

MATHEMATICS ACTION PLAN

2023-2024

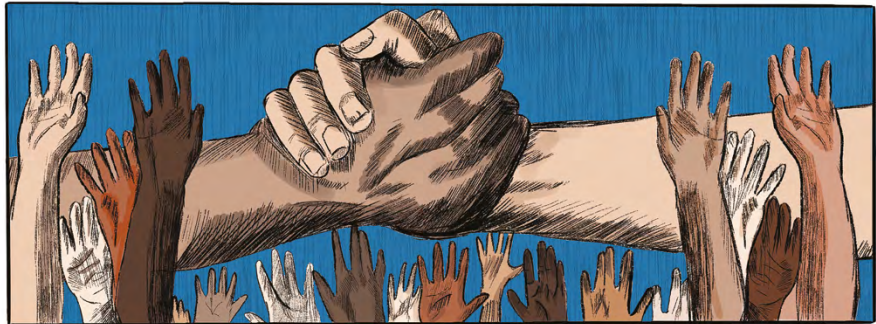
HCDSB Mathematics Action Plan 2023-2024

HCDSB students are well positioned to be successful in Mathematics. Our schools demonstrate a consistently high level of dedication to learning. Parents have indicated that academic excellence is a priority. In 2023-24, the Ontario Government launched the [Ontario Math Achievement Action Plan](#) in order “to boost math competence in the classroom and improve board accountability”.

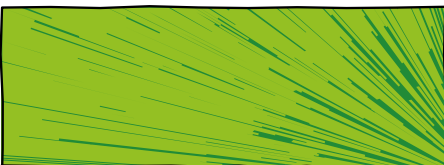
Priorities included in the Ontario Math Achievement Action Plan include the following:

- Ensuring fidelity of curriculum implementation, including the intentional use of High-impact Instructional Practices;
- Engaging in ongoing learning on mathematics content knowledge for teaching;
- Knowing the mathematics learner, and ensuring mathematical tasks, interventions and supports are relevant and responsive.

The following plan demonstrates HCDSB commitment to Provincial Priorities while recognizing the unique needs of our communities to ensure a continued focus on high achievement in Mathematics and teaching the [2020 Ontario Mathematics curriculum](#). This document also aligns with the 2024-2028 [Halton Catholic District School Board Multi-Year Strategic Plan](#).



ARTWORK BY SARAH EDWARDS, STUDENT AT CHRIST THE KING CATHOLIC SECONDARY SCHOOL



WHAT DOES THE
LORD
REQUIRE OF YOU?
**DO JUSTICE,
LOVE KINDNESS**
— AND TO —
WALK HUMBLY
WITH YOUR
GOD.

Micah 6:8

The Catholic faith is integrated into all we do, speak and teach. Teaching and learning mathematics within our Catholic Schools require us to come to know God in all of His creation. God is Creator, Provider, Powerful Ruler, Redeemer, and Omnipotent. It is through Jesus Christ that God has revealed this saving power.

“I am the way, and the truth, and the life; no one comes to the Father but through Me.” - John 14:6

As Catholic educators, we are called to help students see mathematics as essential within God’s creation, and a way to experience God’s infinite wisdom. We aspire to help students become who God intended them to be and we believe that this achievement is directly related to the relationships we, as educators, build with our student, home, and faith communities.

With a focus on viewing mathematical learning through both a faith and developmental lens, assessment for learning practices at Halton Catholic District School Board support educators in providing responsive, faith-centered instruction that is precise to the level of readiness of each student and tailored to individual learning needs. Curriculum-aligned resources and high-impact instructional practices support educators with ensuring equitable and inclusive access to mathematics learning for all students.

Fidelity of Implementation

GOAL	OUTCOMES	STANDARD FOR SUCCESS	ACTIONS
Ensuring fidelity of curriculum implementation, including the intentional use of High-impact Instructional Practices; implementation, including the intentional use of High-impact Instructional Practices; High Impact Instructional Practices include the use of: <ul style="list-style-type: none">• Learning Goals, Success Criteria and Descriptive Feedback• Direct Instruction• Problem-Solving Tasks and Experiences• Teaching About Problem Solving• Tools and Representations• Math Conversations• Small Group Instruction• Deliberate Practice• Flexible Groups	Students will: <ul style="list-style-type: none">• Access variety of HCDSB provided online and print resources to develop their mathematical thinking• Provide a variety of written, oral and modelled responses so their teachers can understand their thinking• Develop a variety of problem-solving strategies• Be able to share their learning with their parents through online resources	<ul style="list-style-type: none">• Students will use multiple strategies and/or models to think deeply and solve problems in a Mathematics classroom	<ul style="list-style-type: none">• Students engage in purposefully selected problem-solving contexts that reinforce development of procedural and conceptual understanding• Access online (or print) resources, such as Mathology or Knowledgehook, to further support their learning and receive feedback on their progress
	Educators will: <ul style="list-style-type: none">• Use a variety of online and print resources, (i.e. Math Up, Mathology, Knowledgehook, to provide instruction to students• Use data collected from online resources to determine student learning needs and growth• Follow the Halton Catholic District School Board's Scope and Sequence to navigate the 2020 Ontario Mathematics Curriculum• Provide students with a wide variety of problem-solving strategies, including explicit instruction on problem solving that involve exposure to relevant contexts and provide opportunities to model using concrete and virtual representations• Ensure that students have received a minimum of 300 minutes of Mathematics instruction per 5-day cycle• Collaborate with colleagues to ensure consistency in assessment	<ul style="list-style-type: none">• All educators will use resources provided to them in Halton Catholic District School Board• All educators will make data-informed decisions to meet student learning needs	HCDSB will Invest in a new online tool, Knowledgehook that will allow for progress monitoring and precise Interventions based on student learning need Implementing Mathematical Resources <ul style="list-style-type: none">• Continue to implement MathUP (textbook resource) for Grades 1-9• Continue to implement Mathology in Grades 1-6, (textbook resource) and begin usage in Grades 7 and 8• Implement Knowledgehook, an online learning platform• Consult the Scope and Sequence documents to assist with planning
	Administrators will: <ul style="list-style-type: none">• Leverage data from online software to inform the Student Achievement Plan for their school ensure that Ministry of Education policies are implemented in the classroom• Work with their staff to use data to determine models that are to be used consistently throughout grade 1-8 classroom• Participate and collaborate with staff about professional development opportunities to coordinate staff efforts to support student learning	<ul style="list-style-type: none">• Administrators can monitor the implementation of resources, student learning and progress	<ul style="list-style-type: none">• Dedicated time during Administrator meetings to monitoring Mathematics initiatives• Coaching provided on how to leverage online resources to understand student learning needs• Meetings with Family of School Superintendents to discuss student learning in Mathematics

Content Knowledge for Teaching

GOAL	OUTCOMES	STANDARD FOR SUCCESS	ACTIONS
Engaging in ongoing learning to strengthen mathematics content knowledge for teaching	Students will: <ul style="list-style-type: none">Be exposed to and engage in rich tasks and challenge themselves in mathematics, entering at their level of understanding, specifically in key areas of math identified as challenging to HCDSB learnersMake connections across areas of Mathematics to solve problems that demonstrate the use of challenging areas of MathematicsWork collaboratively with their peers and instructors to model their approaches to solving math problems to deepen their connectionsShare their learning with their families using online tools	<ul style="list-style-type: none">Students will be engaged and reflective about their participation in a Mathematics taskStudents identify how concepts can be consistently used in different areas of Mathematics	<ul style="list-style-type: none">Complete diagnostic tasks, and pre and post activities to monitor growth in learning.Classrooms will have groups of teachers come to observe and be provided to share their learning strategies.Participate in instruction designed to remediate their understanding of challenging concepts
	Educators will: <ul style="list-style-type: none">Provide opportunities through HCDSB resources to engage and challenge students at their levelIn intermediate, develop a deeper understanding of the connections across Mathematics by focusing on specific topics (for example, Fractions and Integers)Understand student struggles in specific areas of the Mathematics curriculumCollaborate with peers to ensure consistent assessment and evaluation practices	<ul style="list-style-type: none">Identify how specific concepts connect across the curriculumMonitor student growth in specific areas of Mathematics	<ul style="list-style-type: none">Groups of intermediate teachers from both secondary and elementary schools will collaborate on studying specific concepts that challenge studentsAnalyze student work to determine gaps in understanding of key learning needsUse of random groupingsProvide opportunities to remediate student learning in their class
	Administrators will: <ul style="list-style-type: none">In collaboration with classroom teachers, identify specific content areas of focus for the schoolParticipate in learning sessions to further understand student learning needs based on data collected from a variety of sourcesMonitor and participate in the intermediate cross panel workProvide opportunities to share Mathematics learning opportunities with families	<ul style="list-style-type: none">Each school will have a focused content area based on student learning needs as reflected In the Student Achievement PlanWill measure progress in Mathematics learning relative to challenging concepts	<ul style="list-style-type: none">Organize opportunities for families to learn more about their child's mathematics learningMonitor student progress in key learning areas that have challenged students in their schoolParticipate in sessions dedicated to Principals as instructional leads in Mathematics

Knowing the Catholic Mathematics Learner

GOAL	OUTCOMES	STANDARD FOR SUCCESS	ACTIONS
Knowing the mathematics learner, and ensuring mathematical tasks, interventions and supports are relevant and responsive	Students will: <ul style="list-style-type: none">Be provided opportunities to remediate their knowledge in key math areas (e.g. Multiplication) through targeted Interventions, based on needHave an opportunity to participate in International Math Contests (from Grade 2 to Grade 12), and monitor their improvementParticipate in a national initiative to understand early number skills for children in Kindergarten and Grade 1Have opportunities to learn more about how Mathematics has developed and been used in cultures around the world, including contributions from members of the Black and First Nations communitiesCommit to regular participation in their Mathematics classes	<ul style="list-style-type: none">Students selected for intervention will demonstrate Improved understanding In the identified areaStudents will demonstrate increased engagement in more complex MathematicsStudents will develop an appreciation of how Mathematics is used in cultures around the world	<ul style="list-style-type: none">Selected students to participate in twice weekly intervention sessions over a period of 10 weeksStudents can volunteer to participate In the Caribou Math Contest and/or the Waterloo Math Contests at every schoolHCDSB will partner with the AIM initiative to develop tools to assist with numeracy screeningStudents will participate in learning about specific cultures during Black History Month and Indigenous History Month
	Educators will: <ul style="list-style-type: none">Participate in screening and recommend learners for intervention supportsProvide students with opportunities to participate in International Math Contests (e.g. Caribou Math Contests, University of Waterloo Math Contests)Analyze key data points, including attendance, to understand challenges to student learningConsider the needs and backgrounds of their learners and adapt lessons to reflect culturally responsive and relevant pedagogy	<ul style="list-style-type: none">A greater understanding of the impact of timely interventions based on student dataUse of Math contests and student engagement dataKey data is analyzed and instructional responses initiated to support urgent learning needs	<ul style="list-style-type: none">Implement screening and diagnostic tools then analyze data to determine students who require InterventionNumeracy Team meetings established in our secondary schools to facilitate data analysis and collaboration on appropriate interventions
	Administrators will: <ul style="list-style-type: none">Support the implementation of Math contests in their schoolsMonitor student achievement and the impact interventions have had on their studentsParticipate In sessions dedicated to analyzing student data and understanding challenges to student learning, including Identifying the appropriate interventions	<ul style="list-style-type: none">Administrators have identified key staff that can support the implementation of Math contests in their schoolsAdministrators have included key data points in their Student Achievement Plan, are actively monitoring the data and collaborating on appropriate interventions	<ul style="list-style-type: none">Identify key dates for administering Math contests and ensure that resources are availableSecondary Administrators have identified dates for Numeracy Team meetings and are identifying key staff who will collect student dataElementary administrators have collaborated with classroom teachers on students who would benefit from intervention