, aligning with Ministry of Education goals. Implementation is supported through collaboration with central teams: Learning Support Services, Student Achievement Through Equity (SATE), Research, Evaluation and Analytics Department (READ), Equity, Indigenous, and the English as a Second Language (ESL) teams. MAAP priorities and goals are shared with administrators through the School Learning Plan process, with families via a dedicated web page, and with staff through the District portal.

GUIDING QUESTIONS:

14. The following questions are provided to support the discussion of this item by the Committee:

    - How can the District ensure that the positive shifts in educator practice and student engagement are sustained and integrated into everyday practice even after MAAP initiatives or targeted funding conclude?

    - What additional support can the Board consider to strengthen the consistent implementation of the MAAP and ensure all schools have the necessary resources to meet District goals?

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APPENDICES

Appendix A Math Achievement Action Plan, 2024-2025
Appendix B OCDSB Numeracy Assessment Tool (ONAT) Results