



**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:**

Grade 9	2014-15	2015-16	2016-17	2017-2018	2018-2019
Applied	46% 3 yr. avg – 27%	44% 3 yr. avg – 40%	44% 3 yr. avg. – 45%	27% 3 yr. avg. 38%	23% 3 yr. avg- 31%
Academic	72% 3 yr. avg – 71%	88% 3 yr. avg – 75%	72% 3 yr. avg – 77%	56% 3 yr. avg – 72%	59% 3 yr. avg – 63%

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.

Grade	Percentage of Students Unable to Successfully Complete the Pre-Assessment (2 digit multiplication)	Percentage of Students Unable to Successfully Complete the Pre-Assessment (2 digit division)
7	42	35
8	31	39
9	42	46

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*

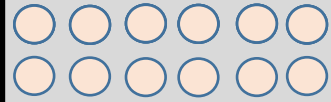
PRE DATA: DUE: October 11, 2019

Monitoring the IF:

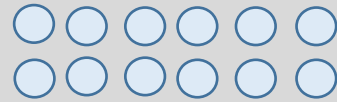
Based on the *co-constructed success criteria* for educator learning. (e.g. criteria for providing effective descriptive feedback). Include pre data for your educators:

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.

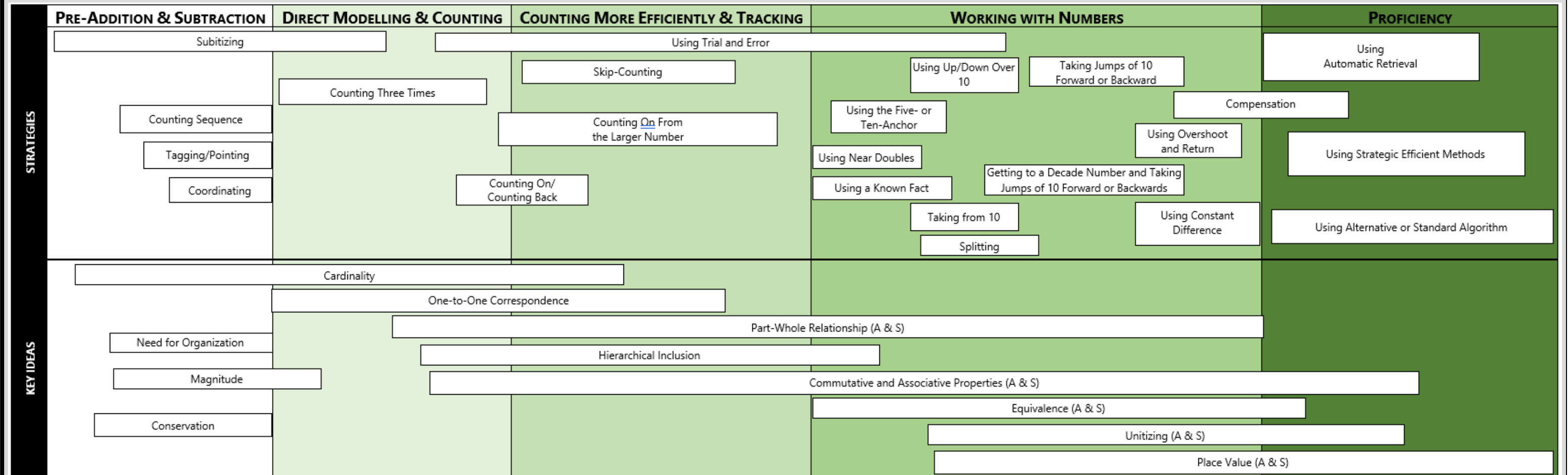
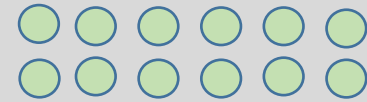
Primary Students:



Junior Students

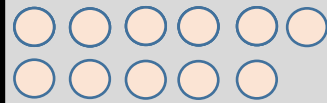


Intermediate Students

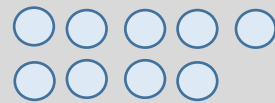


	Phase (Number of Students)	%
None Used	0	0.0%
Pre-Addition and Subtraction	0	0.0%
Direct Modelling and Counting	0	0.00%
Counting More Efficiently and Tracking	0	0.00%
Working With Numbers	0	0.00%
Proficiency	1	100.00%
Totals:	1	100.00%

Primary Students:



Junior Students



Intermediate Students



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



FOCUS STUDENT

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

	Phase (Number of Students)	%
None Used	1	11.1%
Direct Modelling and Counting	2	22.22%
Counting More Efficiently and Tracking	4	44.44%
Working With Numbers	2	22.22%
Proficiency	0	0.00%
Totals:	9	100.00%

**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.**

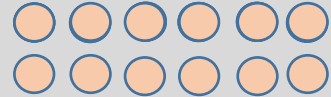
MID CYCLE 1 DATA: DUE: November 29, 2019

**Monitoring the IF:**

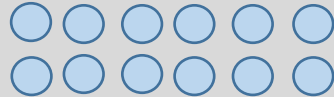
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**Monitoring the THEN** (e.g. student achievement, engagement, wellness): Drag Dots onto the continuum – choose the correct colour based on the division of the child. You can copy more dots if required

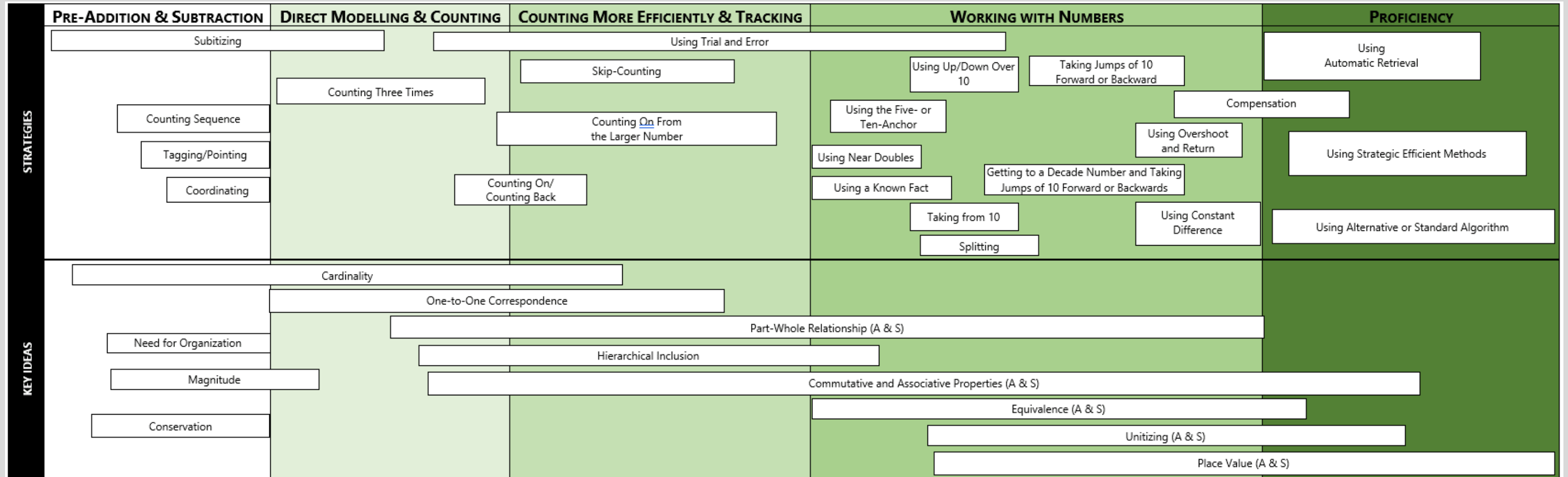
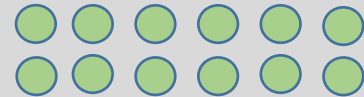
**Primary Students:**



**Junior Students**

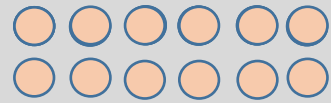


**Intermediate Students**

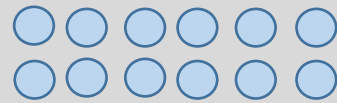


	Phase (Number of Students)	%
None Used	0	0.0%
Pre-Addition and Subtraction	0	0.0%
Direct Modelling and Counting	0	0.00%
Counting More Efficiently and Tracking	0	0.00%
Working With Numbers	0	0.00%
Proficiency	1	100.00%
Totals:	1	100.00%

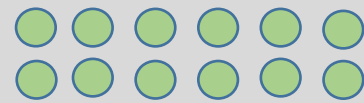
Primary Students:



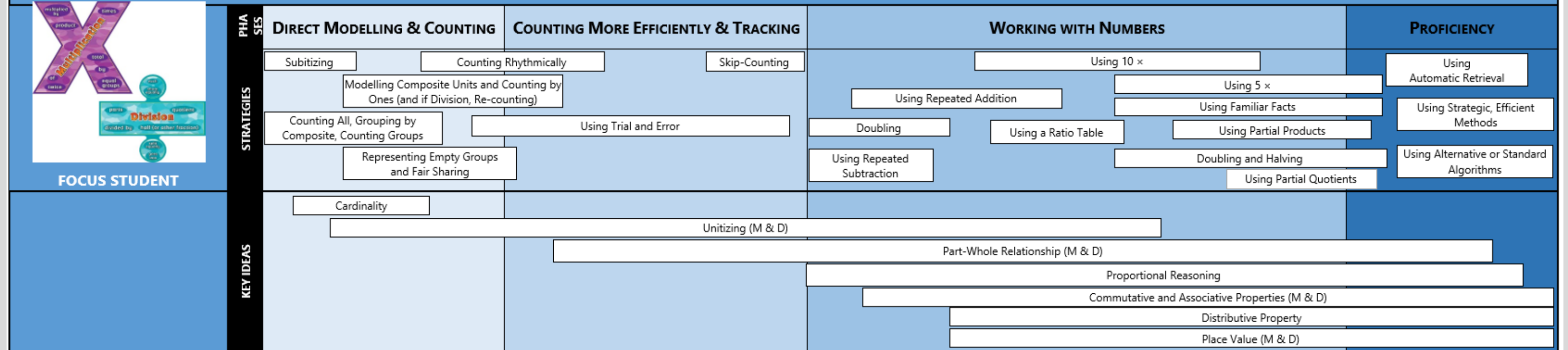
Junior Students



Intermediate Students



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



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**

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

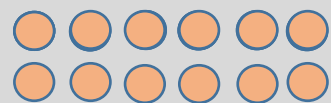
**END CYCLE 1: DATA: DUE: February 15, 2020**

**Monitoring the IF:**

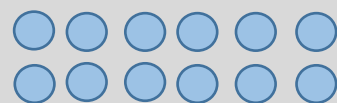
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**Monitoring the THEN (e.g. student achievement, engagement, wellness): Drag Dots onto the continuum – choose the correct colour based on the division of the child. You can copy more dots if required**

**Primary Students:**

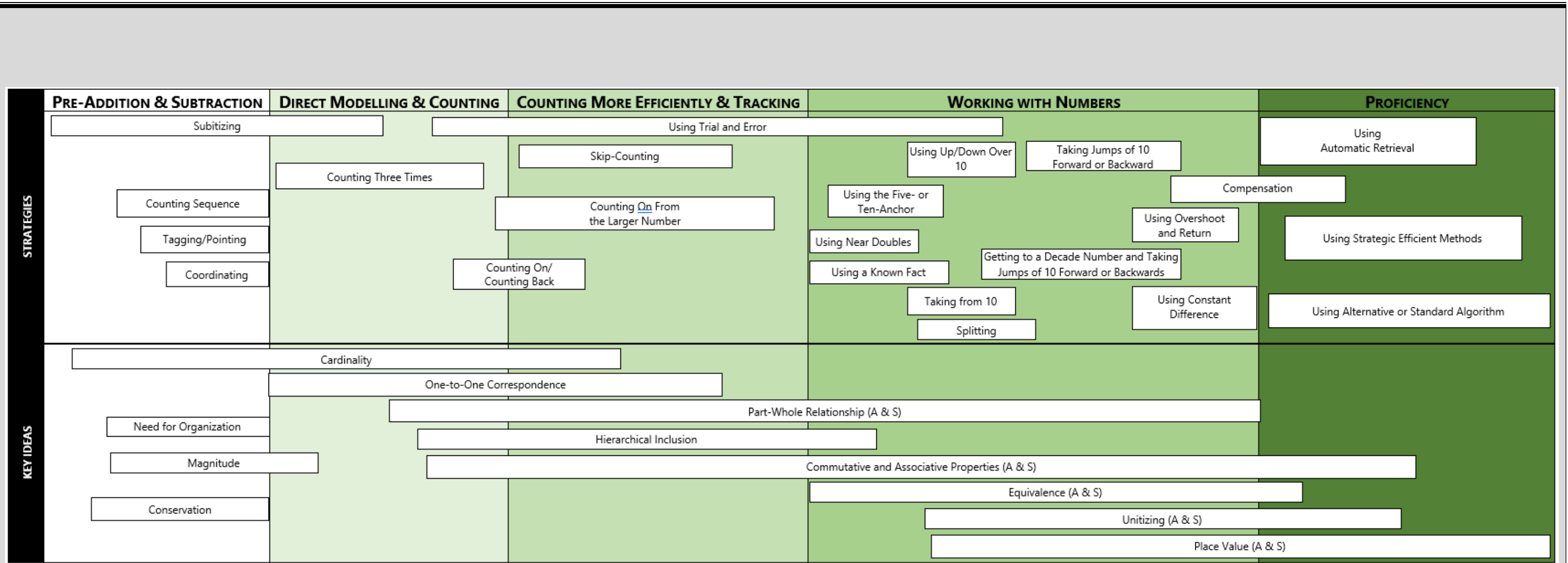


**Junior Students**



**Intermediate Students**

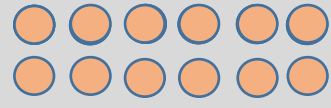




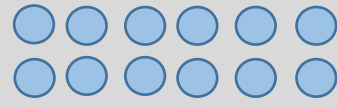
	Phase (Number of Students)	%
None Used	0	0.0%
Pre-Addition and Subtraction	0	0.0%
Direct Modelling and Counting	0	0.00%
Counting More Efficiently and Tracking	0	0.00%
Working With Numbers	0	0.00%
Proficiency	1	100.00%
Totals:	1	100.00%



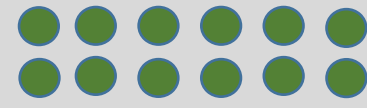
Primary Students:



Junior Students



Intermediate Students



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

<p><b>FOCUS STUDENT</b></p>	<b>PHASES</b>	<b>DIRECT MODELLING &amp; COUNTING</b>	<b>COUNTING MORE EFFICIENTLY &amp; TRACKING</b>	<b>WORKING WITH NUMBERS</b>	<b>PROFICIENCY</b>
	<b>STRATEGIES</b>	Subitizing 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	Skip-Counting Using Trial and Error	Using 10 × Using Repeated Addition Doubling Using Repeated Subtraction Using a Ratio Table Using Partial Products Doubling and Halving Using Partial Quotients	Using Automatic Retrieval Using Strategic, Efficient Methods Using Alternative or Standard Algorithms
<b>KEY IDEAS</b>	Cardinality Unitizing (M & D) Part-Whole Relationship (M & D) Proportional Reasoning Commutative and Associative Properties (M & D) Distributive Property Place Value (M & D)				

	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: 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)**

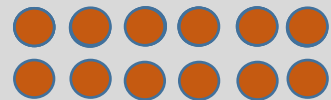
**END CYCLE 2: DATA: DUE: May 29, 2020**

**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:

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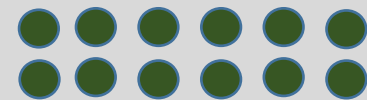
**Primary Students:**

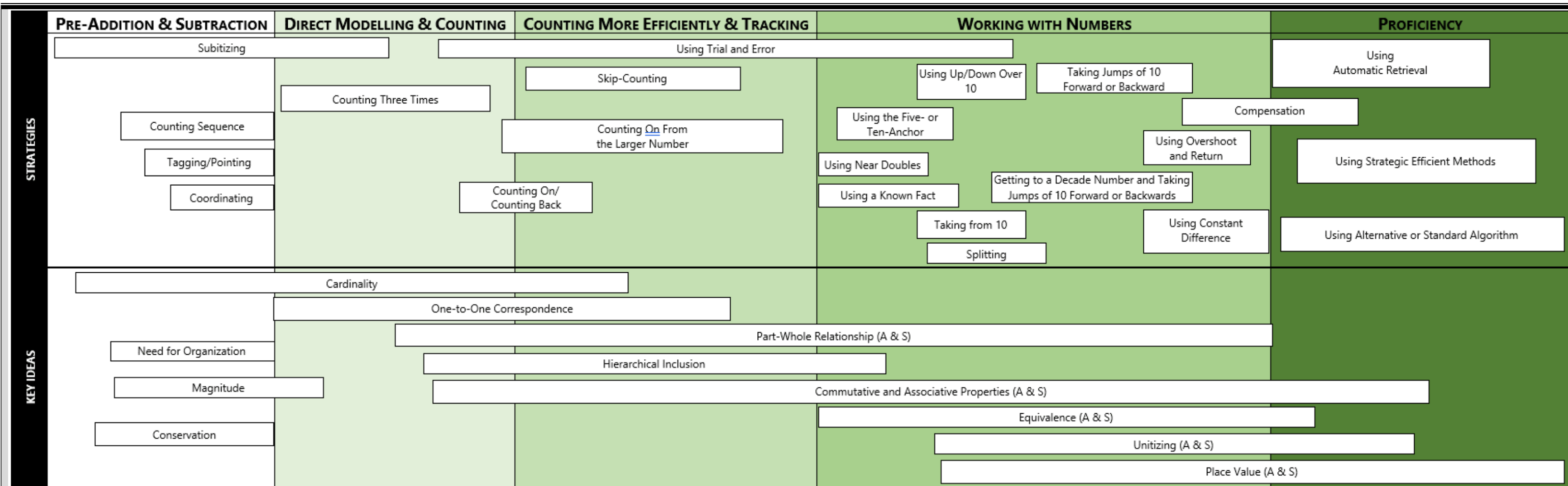


**Junior Students**



**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%

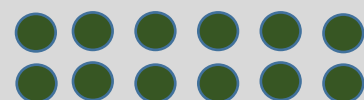
Primary Students:



Junior Students:

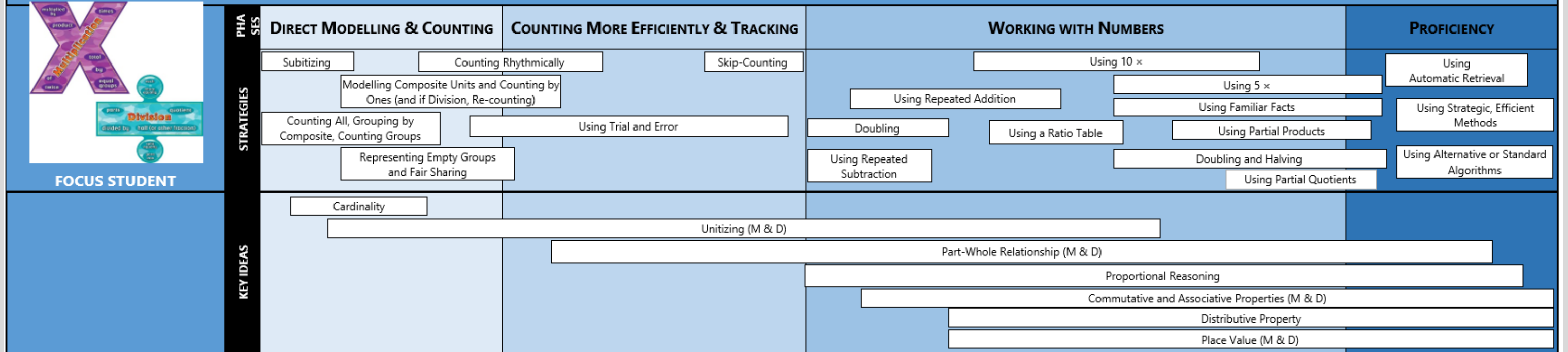


Intermediate Students:



# Alex Lawson's What to Look For Continuum of Numeracy Development

## MULTIPLICATION AND DIVISION



	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**

