



Numeracy Specialist Program

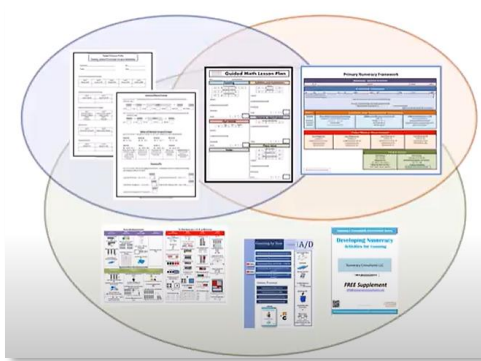
Level 3

Primary Numeracy Intervention

Course #1

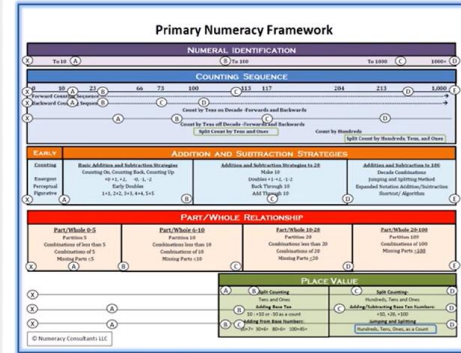
The 3 Pillars of the Program

- Assessment
- Framework
- Instructional Materials
- = Lesson Plan



Framework & Assessment

- Numeral ID on the framework is the same as Assessment.
- Counting by 10's backwards is not on the Assessment, but it is on the Framework.
- Addition and Subtraction is a measure of a strategy on the Assessment. The Framework shows the sequence, development, progression of those strategies.
- The assessment covers missing parts for Part / Whole, the skills above are to help with the development and sequence of instruction.
- Place Value fully matches on the Framework and Assessment
- Though there are skills on the framework that are not on the assessment, the skills are covered with the eLessons and workbooks.

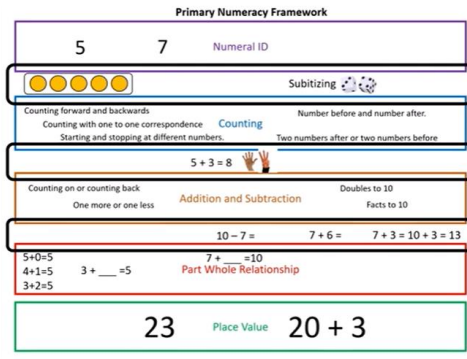




Framework Progression

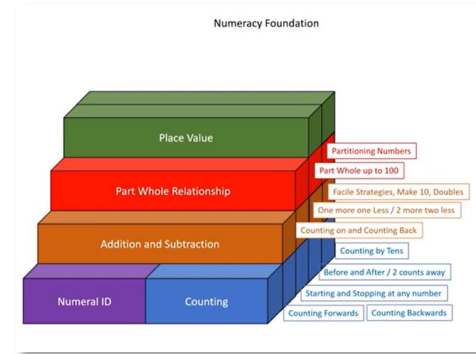
- Every domain of numeracy has overlaps with other domains.
- If a child struggles with a skill in a particular domain, that deficit skill can cause issues in other domains.
- Counting, starting and stopping from different numbers, is a prerequisite skill to adding. (Counting On)
- Part / Whole is just a scaffolded version of addition and subtraction. If a student can add, that does not mean they can do the part / whole version of that problem. Part / Whole is a higher level of understanding.

$6+4=10$ $___ + 4 = 10$ 4



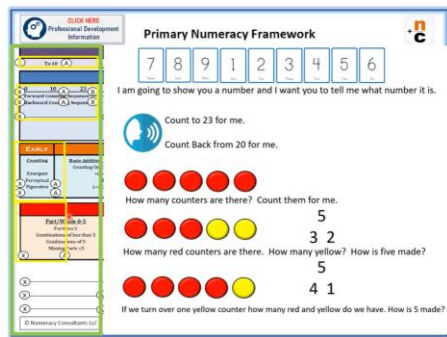
Framework Progression

- Don't look at the Framework as 5 separate areas or as a check box.
- Remember to start at the top, move to a certain point based on student's grade level. Work down to other skills. As those skills get filled in, shift to start back at the top.
- The standards on the Framework are K-3rd grade, but there will be older students that would benefit from Primary Numeracy targeted instruction.
- Teach counting to give depth and strength to numeracy foundation, layering skills on top of each other.



Primary Numeracy Framework

- Working from top to bottom is a really fluid transition.
- Before you get into Addition/Subtraction there is Early Counting. (1 to 1 counting)
- What does instruction look like for a student scoring in the kindergarten range?
- You can do separate Numeral ID. However, it is embedded in counting. (Use # cards)
- Counting Forward to 23 & Backward from 20 (orally)
- Early Counting (1 to 1 & combining sets)
- Part/Whole - Partition 5 (How is 5 made? & combinations < 5)
- Then transition to work on larger numbers in counting, count on...



Real Life Scenarios

- The 3 students identified for intervention have:
 - a limited time for intervention
 - must be grouped together due to scheduling
 - all have different skill sets
- The grouping chart helps determine the level students are at and where to begin instruction.
- You will learn how to sort through complex data systematically, organize the data, plan efficiently and utilize the most effective intervention.

Numeral Identification	Forward Counting	Backward Counting	Counting by Tens	Addition and Subtraction	Part/Whole	Place Value Split
A Nicki	A	A Leah	A Leah Nicki Emerson	A Leah	A Leah Emerson	A Leah Nicki Emerson
B Leah Emerson	B Leah	B Nicki	B	B Nicki	B Nicki	B
C	C Nicki Emerson	C Emerson	C	C Emerson	C	C
D	D	D	D	D	D	D
E	E	E	E	E	E	E

Reality 😞

Add Names to Grouping Chart



Numeral Identification	Forward Counting	Backward Counting	Counting by Tens	Addition and Subtraction	Part/Whole	Place Value
A	A	A	A	A	A	A
B	B	B	B	B	B	B
C	C	C	C	C	C	C
D	D	D	D	D	D	D
E	E	E	E	E	E	E

Numeral Identification	Forward Counting	Backward Counting	Counting by Tens	Addition and Subtraction	Part/ Whole	Place Value Split
A Nicki	A	A Leah	A Leah Nicki Emerson	A Leah	A Leah Emerson	A Leah Nicki X Emerson
B Leah Emerson	B Leah	B Nicki	B	B Nicki	B Nicki	B
C	C Nicki Emerson	C Emerson	C	C Emerson	C	C
D	D	D	D	D	D	D
E	E	E	E	E	E	E

- Leah
- Nicki
- Emerson

Numeral Identification	Forward Counting	Backward Counting	Counting by Tens	Addition and Subtraction	Part/ Whole	Place Value Split
A Nicki	A	A Leah	A Leah Nicki Emerson	A Leah	A Leah Emerson	A Leah Nicki X Emerson
B Leah Emerson	B Leah	B Nicki	B	B Nicki	B Nicki	B
C	C Nicki Emerson	C Emerson	C	C Emerson	C	C
D	D	D	D	D	D	D
E	E	E	E	E	E	E

Grouping Chart



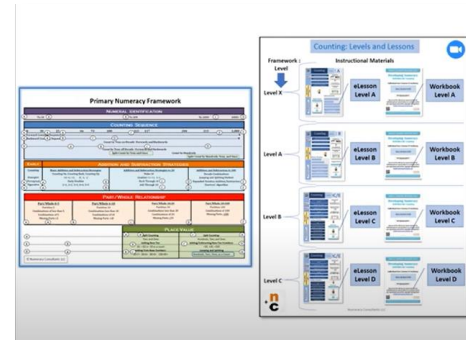
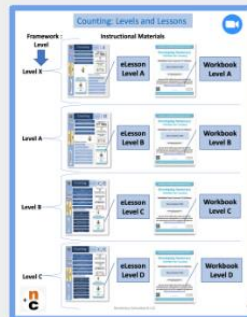
- The grouping chart is set up just like the Framework, but it works LEFT to RIGHT.
- System to follow for ease in grouping includes specific forms and organizational tips.
- Making little small changes within instruction will make your planning easier & less time consuming.
- Since Numeral Identification is ingrained into all the other areas, there aren't any specific lessons or books. However, there are some activities on the Leveled Activities Guide.

Numeral Identification	Forward Counting	Backward Counting	Counting by Tens	Addition and Subtraction	Part/ Whole	Place Value Split
A Nicki	A	A Leah	A Leah Nicki Emerson	A Leah	A Leah Emerson	A Leah Nicki X. Emerson
B Leah Emerson	B Leah	B Nicki	B	B Nicki	B Nicki	B
C	C Nicki Emerson	C Emerson	C	C Emerson	C	C
D	D	D	D	D	D	D
E	E			E	E	

Levels & Materials Map

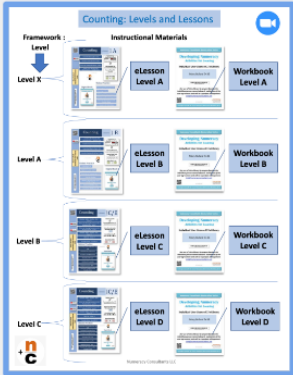


- You will use the Framework alongside the Levels & Materials Map.
- The maps show both the eLesson & workbook level for each level of the 4 different skill sets.
- There is a video containing helpful information linked at the top of each Levels & Materials Map .



Grouping & Instruction Chart

- When adding the student to the chart be sure to place the student on the next level up.
- Use this document to sort the data and then make instructional decisions.
- Post-it notes are the life line to your lessons.



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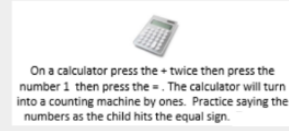
Numeracy Identification	Students	Activity
Level A - Identifies Numbers to 100	Nikki	
Level C - Identifies Numbers to 1,000	Leah, Emerson	
Level D - Identifies Numbers 10,000 to 100,000+		
Counting Forwards	Students	Activity
Level A - Counts to 50		
Level B - Counts to 22		
Level C - Counts to 313	Leah	
Level D - Counts to 213	Nikki, Emerson	
Level E - Counts to 1,000		
Backwards Counting	Students	Activity
Level A - Counts back from 10		
Level B - Counts back from 23	Leah	
Level C - Counts back from 73	Nikki	
Level D - Counts back from 104	Emerson	

Forward Counting
Leah - C up to 115
Emerson/Nikki - D up 215

Backward Counting
Leah - B Back from 23
Nikki - C Back from 73
Emmy - D Back from 104

Leveled Activities Guide - Counting

- Use your post it note with number range for each student during your lesson.
- For calculator counting, the student states each number out loud. Calculator counting allows for differentiated independent practice. Be sure to work on both forward & backward counting.

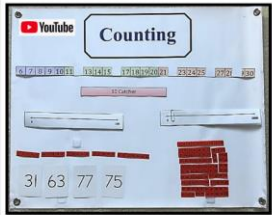


- The "Unlimited Number Line" is located under "More" (top right), "Games" on numeracyconsultants.net
- Caterpillar Ordering/Sequencing can also be found under "Games" on our website.

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DEMOS FOR TEACHERS



Printable Resources

Printable resource page for Level B and Level C activities. The page is divided into two columns: Level B (left) and Level C (right). Each column contains instructions, a 'Materials' list, and 'Activities' to be performed. Level B activities include counting forward and backward, and Level C activities include counting forward and backward from a specific number.



Leveled Workbook

- Print off the page to match level student is working on.



- Remember to specify certain problems to practice backward counting.

Counting by Tens

- Level A is a common result for many students. They need to learn to count by tens off decade.
- On your Grouping & Instruction Chart, remember to place all 3 students at Level B, up a level from assessment score.
- All will be doing the same activity from the Leveled Activities Guide and the same page from the workbook.

Counting by Tens	Students	Activity
Level A: Counts to One Hundred by Tens		
Level B: Counts by Tens off Decade to 66	Nikki, Emerson, Leah	
Level C: Counts by Tens off Decade to 117		
Level D: Counts by Tens off Decade to 208		

Counting by Tens	Students	Activity
Level A: Counts to One Hundred by Tens		
Level B: Counts by Tens off Decade to 66	Nikki, Emerson, Leah	
Level C: Counts by Tens off Decade to 117		
Level D: Counts by Tens off Decade to 208		

** means to begin instruction at the assessed level and do NOT go to the next level until instruction is completed.*

The screenshot displays the 'eLibrary 2.0' interface. At the top, there is a 'Lesson Booster: Lessons for Counting' section with a grid of lesson cards for levels A through E. Below this, a 'Free Supplement' box for 'Numeracy Consultants' is visible, with a blue arrow pointing to it. To the right, there is a 'Supplemental Lessons and Practice Counting by Ones and Tens' section with a 'Main Menu' for 'Counting by Tens Level A, B, C, D, E'. A license purchase box for 'Dane Ziemba Individual License 1356' is also present. A large white banner with the text 'eLibrary 2.0' is overlaid on the top half of the image.



Counting by Tens



Counting by Tens Activities

Activity	Forward Counting	Backward Counting	Counting by Tens	Addition and Subtraction	Part/Whole	Place Value
Leah Nicki	A	A	A	A	A	A
Leah Emerson	B	B	B	B	B	B
Nicki Emerson	C	C	C	C	C	C
Emerson	D	D	D	D	D	D
Emerson	E	E	E	E	E	E



Addition & Subtraction

- Addition and Subtraction will have to be separate and on their own page. In almost all circumstances, you will start with addition.
- Addition and Subtraction is by far the most difficult skill set to differentiate.
- As long as it is temporary and not a continuous habit, it is okay for a student to work on a skill they already know for the “common good” of the group.
- There are still ways to expose students to new instruction even if their level is far ahead of the groups

Numeral Identification	Forward Counting	Backward Counting	Counting by Tens	Addition and Subtraction	Part/Whole	Place Value
A Nicki	A	A	A	A	A	A
B Leah Emerson	B	B	B	B	B	B
C Nicki Emerson	C	C	C	C	C	C
D Emerson	D	D	D	D	D	D
E Emerson	E	E	E	E	E	E

Addition & Subtraction

- The Levels and Materials Map is in the free folder and is a useful tool to help you figure out where to start instruction.
- If a student is a level X or level A you would begin instruction at level A.
- If a student is a level B, you would begin instruction at level B because level B is an incomplete skill.
- Level C is a complete skill (Counting On), and you would instruct at Level D.

What is the difference between Level X and Level A?

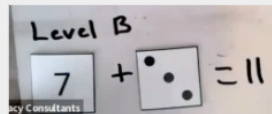
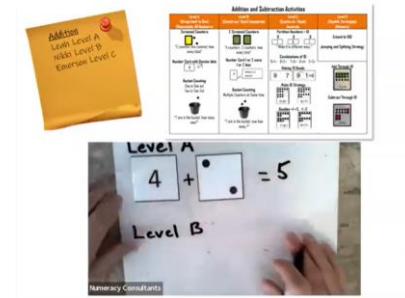
Addition and Subtraction Conceptual Strategies			
Say to the Student: "I am going to ask you to solve some addition and subtraction problems."			
746+13 08 - 02 - 04 F	8+4=12 08 - 02 - 04 F	9+6=15 08 - 02 - 04 F	8+7=15 08 - 02 - 04 F
10-7=3 08 - 02/03 - 04 F	7-4=1 08 - 02/03 - 04 F	15-8=7 08 - 02/03 - 04 F	14-6=8 08 - 02/03 - 04 F
Strips Back to 0: 08 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Counts On: 03 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Counts Back: 02 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Memory: 04 One-Step Addition Two-Step Addition Two-Step Subtraction Memory
Level X Strips Back to 0: 08 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level B Counts On: 03 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level C Counts On: 04 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level D Counts On: 05 One-Step Addition Two-Step Addition Two-Step Subtraction Memory

Addition and Subtraction Strategies			
Level X Strips Back to 0: 08 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level B Counts On: 03 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level C Counts On: 04 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level D Counts On: 05 One-Step Addition Two-Step Addition Two-Step Subtraction Memory

Addition and Subtraction Strategies			
Level X Strips Back to 0: 08 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level B Counts On: 03 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level C Counts On: 04 One-Step Addition Two-Step Addition Two-Step Subtraction Memory	Level D Counts On: 05 One-Step Addition Two-Step Addition Two-Step Subtraction Memory

Addition & Subtraction

- Our focus is going to be on getting Leah & Nikki to Level C. Then we will be able to work with all 3 girls on the same Level D type instructional materials.
- It is really easy to go back and forth between a Level A student and Level B student in the same group.
- Level A means the student is recounting everything and needs to learn to count on.
- Level B means the student can count on, but is not accurate.
- Place the dice card second to help with both counting on & accuracy.



- Place the dice card second to help with both counting on & accuracy.

Addition & Subtraction

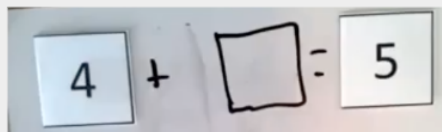
- There is too far of a gap between Emerson and the other 2 girls to start Level D instruction with her.
- You can include Emerson in the group by either giving her additional practice with counting on or by making some minor changes.
- Change the structure of the problem to part/whole when it is Emerson's turn.

Counting by Tens	Students	Activity
Level A: Counts by Tens off Decade to 90		
Level B: Counts by Tens off Decade to 90		
Level C: Counts by Tens off Decade to 100		
Level D: Counts by Tens off Decade to 200		
Addition and Subtraction *		
Level	Students	Activity
Level A: Addition** Counts back to 0 or represents	Leah	
Level B: Subtraction** Counts back to 0 or represents	Nikki	
Level C: Addition** Counts on	Emerson	
Level D: Subtraction** Counts back		
Part/Whole		
Level	Students	Activity
Level A: Non-Accused Strategy for 1		
Level B: Facile Strategy for 5	Emerson, Leah	
Level C: Facile Strategy for 10	Nikki	
Level D: Facile Strategy for 20		
Level E: Non-Accused Strategy to 100		

* means to begin instruction at the assessed level and do NOT go to the next level until instruction is completed.

Addition
Level Level A
Nikki Level B
Emerson Level C

Part/whole
Leah / Emerson Level A
Nikki Level B



- Part/whole is just a scaffolded version of Addition & Subtraction.

Isolated Skill Instruction and Practice

Application of Skill within Context

Word Problem Intervention Level 1

Name: _____

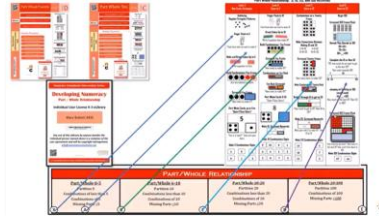
Teacher Set
Jason has 5 pieces of candy. Sam has 3 pieces of candy.
How many pieces of candy do they have altogether?

Teacher Set
Cat saw 4 spiders. Fred saw 4 spiders. How many spiders did they see in all?

Independent Practice
Jim drew 2 pictures. Emma drew 7 pictures. How many pictures did they draw combined?

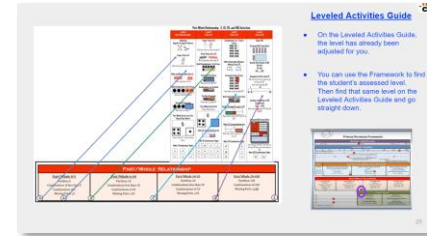
Part/ Whole

- Part/Whole is really an extension of addition and subtraction. You need part/whole to fully understand both.
- You can do part/whole as a scaffold of addition or as a separate skill set.
- Looking for the student to be facile/flexible - no math or calculation involved.
- Level A means the student used a low level of thinking to solve to 5 and was 100% accurate.
- Level "X" means the student used a low level strategy to try to solve to 5, but was not accurate.
- Level "X" & level A will both begin on level B instruction - solve to 5.



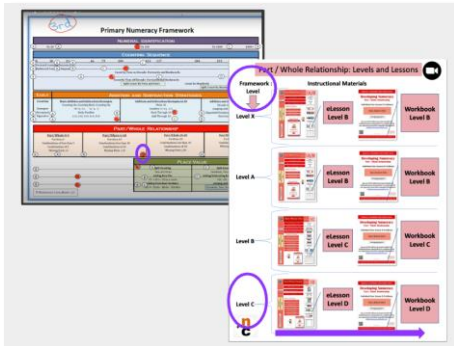
Leveled Activities Guide

- On the Leveled Activities Guide, the level has already been adjusted for you.
- You can use the Framework to find the student's assessed level. Then find that same level on the Leveled Activities Guide and go straight down.



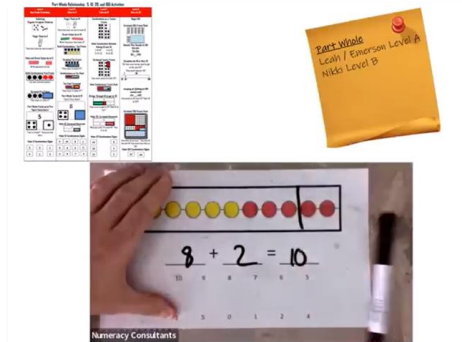
Materials Review

- For the eLessons & Workbook, you do need to adjust the level.
- Use the Framework along with the Levels & Materials Map to determine the instructional materials.



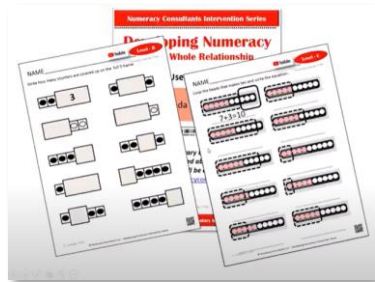
Part Whole

- Transfer instructional level of each student to the grouping document.
- Don't forget about your post-it note to help with differentiation.
- Be sure to organize all of your materials ahead of time.
- New document takes the place of a ten rack and is very efficient.
- After a few days, add the scaffold to present things in a different way and to develop depth within the skill.



Part Whole

- For the practice book, print off a page to match the level the student is working on.
- Quick and easy way to differentiate for the levels of your students.
- You never want to do more than one or two pages a day.

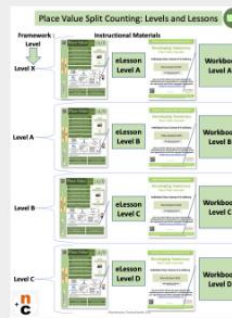


Level - C

- YouTube videos for student review located throughout the workbook.

Place Value

- There are 3 components to Place Value: Split Counting, Adding Base Ten & Adding From a Base Ten.



- We are going to focus on Split Counting.
- Transfer data to the Grouping & Instruction Chart being sure to go up a level & create your sticky note.

Place Value: Split Counting	Students	Activity
Level A: Split counts by ones and tens with visuals	Emerson	
Level B: Split counts by ones and tens without visuals	Nicki, Leah	
Level C: Split counts, ones, tens, hundreds with visuals		
Level D: Split counts, ones, tens, hundreds, without visual		
Place Value: Adding Base Ten	Students	Activity
Level A: Non-fact strategies		
Level B: 10 more 10 less		
Level C: 20 more 20 less		
Level D: 100 more 100 less		
Place Value: Adding from Base Ten	Students	Activity
Level A: Add from a ten (Doubles)		
Level C: Add from a decade (Fact)		
Level D: Add from a hundred		

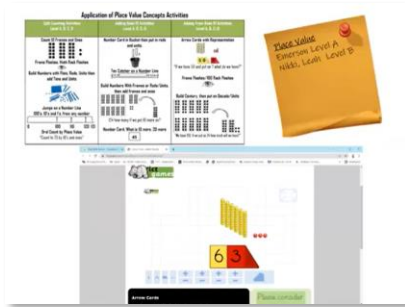


* means to begin instruction of the assessed level and do NOT go to the next level until instruction is completed.

Place Value

- We will use our website (numeracyconsultants.net) for a differentiated digital lesson.
- Click on "More", then "Games"
- These activities are meant to be teacher led or teacher monitored.
- We will use "Arrow Cards" for a teacher led lesson.
- Level A - Count by tens and ones with visuals
- Level B - Count by tens & ones orally - no visuals
- Use "Arrow Cards" for prompting & asking questions.

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Review of Scenario

- We were able to pretty easily differentiate throughout this entire very realistic scenario.
- For addition, we had to choose between having Emerson review for the "good of the group" or scaffold to include Part/Whole instruction for her during the same lesson.
- We want to try and minimize the teaching of a remedial skill a student already knows.
- To begin with, transfer assessment data from each student's Framework to the Grouping Chart in order to centralize the data for multiple students.
- Then, in most cases, bump up a level when placing on Grouping & Instruction Chart.
(Addition/Subtraction ⓧ)

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