

TCDSB K to 12 Professional Learning Form 2016-2017



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| SCHOOL - Prin - Sup | St Bernard, Aloisi, Area 1 |
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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.) |
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| <p>-Gr. 2 CAT4 2014-15: Mathematics (47%); computation (51%)</p> <p>-Gr. 5 CAT4 2014-15: Mathematics (61%); computation (72%)</p> <p>-Gr. 7 CAT4 2014-15: Mathematics (80%); Computation (58%)</p> <p>** % reflects stanine 4 and above</p> <p>- EQAO – historical gr. 6 math scores have a downward trend</p> <p>- There is a sharp decline in the most recent gr. 3 math scores (2013/14-40%, current gr. 6s) compared to previous years (2012-13- 79%)</p> <p>- Cohort data from gr. 6 EQAO math data from 2013-14 (33%),</p> | <p>- significant number of immigrant families. Large number of parents who are not necessarily engaged in their children’s learning</p> <p>-69% of homes where neither parent was born in Canada (SCSS)</p> <p>- EDI data (10/11), 40% of students score in the lowest 10th percentile (physical health and wellbeing, communication skills and general knowledge (current grade 6s)</p> | <p>- Many lower income families (40%)</p> <p>-very few established and/or generational families</p> <p>- almost half of our students come from single parent homes</p> <p>- school has a large incidence of families with parents without secondary school diploma (2nd Ntile)</p> | <p>-Empower decoding has 10 students</p> <p>-Education Assistants provided grade 1 students who scored too low for 5th Block with a reading program to boost skills. ELL for both Math and Language for newer students</p> | <p>-Intermediate teachers worked with the SSLN teams looking at skills for transition in Mathematics</p> <p>-math coach worked with students for small group support</p> <p>-Math Study Groups continued throughout the year through the Jump Math Program</p> <p>-License to Learn Program for grade 3 class tutored by grade 8 class to support in strategies to respond to word problems in Mathematics/EQAO type questions</p> |

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| <p>and CAT4 data from 2014-15 (same group in gr. 7- see scores above) shows some upward movement but data is not necessarily compatible</p> | | | | |
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| <p>URGENT CRITICAL LEARNING NEED Explain in 140 characters or less ... student learning problems we need to solve - Professional learning focus for this year.</p> | <p>Students lack skills in mental math necessary to solve math problems.</p> |
| <p>From the data, what learning condition will support increased achievement?</p> | <p>Implementation of gradual release model to support problem solving beginning first with numeracy skill development across the grades in operational sense (mental math skills embedded) in first term to a focus upon problem solving within a context in word problems.</p> |

PROFESSIONAL LEARNING PLAN TO MEET URGENT CRITICAL NEED:

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| <p>Collaborative Inquiry Question (What is the problem of practice?)</p> | <p>How do we support students in the process of developing skills in operational sense (mental math embedded) to solve problems firstly without a context and then within a context to solve problems in addition, subtraction, multiplication and division?</p> |
| <p>If... Then... Statement:</p> | <p>If teachers assist students to recognize and identify different mental math strategies (in computation) then they will be able to build their own repertoire of mental math strategies in problem solving. If teachers provide daily focused time on mental math strategies/activities, then the students will improve in the complexity of computation skills.</p> |
| <p>Learning Goals (related to urgent critical learning need)</p> | <p>-To help students develop better mental math (operational sense) to solve math problems.</p> |
| <p>Marker students who will receive intervention (subgroups e.g., achieving at 2.5-2.9, Applied, gender, Grade(s), etc)</p> | <p>-Target groups based upon diagnostic test (level 2) -Students who achieved level 2.5-2.9 in EQAO (CURRENT GR. 8 AND GR. 5)</p> |

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| <p>Actions/Interactions (What will we do to meet our goals?)</p> | <ul style="list-style-type: none"> -Teachers familiarize themselves with different addition, subtraction, multiplication and division strategies; -Teachers solve problems using different strategies in addition, subtraction, multiplication division; -Teachers collaborate with other teachers to identify different strategies used in solutions; -Teachers purposely select questions that elicit various solutions; -Teachers give students opportunities to solve addition, subtraction, multiplication division problems in different ways; -Teachers identify and name the strategies used by students to solve addition, subtraction, multiplication division problems; -Teachers expose students to other strategies if students are limited to only one strategy; -Collect student solutions that show different strategies; -Teachers challenge students to identify and name strategies; -Teachers engage students in whole school math activity (games with dice, cards, kahoot, Prodigy, www.wwdb.com (which one doesn't belong), etc.,) in order to build numeracy skills. |
| <p>Strategies to address the needs of students who have an IEP or are ELL</p> | <ul style="list-style-type: none"> -Analysis of student work; -Pre, mid and post assessments; -Opportunities for Math Talk; student voice; additional small group support -“Math Activities” focus group to work with teacher -Whole group “MATH MANIA” every Wednesday to play Math games. -Math Games club -homework tutoring sessions offered by teachers in Intermediate and Junior divisions -After school Numeracy sessions offered to target group of grade 3 students. |
| <p>PD Required for Staff</p> | <ul style="list-style-type: none"> -Review of expectations for Number Sense and Numeracy: Operational Sense, understanding the expectation development across the trajectory. -Continued PD for Jump Math with focus on Mental Math Strategies |
| <p>Measures/Evidence of Success to be used</p> | <ul style="list-style-type: none"> -Pre and post assessments; -Analysis of student work; -Observation of math talk; -Students’ ability to communicate their understanding of mental math addition and/or subtraction, multiplication, division strategies; -Students’ ability to choose the appropriate operation in problem solving, -Students’ ability to justify/demonstrate their thinking; |
| <p>Resources Required (human, material, #code days)</p> | <ul style="list-style-type: none"> -ONAP assessments -EQAO Assessments -Curriculum trajectory for Number Sense: Math Department -Mental Math Strategies – Math dept. and Jump Math -Math Resource Staff <p>Term One:</p> |

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-Code Day 1: School Improvement Team Planning: Discussion for focus of pre and post tests for terms one and two.

-Code Day 2(in divisions) Moderated Marking of Diagnostic tests for planning. "Midweek Math" Activities (Schoolwide) (successes, challenges)

-Code Day 3 (in divisions): Moderated Marking Post Tests: Discussion (Midweek Math" Activities): Forward Planning: discussion for term 2 pre and post diagnostic tests: how do students apply skills learned to testing?

Term 2:

-Code Day 4 (School Improvement Team Planning) discussion and preparation for new pre and post diagnostic for Term two.

-Code Day 5: Moderated Marking Post Tests: Discussion: Reflect and analyze student work in post-test; discuss next steps; How do students apply skills learned to testing?