Goal Setting

Overall Goal: All students, as measured by our focus students, will move at least one strategy along Lawson’s continuum of Numeracy development. We will be focusing on Multiplication and Division this year. In addition, all educators will meet at least one success criterion we have established as a school in providing descriptive feedback to students.

Needs Assessment / Where Are We Now?

Grade 9 EQAO Math results:

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>46%</td>
<td>44%</td>
<td>44%</td>
<td>27%</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>3 yr. avg – 27%</td>
<td>3 yr. avg – 40%</td>
<td>3 yr. avg – 45%</td>
<td>3 yr. avg. 38%</td>
<td>3 yr. avg. 31%</td>
</tr>
<tr>
<td>Academic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>72%</td>
<td>88%</td>
<td>72%</td>
<td>56%</td>
<td>59%</td>
</tr>
<tr>
<td></td>
<td>3 yr. avg – 71%</td>
<td>3 yr. avg – 75%</td>
<td>3 yr. avg – 77%</td>
<td>3 yr. avg – 72%</td>
<td>3 yr. avg – 63%</td>
</tr>
</tbody>
</table>

Pre-assessment of students in Grades 7, 8 and 9 (applied) indicates the following percentage of students have difficulty with 2-digit multiplication and division word problems.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage of Students Unable to Successfully Complete the Pre-Assessment (2 digit multiplication)</th>
<th>Percentage of Students Unable to Successfully Complete the Pre-Assessment (2 digit division)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>42</td>
<td>35</td>
</tr>
<tr>
<td>8</td>
<td>31</td>
<td>39</td>
</tr>
<tr>
<td>9</td>
<td>42</td>
<td>46</td>
</tr>
</tbody>
</table>

We continue to see a decline in standardized test scores despite overall good performance in the classroom by our students. The varied methods of assessments help students succeed in class but are not improving our test scores.

Theory of Action: Due October 11, 2019

If we create engaging learning experiences through a focus on purposeful planning and improve assessment and feedback practices through a focus on generating descriptive feedback then student engagement and achievement will improve as measured by monitoring our focus students.

Success criteria for engaging learning experiences:
- I can see and hear authentic learning experiences
- I can see and hear assessment and feedback practices
- I can see and hear student-centered learning
- I can see and hear students using resources with intention
- I can see and hear educators as responsive facilitators
- I can see and hear collaboration
- I can see and hear purposeful planning
- I can see and hear discourse along with independent think time
- I can see and hear wellness

Success Criteria for generating descriptive feedback:
- I can see and hear students providing feedback to each other
- I can see and hear collaboration
- I can see and hear educators providing detailed feedback to improve student work
- I can hear constructive comments from all stakeholders
- I can see and hear students and staff using the feedback to improve
- I can see and hear students and staff using feedback to plan next steps
Monitoring the IF:
Based on the co-constructed success criteria for educator learning, (e.g. criteria for providing effective descriptive feedback). Include pre data for your educators:

Monitoring the THEN (e.g. student achievement, engagement, wellness): Drag Dots onto the continuum – choose the correct colour based on the division of the child. You can copy more dots if required.

<table>
<thead>
<tr>
<th>Primary Students:</th>
<th>Junior Students</th>
<th>Intermediate Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Dots]</td>
<td>![Dots]</td>
<td>![Dots]</td>
</tr>
</tbody>
</table>

### Strands

#### Key Ideas
- Conservation
- Magnitude
- Need for Organization
- One-to-One Correspondence
- Part-Whole Relationship
- Hierarchical Inclusion
- Commutative and Associative Properties
- Equivalence
- Unitizing
- Place Value

#### Proficiency
- Using Automatic Retrieval
- Using Strategic Efficient Methods
- Using Alternative or Standard Algorithm
<table>
<thead>
<tr>
<th>Phase (Number of Students)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>None Used</td>
<td>0.0%</td>
</tr>
<tr>
<td>Pre-Addition and Subtraction</td>
<td>0.0%</td>
</tr>
<tr>
<td>Direct Modelling and Counting</td>
<td>0.0%</td>
</tr>
<tr>
<td>Counting More Efficiently and Tracking</td>
<td>0.0%</td>
</tr>
<tr>
<td>Working With Numbers</td>
<td>0.0%</td>
</tr>
<tr>
<td>Proficiency</td>
<td>100.0%</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Primary Students:**

![Primary Students icon]

**Junior Students:**

![Junior Students icon]

**Intermediate Students:**

![Intermediate Students icon]

---

**Alex Lawson’s What to Look For Continuum of Numeracy Development**

**MULTIPLICATION AND DIVISION**

<table>
<thead>
<tr>
<th>PHA</th>
<th>FOCUS STUDENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Modelling &amp; Counting</strong></td>
<td>Socializing Counting Psychomically Counting All Groups Counting Groups Representing Empty Groups and Fair Sharing</td>
</tr>
<tr>
<td><strong>Counting More Efficiently &amp; Tracking</strong></td>
<td>Modelling Composite Units and Counting by Ones (and if Division, Re-counting) Using Trial and Error</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHA</th>
<th>FOCUS STUDENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Working with Numbers</strong></td>
<td>Using 10 x Using 5 x Using Familiar Facts Using Portal Products Doubling and Halving Using Partial Quotients</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHA</th>
<th>FOCUS STUDENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proficiency</strong></td>
<td>Using Automatic Retrieval Using Strategic, Efficient Methods Using Alternative or Standard Algorithms</td>
</tr>
</tbody>
</table>

**Key Ideas:**

- Cardinality
- Utilizing (M & O)
- Part-Whole Relationship (M & O)
- Proportional Reasoning
- Commutative and Associative Properties (M & O)
- Distributivity Property
- Place Value (M & O)
Other Quantitative Data

EQAO Data – have Learning Partner show how do dig deeper into the data
Classroom Performance on Curriculum
Continue to use Pre-assessments

Qualitative Data
- Teacher observations
- Regular feedback from student performance during games
  Results from Student conferences.

PLAN and ACT – DUE: October 11, 2019
Choose 3 focus students from each class
Use the assessment tools and video students completing problems
Place students on the continuum as a team (collaboration)
Moderated marking
Provide descriptive feedback to students – model for teachers
Play math games as per Lawson’s book -designed to move students along continuum
Re-visit the student’s placement on the continuum.
MID CYCLE 1 DATA: DUE: November 29, 2019

Monitoring the IF:
Based on the co-constructed success criteria for educator learning. (e.g. criteria for providing effective descriptive feedback). Include pre data for your educators:

Monitoring the THEN (e.g. student achievement, engagement, wellness): Drag Dots onto the continuum – choose the correct colour based on the division of the child. You can copy more dots if required...

Primary Students:  
Junior Students:  
Intermediate Students:  

PRE-ADDITION & SUBTRACTION  DIRECT MODELLING & COUNTING  COUNTING MORE EFFICIENTLY & TRACKING  WORKING WITH NUMBERS  PROFICIENCY

Subitising  Counting Three Times  Counting On From the Larger Number  Using Trial and Error  Using Up/Down Over 10  Taking Jumps of 10 Forward or Backward  Using the Five- or Ten-Anchors  Using Near Doubles  Getting to a Decade Number and Taking Jumps of 10 Forward or Backwards  Using a Known Fact  Using Over/Under and Return  Compensation  Using a Known Fact  Using Constant Difference  Using Alternative or Standard Algorithm

Counting Sequence  Skip-Counting  Counting On From the Larger Number  Counting On/Counting Back

Tapping/Pointing  One-to-One Correspondence  Part-Whole Relationship (A & S)  Using Uniting (A & S)

Coordinating  One-to-One Correspondence  Hierarchical Inclusion  Place Value (A & S)

Need for Organization

Magnitude

Conservation

Commutative and Associative Properties (A & S)  Equivalence (A & S)  Equivalent (A & S)
<table>
<thead>
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<th>Phase (Number of Students)</th>
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Alex Lawson’s What to Look For Continuum of Numeracy Development
MULTIPLICATION AND DIVISION

**Direct Modelling & Counting**
- Subitizing
- Counting Rhyme/lyrical
- Modelling Composite Units and Counting by Ones (and if Division, Re-counting)
- Counting All, Grouping by Composite, Counting Groups
- Representing Empty Groups and Fair Sharing

**Counting More Efficiently & Tracking**
- Skip-Counting
- Using Trial and Error

**Working with Numbers**
- Using $x$:
  - Using Repeated Addition
  - Using a Ratio Table
  - Using Repeated Subtraction
- Using $x$:
  - Using $x$:
  - Using $x$:
- Doubling
- Doubling and Halving
- Doubling and Halving
- Doubling and Halving
- Doubling and Halving

**Proficiency**
- Using Automatic Retrieval
- Using Strategic, Efficient Methods
- Using Alternative or Standard Algorithms

**Focus Student**

**Review**
- Continuity
- Utilizing (M & D)
- Part-Whole Relationship (M & D)
- Proportional Reasoning
- Commutative and Associative Properties (M & D)
- Distributive Property
- Place Value (M & D)
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Other Quantitative Data:

Qualitative Data

**MID CYCLE 1: ASSESS and REFELCT: DUE: November 29, 2019**

**END CYCLE 1: DATA DUE: February 15, 2020**

**Monitoring the IF:**

Based on the co-constructed success criteria for educator learning. (e.g. criteria for providing effective descriptive feedback). Include pre data for your educators:

**Monitoring the THEN (e.g. student achievement, engagement, wellness):** Drag Dots onto the continuum – choose the correct colour based on the division of the child. You can copy more dots if required

Primary Students: ![Dots](image1)
Junior Students: ![Dots](image2)
Intermediate Students: ![Dots](image3)
Alex Lawson’s What to Look For Continuum of Numeracy Development

MULTIPLICATION AND DIVISION

<table>
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<td>1 100.00%</td>
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<tr>
<td>Totals:</td>
<td>1 100.00%</td>
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Other Quantitative Data
Qualitative Data

END CYCLE 1: ASSESS and REFLECT - DUE: February 15, 2020

CYCLE 2 PLAN and ACT – DUE: February 15, 2020 (based on the assessing and reflecting at the end of cycle 1 – may not change from the October plan or may be revised)

END CYCLE 2: DATA DUE: May 29, 2020

Monitoring the IF:
Based on the co-constructed success criteria for educator learning. (e.g. criteria for providing effective descriptive feedback). Include pre data for your educators:

Monitoring the THEN (e.g. student achievement, engagement, wellness): Drag Dots onto the continuum – choose the correct colour based on the division of the child. You can copy more dots if required

Primary Students:  Junior Students  Intermediate Students

[Diagram showing dots in different colors for Primary, Junior, and Intermediate Students]
### Pre-Addition & Subtraction

- Subitizing
- Counting Sequence
- Tapping/Pointing
- Coordinating

### Direct Modelling & Counting

- Counting Three Times
- Skip-Counting
- Counting On From the Larger Number
- Counting On/Counting Back

### Counting More Efficiently & Tracking

- Using Trial and Error
- Using One-to-One Correspondence
- Hierarchical Inclusion
- Equivalence (A & S)
- Unitizing (A & S)
- Place Value (A & S)

### Working with Numbers

- Using Up/Down Over 10
- Taking Jumps of 10 Forward or Backward
- Using the Five- or Ten-Anchor
- Using Near Doubles
- Using a Known Fact
- Taking from 10
- Using Compensation
- Using Overhead and Return
- Getting to a Double Number and Taking Jumps of 10 Forward or Backward
- Using Constant Difference
- Using Alternative or Standard Algorithm

### Proficiency
- Using Automatic Retrieval

### Key Ideas

- Continuity
- One-to-One Correspondence
- Part-Whole Relationship (A & S)
- Hierarchical Inclusion
- Commutative and Associative Properties (A & S)
- Equivalence (A & S)
- Unitizing (A & S)
- Place Value (A & S)

### Phase (Number of Students) %

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</tr>
<tr>
<td>Proficiency</td>
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</tr>
<tr>
<td>Totals:</td>
<td>1</td>
</tr>
</tbody>
</table>

### Primary Students: Junior Students Intermediate Students

- [Primary Students:](#) [Junior Students:](#) [Intermediate Students:](#)
# Alex Lawson’s What to Look For Continuum of Numeracy Development

## MULTIPLICATION AND DIVISION

### Direct Modelling & Counting
- Subitising
- Counting Rhythmically
- Modelling Composite Units and Counting by Ones (and if Division, Re-counting)
- Counting All, Grouping by Composite Counting Groups
- Representing Empty Groups and Fair Sharing
- Cardinality

### Counting More Efficiently & Tracking
- Skip-Counting
- Using Trial and Error

### Working with Numbers
- Using 10 ×
- Using 5 ×
- Using Repeated Addition
- Using a Ratio Table
- Doubling
- Using Familiar Facts
- Using Repeated Subtraction
- Using Part-Part-Whole
- Doubling and Halving
- Using Part-Whole Relationship
- Using Alternative or Standard Algorithms
- Using Proficiency

### Other Quantitative Data:

<table>
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<tr>
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<tr>
<td>Totals:</td>
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</table>

**Qualitative Data**

**END CYCLE 1: ASSESS and REFLECT - DUE: May 29, 2020**