

TCDSB K to 12 Professional Learning Form 2017-2018

SCHOOL - Prin - Sup

Our Lady of Wisdom Catholic School – William Kwon – Peter Aguiar

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>Cat 4 Math and Computation 2016-2017: In Grade 5: The National Percentile of 81 indicates that the students did as well as or better than 81% of students in Gr. 5 across Canada. 89% for Computation.</p> <p>96% were at stanines 4 and above in math, 91% were at stanines 4 and above in computation.</p> <p>4% at stanine 3 and below in math; 9% at stanines 3 and below in computation.</p> <p>In Grade 7: The National Percentile of 90 indicates that the students did as well as or better than 90% of students in Gr. 7 across Canada. 68% for Computation.</p> <p>100% of students were at stanines 4 and above in math, and 68% at stanines 4 and above in computation.</p>	<ol style="list-style-type: none"> Assessment is connected to the curriculum, collaboratively developed by educators and used to inform next steps in learning and instruction-73 % routine use (1.1) Same Grade partners need to continue this practice, engage more in moderated marking and reflection of whether students are being well served by the math assessments used Students and educators build a common understanding of what students are learning by 	<p>Based on a Trillium enrollment of 363, Single parent families are in the 6th percentile at 23.7 percent, low family income in the 6th percentile at 21.6 %, Second Language at Home at 28.2 % in the 5th percentile and Parent Education at 12.5% in the 6th percentile.</p> <p>The data suggests that these factors may contribute to a lack of access to certain resources beyond the school setting, i.e., computers, Internet service, homework support, hindrance to assisting their children with school work. Students may also treat math problems too realistically and draw on limited experiences and considerations.</p>	<p>-Not Applicable</p>	<p>-Based on the 2014 EDI (Early Development Instrument) and 45 EDI's submitted, 2.2% of the SK students were in the vulnerable percentile for Language and Cognitive Development with the majority being on track at 84.4% and the other area of vulnerability was 4.4% of the students being in the vulnerable category for Communication Skills and General Knowledge</p>

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<p>0% at stanines 3 and below in math; 21% at stanines 3 and below in computation.</p> <p>EQAO 2016-2017: Grade 3 cohort of 31 students: 10% Special Needs, 65% like math most of the time, 35% sometimes Students struggled with 1:8 (measurement, thinking- 10 students, OR), 1:11 (GSS, Application) OR-19 students, 1:9 (DMP, Application) OR-13 students, 2:5 (NS, application) OR- 14 students, 2:12 (GSS, Thinking) OR- 16 students, 2:16 (PA, Application) OR- 13 students</p> <p>-14% at level 4, 49% achieved level 3, 30% level 4, 14% level 2</p> <p>5 year trend from 2012-2017: 60, 62, 68, None, 81</p> <p>Analysis of the IIR for Gr. 3 2016-2017 indicates that students struggled the most with Application questions with 8 questions in which the percent of correct MC answers was in the 59% and below to 60-69% range or the mean score was from 59% and below to 60-60%. The strands that students struggled with were Measurement at 3 questions, and Geometry and Spatial</p>	<p>identifying, sharing and clarifying the learning goals and success criteria- 36% implementation, 64% routine use (1.3)-the goal is to increase this percentage</p> <p>10. The teaching and learning environment is inclusive, promotes the intellectual engagement of all students and reflects individual student strengths, needs, learning preferences and cultural perspectives- 73% routine use (3.1)</p> <p>13. A culture of high expectations supports the beliefs that all students can learn, progress and achieve- 64% routine use (4.1)</p> <p>16. Resources for students are relevant, current, accessible, inclusive and monitored for bias- 18% routine use</p>			
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<p>Sense at 3 and NSS at 3.</p> <p>Grade 6 cohort of 39 students: 13% special needs, 42% sometimes like math, 5% did not answer, 50% like math most of the time -18% achieved level 1, 31% at level 2, 37% at level 3 and 12% at level 4 Who are these students? See lists. (These students are in effect your students to monitor and move)</p> <p>5 year trend from 2012-2017: 68, 75, 82, None, 49 (1% above board)</p> <p>Open Response Questions that students struggled with are:</p> <p>1:8 (Measurement application, 16 students) 1:10 (GSS, Application, 18 students) 1:9 (DMP, Application, 20 students) 2:4 (NS, Application, 18 students) 2:11 (GSS, Thinking, 16 students)</p> <p>Analysis of the IIR for Gr. 6 2016-2017 indicates that students struggled</p>	<p>(4.6)-This needs to improve, relevance and students ability to connect are critical to their understanding and success in math</p>			
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<p>the most with Application questions with 14 questions in which the percent of correct MC answers was in the 59% and below to 60-69% range or the mean score was from 59% and below to 60-60%. This was followed by 9 Thinking questions that students struggled with. The strands that students struggled with in almost equal measure were Measurement at 5 questions, PA at 5 questions, DMP at 5 and NSS at 4.</p>				
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<p>URGENT CRITICAL LEARNING NEED Explain in 140 characters or less ... student learning problems to solve - Professional learning focus for this year.</p>	<p>When it comes to multi-step math problems, our students experience difficulty persevering due to struggles with specialized French and English math vocabulary and gaps in prior experience. Our students need to learn how to answer multiple choice questions and multi-step word problems by identifying what steps are required.</p>
<p>From the data, what learning conditions will support increased achievement?</p>	<ul style="list-style-type: none"> -co-development, revision and alignment of assessments -moderated testing and marking -intentional time allotted for error analysis during the math block and beyond -continued selection and use of appropriate resources to assist in the remediation of misunderstood concepts and misapplied skills

PROFESSIONAL LEARNING PLAN TO MEET URGENT CRITICAL NEED:

<p>Collaborative Inquiry Question (What is the problem of practice?)</p>	<p>If teachers work together to create accessible and relevant assessments in our same grade groups and integrate error-analysis in their math instructional blocks, then the students will improve their ability to approach the problem confidently.</p>
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<p>If... Then... Statement:</p>	<p>If we emphasize the importance of clear mathematical thinking in written format through consistent and explicit instruction, the identification and the</p>
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	analysis and self-correction of errors and missing steps, then more students will achieve the Ontario standard in math.
Learning Goals (related to urgent critical learning need)	<ul style="list-style-type: none"> -Teachers are learning to balance their formative and summative assessments with greater attention paid to the number of question types as reflected in the EQAO question Breakdown and Ontario Mathematics Achievement charts (33% KU, 44% Application, 22% Thinking). -Teachers are learning to use strategies to assist students to connect the language of math problems, mathematize the situation communicated in the problem, analyze mathematically and interpret and communicate results -SEF indicator 1.5 (Students are explicitly taught and regularly use self-assessment skills to mentor, improve and communicate their learning, within the context of the Ontario curriculum and/or IEP)
Marker groups that will receive intervention (subgroups e.g., achieving at 2.5-2.9, Applied, gender, Grade(s), etc)	We will focus on subgroups from grades 1-8 who are achieving at the 2.5-2.9 range in math across the strands, based on current class diagnostic, summative and individual assessment and report card data, as well as students who achieved level 2 or lower on EQAO and stanines 4 and below on the CAT 4 assessments.
Actions/Interactions (What will we do to meet our goals?)	<ul style="list-style-type: none"> -Same grade groups will re-evaluate and co-develop math assessments to create greater alignment and share strategies to integrate error analysis -Increase collaboration between Special Ed. Resource and math teachers to provide intentional, specific, timely, remediation based on student need -Liaise and work together with Area 4 Math resource to address school's urgent critical need -continuation of intentional time allocated for math talks, focus on student justification of responses (Why is the answer reasonable), as well as, the establishment of formalized time for error analysis and error math gallery
What professional learning have you engaged in (or will you engage in) to ensure that culturally responsive pedagogy is embedded in teaching and learning?	<p>The Math resource personnel will be coming in to co-plan and co-deliver with the principal the following on Oct. 18th and 25th, 2017:</p> <ul style="list-style-type: none"> -co-development and aligning assessment practices around our area of need: once again, application style questions and weakness in GSS, DMP, NS strands. Establishing a greater balance/distribution of question types, as per your EQAO question type chart, revising assessments for relevance to students and teaching explicit strategies to connect to the situation and understand the math involved, providing greater insight and strategies on how to integrate within the math block greater opportunities for teacher and student self-correction and error analysis -Math teachers are collaborating in same grade level groups to co-create math assessments using their own assessment sources and as a guide, a recently created mini-bank/booklet of EQAO questions from multiple years sorted by specific expectations and then again in subsets and other sources <p>The goal is to use the above to revise their current assessments and practices, ensure that they are age and grade appropriate and that there is relevant content in them that is culturally responsive and better reflects students' life experiences</p>

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<p>Strategies to address the needs of students who have an IEP or are ELL</p>	<ul style="list-style-type: none"> -Differentiated instruction -Intensive focus on remediation of skills through error analysis and remediation, support with word problems using high yield strategies, such as, chaining, student paraphrasing timely and frequent review of key concepts and practice of skills -reference to EQAO questions -use of assistive digital applications and manipulatives -Continued focus on use of strategies to assist students with key math words in French and English, learning goals and success criteria notebook, math word walls, personal math glossaries
<p>PD Required for Staff</p>	<ul style="list-style-type: none"> -Code 92 Math Strategy days will be allocated for the planned PD in conjunction with the principal and Area 4 Math resource -Continued involvement of math leads in in services and sharing of pertinent resources and strategies -Math teachers will integrate error analysis math tasks into their review of misunderstood concepts and misapplied skills and use exemplars at Code 20/Level 2 -Explicitly instruct students to use the math think aloud prompts to make their mathematical thinking clearer rather than proceed right away to calculation -Engage students in Math gallery walks with focus on the identification and explanation of the error, re-working the problem and sharing a strategy -Further exploration of how to create/revise assessments for greater cultural responsiveness and relevance
<p>Measures/Evidence of Success to be used</p>	<ul style="list-style-type: none"> -Improved achievement in Key assessment results -formative and summative math assessments -observations and documentation of students' work and ability to self-correct and analyze errors -EQAO, CAT 4 -results from Math learning cycles based on resources used, Jump Math, ONAP -Identified marker students from 2.5 to 3.1 range show greater improvement at the end of units and math cycles -Students will demonstrate greater fluency in solving multi-step multiple choice and word problems -students will more readily be able to identify errors and missing steps in their own math thinking in written format, then go back and add those missing steps and/or revise miscalculations and re-work the problem, and share the strategies they used -there will be visible greater collaboration in terms of developing/ revising assessment to reflect more application style questions, content that is inclusive and relevant to all students

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Resources Required (human, material, #code days)	Paying Attention to Spatial Reasoning K-12 Support Document Student Interaction in the Math Classroom Monograph # 1 LNS Word Problems Monograph #34 -PD with Marg Quinn Area 4 on Oct. 18, Oct. 25 th , 2017 http://edugains.ca/newsite/math/targeted_implementation.html https://teachingtoinspire.com/2015/12/math-error-analysis.html
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Questions to Consider:

- Are we being collaborative in our decision making?
- Are we improving instructional leadership in our school?
- How are all stakeholders involved in the Professional Learning Plan?
- Does the plan build capacity amongst our staff related to student need?
- Are we using high yield instructional strategies? What does research say about this student learning problem?
- Have we increased the amount and quality of learning related to our student need?