



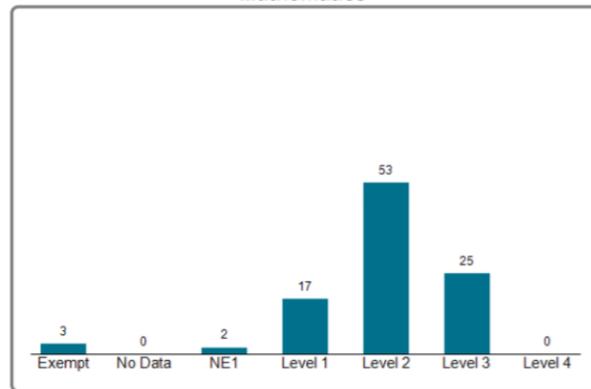
Goal Setting

Overall Goal: All students, as measured by our level 2 students, will move two phases on the Lawson continuum. Educators will choose 2 Level 2 marker students (as measured by EQAO, report card marks from June 2019, and diagnostic tools), to monitor, plan and assess for student improvement.

Needs Assessment / Where Are We Now?

Percentage of Grade 3 students

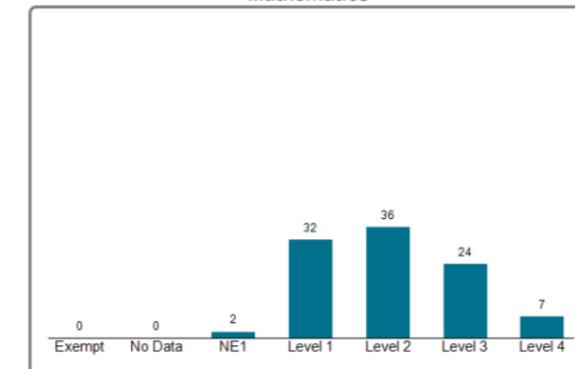
Mathematics



- 53% of Grade 3 students are approaching grade level (34/64)
- 36% of Grade 6 students are approaching grade level (21/59)
- Educators understand that intentional teaching of strategies is necessary, many do not yet notice and name the strategies that are being used or the next efficient strategy to be taught
- Many math lessons continue to be taught as a whole group as noticed during classroom observations

Percentage of Grade 6 Students

Mathematics



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 monitoring learning and setting goals 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 monitoring learning and setting goals

- *I see evidence of pre-assessment.*
- *I see the use of a diagnostic tool.*
- *I see a class profile that includes academic information.*
- *I see guided groups with skill specific goals.*
- *I see a monitoring template to record student achievement along a continuum.*
- *I see clear, curriculum based learning goals posted.*
- *I hear students referring to co-created success criteria to self assess learning.*

PRE DATA: DUE: October 11, 2019

Monitoring the IF:

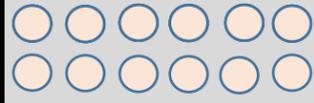
Based on the **co-constructed success criteria** for educator learning. (e.g. criteria for providing effective descriptive feedback). Include pre data for your educators:

Using a survey with all educators, we noticed that educators that have previously participated in learning teams and/or system math days are able to identify specific strategies that students are using effectively and intentionally plan the next strategy to be taught. 6/10 educators, having previously been on a learning team, identify specific strategies from the Lawson continuum when documenting student thinking and planning next steps. Educators who have yet to participate in learning teams, document general observations such as “basic numeracy skills”, “mental math strategies”, “participate in math talks”.

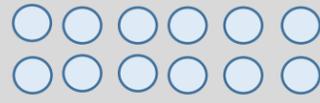
Monitoring the THEN (e.g. student achievement, engagement, wellness): Drag Dots onto the continuum – choose the correct colour based on the division of the child. You can copy more dots if required.

**This data will be plotted following our first learning team meeting.

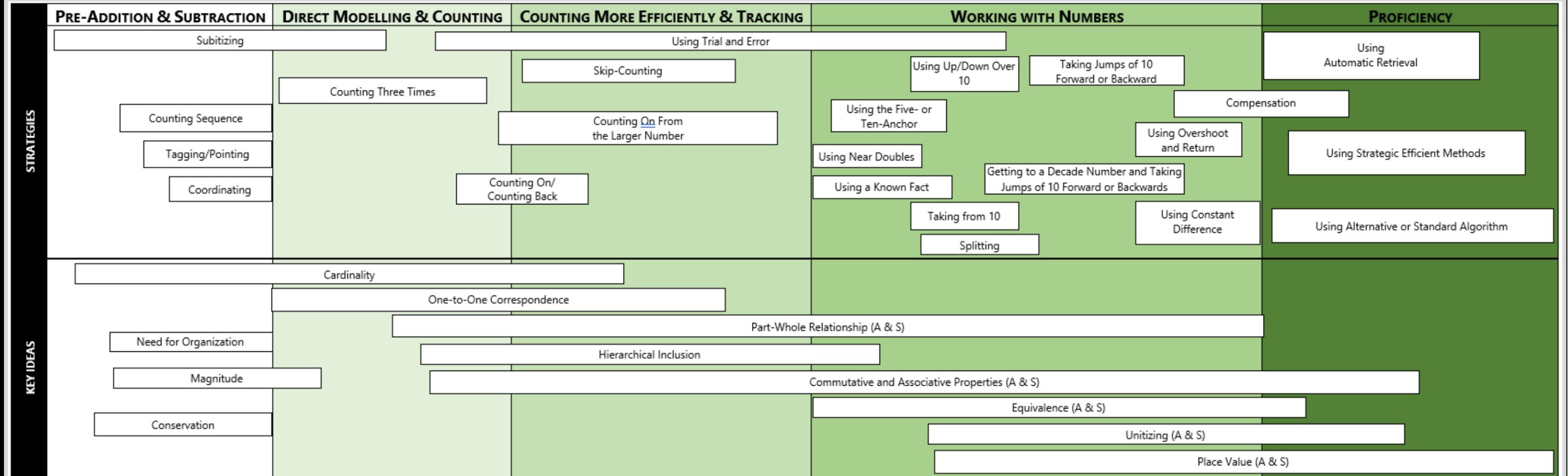
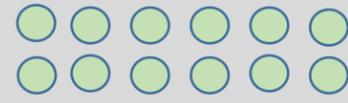
Primary Students:



Junior Students

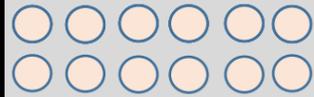


Intermediate Students

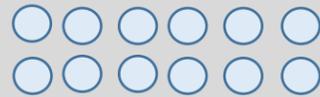


	Phase (Number of Students)	%
None Used	0	0.0%
Pre-Addition and Subtraction	0	0.0%
Direct Modelling and Counting	0	0.00%
Counting More Efficiently and Tracking	0	0.00%
Working With Numbers	0	0.00%
Proficiency	1	100.00%
Totals:	1	100.00%

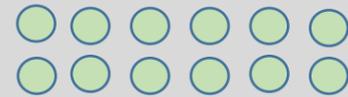
Primary Students:



Junior Students



Intermediate Students



Alex Lawson's What to Look For Continuum of Numeracy Development MULTIPLICATION AND DIVISION

 <p>FOCUS STUDENT</p>	PHASES STRATEGIES KEY IDEAS	DIRECT MODELLING & COUNTING	COUNTING MORE EFFICIENTLY & TRACKING	WORKING WITH NUMBERS	PROFICIENCY
		Subitizing 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 Rhythmically Using Trial and Error Unitizing (M & D)	Skip-Counting Doubling Using Repeated Subtraction Part-Whole Relationship (M & D) Proportional Reasoning Commutative and Associative Properties (M & D) Distributive Property Place Value (M & D)	Using 10 × Using 5 × Using Repeated Addition Using Familiar Facts Using Partial Products Doubling and Halving Using Partial Quotients

	Phase (Number of Students)	%
None Used	0	0.0%
Direct Modelling and Counting	0	0.00%
Counting More Efficiently and Tracking	0	0.00%
Working With Numbers	0	0.00%
Proficiency	1	100.00%
Totals:	1	100.00%

Other Quantitative Data

Qualitative Data

PLAN and ACT – DUE: October 11, 2019

- Choose all new members for our Numeracy Learning team to spread the depth of knowledge in our building.
- Meet as a Team.
- Ensure student work is central to our work & learning.
- Develop a pre-assessment task(s) to administer to our students.
- Ensure each teacher has a copy/access to Alex Lawson's What to Look For.
- Peruse sample monitoring plans to meet our purpose.
- Build staff capacity around the early addition and subtraction strategies to improve teacher ability to notice and name the strategies with students.
- Analyze EQAO data & report card data.
- Plan professional learning opportunities to build staff capacity around purposeful planning and using success criteria to provide meaningful descriptive feedback to students.
Survey staff regarding interest/needs around Technology support to monitor student learning.

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:

We met for a half day with teachers who had not been on a numeracy learning team. We introduced the Alex Lawson resource. We completed a placement activity that introduced the strategies for addition and subtraction. Teachers collaborated to match definitions to strategies and examples of student work.

Teachers noted:

- Unfamiliar with some terms (subitizing)

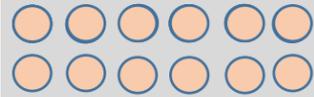
- Number of strategies on the continuum
- Complexity of some strategies (overshoot and return)
- The development of key ideas as they relate to the strategies

We explored the text to find definitions of the key ideas. We looked at examples of student work in the text to clarify the difference between the Working With Numbers Strategies. We introduced the 5 practices model. We selected 2 videos of student work (one primary and one junior). We anticipated student responses and collaborated to notice and name the strategies the students used. We plotted the strategies on the continuum and discussed what we could plan for next steps. We investigated the games section in the Lawson resource to find games that could support practicing different strategies. Teachers committed to doing a pre-assessment of their two level 2 marker students, plotting them on the continuum and planning for next steps.

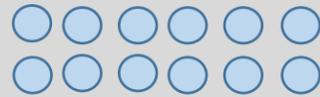
We met with all the teachers who have previously been on learning teams. The kindergarten team reviewed the subitizing continuum and digital resources (WODB, Splat, Mathies). Grades 1-6 math teams reviewed the Lawson continuum and the 5 practices model. Teachers committed to selecting two level 2 focus students to monitor and provide data.

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

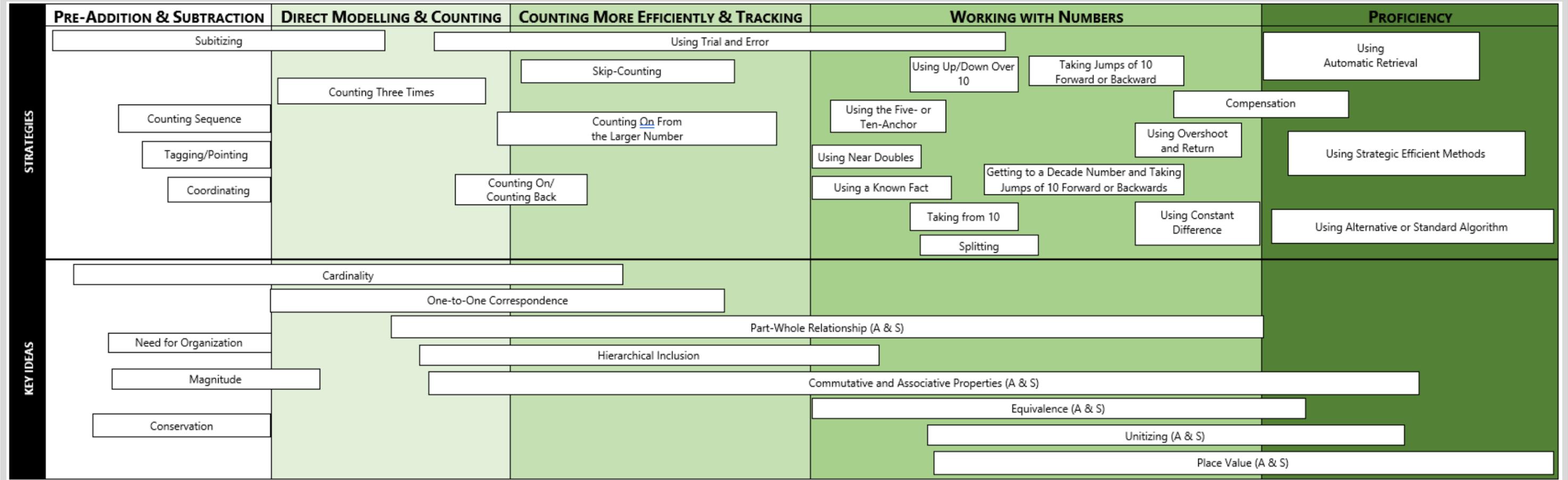
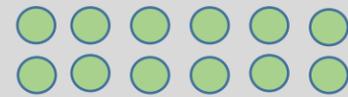
Primary Students:



Junior Students



Intermediate Students

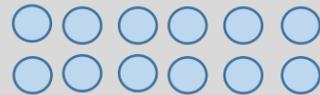


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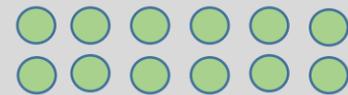
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Junior Students



Intermediate Students



Alex Lawson's What to Look For Continuum of Numeracy Development MULTIPLICATION AND DIVISION

PHASES	DIRECT MODELLING & COUNTING	COUNTING MORE EFFICIENTLY & TRACKING	WORKING WITH NUMBERS	PROFICIENCY	
	STRATEGIES	Subitizing Counting All, Grouping by Composite, Counting Groups Representing Empty Groups and Fair Sharing	Counting Rhythmically Modelling Composite Units and Counting by Ones (and if Division, Re-counting) Using Trial and Error	Skip-Counting Doubling Using Repeated Addition Using Repeated Subtraction Using a Ratio Table	Using 10 × Using 5 × Using Familiar Facts Using Partial Products Doubling and Halving Using Partial Quotients
KEY IDEAS	Cardinality	Unitizing (M & D)	Part-Whole Relationship (M & D) Proportional Reasoning Commutative and Associative Properties (M & D) Distributive Property Place Value (M & D)		



FOCUS STUDENT

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Working With Numbers	0	0.00%
Proficiency	1	100.00%
Totals:	1	100.00%

Other Quantitative Data:

Qualitative Data

MID CYCLE 1: ASSESS and REFLECT: DUE: November 29, 2019

We are planning to expand the scope of professional development in mathematics to the staff who have not yet participated in learning teams. Going forward, we will formally meet with that team. We plan to support these teachers through the learning team and also by providing for release time to collaborate and team teach with colleagues. We discussed purchasing resources, such as MathUp and Mathology. Teachers on this team will participate in learning teams and revisit these two resources later in the year. One teacher is participating in the Mathology professional development with her immersion teaching partner.

*We were only able to collect data from two teachers.

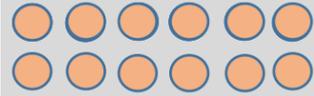
END CYCLE 1: DATA: DUE: February 15, 2020

Monitoring the IF:

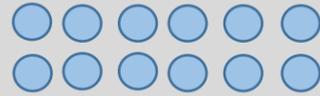
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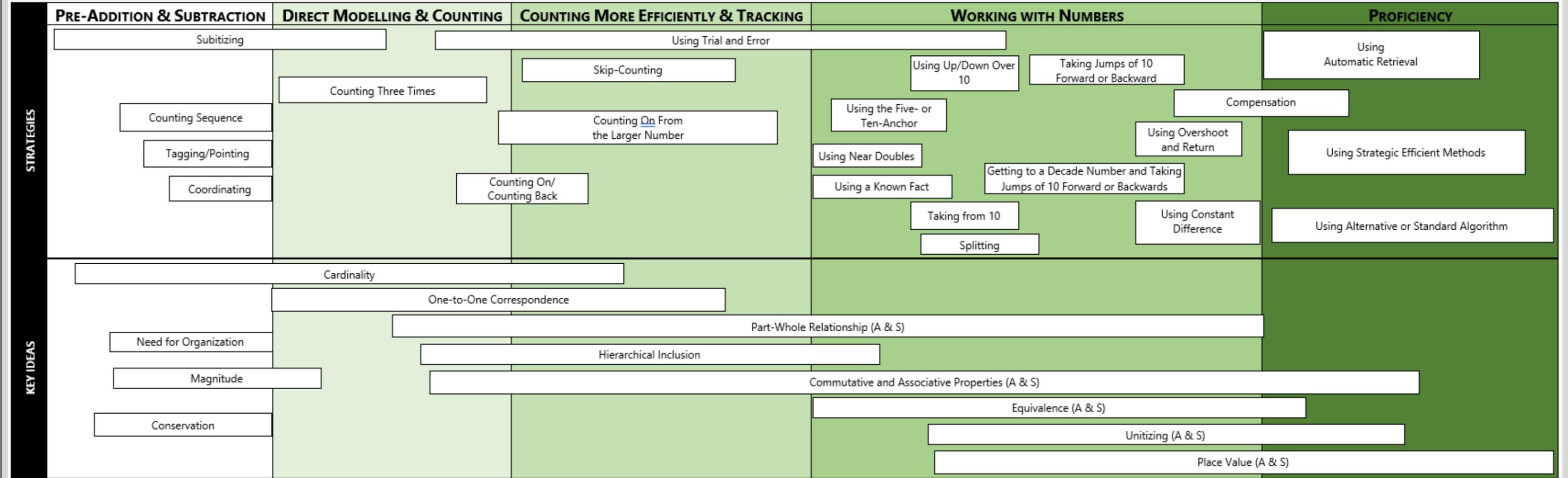
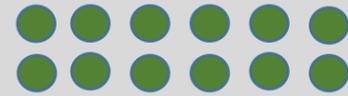
Primary Students:



Junior Students

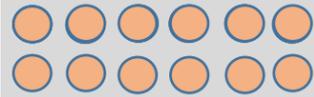


Intermediate Students

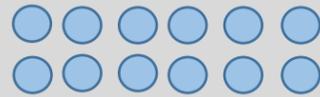


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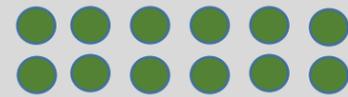
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Alex Lawson's What to Look For Continuum of Numeracy Development MULTIPLICATION AND DIVISION

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KEY IDEAS	Cardinality	Unitizing (M & D)	Part-Whole Relationship (M & D) Proportional Reasoning Commutative and Associative Properties (M & D) Distributive Property Place Value (M & D)	



FOCUS STUDENT

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Proficiency	1	100.00%
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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)

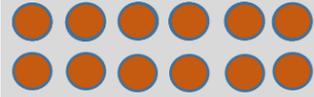
END CYCLE 2: DATA: DUE: May 29, 2020

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

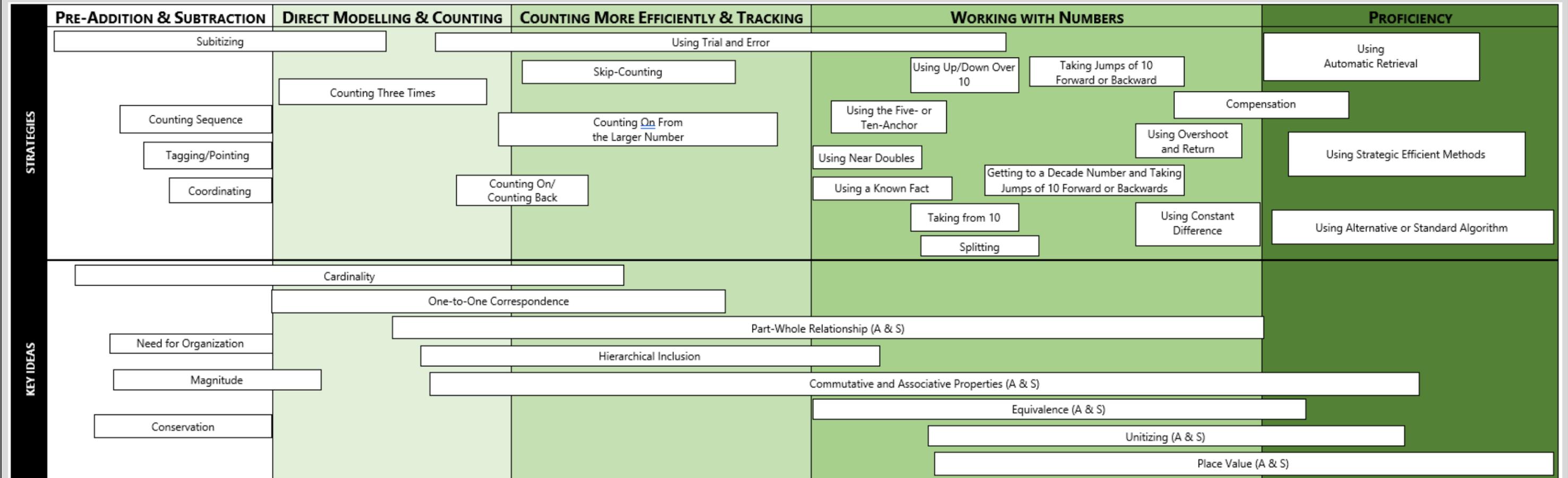
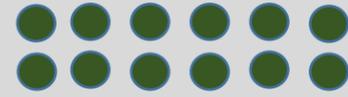
Primary Students:



Junior Students

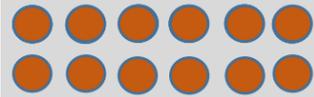


Intermediate Students



	Phase (Number of Students)	%
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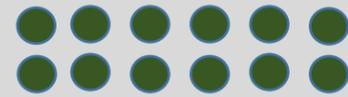
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Junior Students



Intermediate Students



Alex Lawson's What to Look For Continuum of Numeracy Development MULTIPLICATION AND DIVISION

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KEY IDEAS	Cardinality	Unitizing (M & D)			
	Part-Whole Relationship (M & D)				
	Proportional Reasoning				
	Commutative and Associative Properties (M & D)				
	Distributive Property				
	Place Value (M & D)				



FOCUS STUDENT

	Phase (Number of Students)	%
None Used	0	0.0%
Direct Modelling and Counting	0	0.00%
Counting More Efficiently and Tracking	0	0.00%
Working With Numbers	0	0.00%
Proficiency	1	100.00%
Totals:	1	100.00%

Other Quantitative Data:

Qualitative Data

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