

TCDSB K to 12 Professional Learning Form 2017-2018

SCHOOL - Principal – Superintendent	ST. GREGORY – Mr. J. Pannozzo- Mr. D. Yack
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Based on analysis of the data, in collaboration with staff identify a critical learning need area or strategy that addresses the learning of your school community (i.e., numeracy, assessment, problem solving, inquiry learning, learning skills, etc.)

BACKGROUND – DATA ANALYSIS

Student Achievement Data (EQAO, CAT4, etc.)	Perceptual Data (Survey data, School Climate, etc.)	Demographic Data (N tiles, etc)	Program Data (Empower, 5 th Block, Taking Stock, SSI, etc.)	Other (SSLN, EDI, etc.)
<p>EQAO- Reading and Writing results significantly higher than mathematics</p> <p>Student achievement in math is higher in knowledge and understanding and significantly lower in application and thinking</p> <p>Student Questionnaire results Majority (68%) read math problem to make sure know what to do</p> <p>Minority (35%) think about steps to problem-solve (plan)</p>	<p>2016-2017 Safe and Caring Catholic School Climate Survey indicates Majority of students feel safe (44%) or very safe (52.8%) and that the school is a happy and welcoming place to learn (Agree=57.6%, Strongly Agree=33.6%)</p> <p>Many students are involved in extracurricular activities as well as leadership opportunities to help those in need</p> <p>Students and staff share common understanding of growth mindset and culture of high expectations</p>	<p>N-Tiles = 9</p> <p>Majority of Students are born in Canada</p> <p>English-Speaking</p> <p>Mid to High SES</p> <p>CSPC prioritizes support for student success and well-being</p>	<p>Empower-Spelling and Decoding Gr.2-5</p> <p>Special Education Withdrawal Support (1.5) for language and mathematics</p>	<p>EDI indicates high scores (>9) in Communication Skills and General Knowledge, Language and Cognitive Development, Social Competence, and Physical Health and Well-Being</p> <p>SSLN – Intermediate grade teachers collaborating with secondary school partners in math teaching and learning</p>

URGENT CRITICAL LEARNING NEED Explain in 140 characters or less ... student learning problems to solve - Professional learning focus for this year.	Students need to develop mathematical problem-solving skills and strategies with an emphasis on reasoning and justifying while building capacity to engage in risk-taking and innovation
From the data, what learning conditions will support increased achievement?	MATHEMATICS – intentional teaching and talk around problem-solving strategies (i.e., 3-part problem-solving) and developing understanding/deconstructing math problems

PROFESSIONAL LEARNING PLAN TO MEET URGENT CRITICAL NEED:

Collaborative Inquiry Question (What is the problem of practice?)	How can we foster a deep and common understanding of problem-solving planning and processing skills, specifically thinking and application?
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<p>If... Then... Statement:</p>	<p>If teachers consistently teach, model and reflect on the importance of thinking and application skills and processes to problem-solve, while acknowledging mistakes as an important part of learning, then students will deepen their knowledge and understanding of the framework of math problems.</p>
<p>Learning Goals (related to urgent critical learning need)</p>	<p>Support students to develop greater self-efficacy, knowledge, skills and strategies in planning how to solve mathematical problems.</p>
<p>Marker groups that will receive intervention (subgroups e.g., achieving at 2.5-2.9, gender, grade, etc.</p>	<p>What are the criteria for achieving 2.9 as opposed to 3.0 or 3.1 as a raw score in mathematics? How do we move students from success in knowledge and understanding to greater success in thinking and application- what strategies and supports are needed?</p>
<p>Actions/Interactions (What will we do to meet our goals?)</p>	<p>Professional Learning Plan <u>WORD-PROBLEMS AND PROBLEM-SOLVING IN MATH FDK - Gr.8</u> <u>CULTURE OF POSITIVE NORMS IN THE CLASSROOM AND SCHOOL</u> Continue Reinforcing Understanding of Growth Mindsets/Mathematical Mindsets (Messages- Everyone can learn math.//Mistakes are valuable.//Math is about creativity and making sense.//Questions are really important//Math class is about learning.) Encourage and model creativity and risk-taking <u>COMMON UNDERSTANDING OF THINKING AND APPLICATION</u> Ongoing development/practice of thinking and application for teachers and students <u>TEACHERS USE TCDSB LONG RANGE PLANNER</u> – observe math expectations across the grades- Are there any gaps in knowledge/skills/strategies? <u>CLEARLY ARTICULATED LEARNING GOALS</u> <u>ALL GRADES FOCUS ON PROBLEM-SOLVING</u> <u>TEACHERS USE THREE PART PROBLEM-SOLVING LESSON STRUCTURE</u> Teaching through problem-solving –use groups to support learning/communication <u>SOLVE THE PROBLEM OF THE WEEK- Gr. 3 to 8 – CEMC @ University of Waterloo</u> <u>MULTIPLE OPPORTUNITIES TO PRACTICE CONCEPTS/SKILLS/PROCESSES/APPLICATION</u> <u>ASSESSMENT FOR LEARNING (A4L)</u> 1.(red/yellow/green cups- students use colours to indicate understanding of lesson- students use red cup to indicate they need teacher support//yellow cup – lesson is too fast//green – student can explain idea/concept to other students) 2.Students write math assessment/math word problems – students develop understanding of nature of word problems <u>CLEAR, SPECIFIC DESCRIPTIVE FEEDBACK TO SUPPORT LEARNING</u> <u>STUDENT ASSESSMENT – ALIGNMENT/COMMON EXPECTATIONS – INTERMEDIATE</u> Opportunities/Time for Co-planning Math Assessments prioritizing Thinking and Application to be used across the grade to ensure consistency and alignment of <u>expectations followed by Moderated Marking to deepen teacher understanding</u> <u>STUDENT SELF-ASSESSMENT – PROMOTE REFLECTION/METACOGNITION</u> Co-constructed Success Criteria – used at school and for homework (home-school connection) Students in various grades complete problems from EQAO assessment – use exemplars to Assess Peers Solutions and Own Solutions <u>ENGAGING PARENTS</u> - FAMILY MATH NIGHT- gallery walk – supporting parent understanding of elementary school mathematics Sharing DIGITAL RESOURCES with Parents/Students/Teachers CLIPS – online videos explaining/demonstrating concept -reinforcement (EDUGAINS- website, OAME – website) Students using Prodigy Math (motivation/skill practice) iPad – apps (ready to install on TCDSB REFRESH iPads)</p>

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<p>Strategies to address the needs of students who have an IEP or are ELL</p>	<p>Digital Resources (motivate/practice) CLIPS – online videos explaining/demonstrating concept -reinforcement at students own pace - (EDUGAINS- website, OAME – website) DIFFERENTIATION Vocabulary Instruction – math word wall MULTIPLE OPPORTUNITIES/MEANS to learn, practice and demonstrate learning Direct Instruction/Modeling Manipulatives</p>
<p>PD Required for Staff</p>	<p>PD – 3 Sessions – January to March 2018</p> <p>TCDSB Resource Personnel –Numeracy Resource Teacher (Ms. Kus) Early Years (Ms. Molyneaux) Literacy Resource Teacher (Ms. Russell)</p> <p>Participants– FDK to Grade 6 Objective: Aligning with SSLN focus on assessment of thinking and application skills Common long range planning, co-creating common assessments with combination of knowledge, thinking and application problems/question In-Service- Developing and Deepening understanding of Thinking and Application Processes/Skills Explore Effectiveness of Implementing Common Assessments/Moderated Marking Across Grades/Divisions</p> <p>Session One- Wednesday, January 24, 2018 Session Two - Thursday, February 8, 2018 Session Three – Thursday, March 8, 2018</p> <p><u>SCHOOL LEVEL</u> - TIME/OPPORTUNITIES FOR CO-PLANNING, CO-TEACHING, MODERATED MARKING</p> <p><u>MATH PROFESSIONAL LEARNING</u> SCHOOL SELF-DIRECTED LEARNING MODULES (TCDSB Numeracy)- individual or group https://intranet.tcdsb.org/Departments/CandA/Numeracy/MathProfessionalLearning-schoolself-directedlearningmodules/Pages/default.aspx</p>
<p>Measures/Evidence of Success to be used</p>	<p>Student Work – observation, data Pre and Post Assessments Observation/Conference/Survey indicating Decrease in student’s math anxiety specifically performance anxiety – increased self-efficacy Teacher Observation of Student Interest and Participation in Problem-Solving with Visiting Math Professor from CEMC – University of Waterloo (Grade 7 & 8) Assessment Data – EQAO Results of Waterloo Math Contest - GAUSS</p>
<p>Resources Required (human, material, #code days)</p>	<p>Code Days for Collaborative Planning/Learning/Assessment Support from TCDSB Literacy, Numeracy, Early Years Resource Teachers Student Artefacts/Video recordings of Teaching/Learning/Student Products</p>