

Student Teacher/Intern: Giselle Swann		Date: 3/20/2023
Check one: <input type="checkbox"/> 1 st Placement <input type="checkbox"/> 2 nd Placement		Formal Observation # 1-4:
Unit Title: Multiplication is just repeated addition		Age/Grade Level: 2nd Grade
Lesson Title: What is an Array?		Order in Learning Segment:
Total # of Students: 20	# IEP Students: 2	# ELL Students: 2

LESSON PLAN THINKING/REFLECTION PROMPTS

PREPARATION				
<p>Context of the Lesson: <i>How does this lesson fit into the unit and knowledge/skill progression?</i></p> <ul style="list-style-type: none"> Students will have prior knowledge of repeated addition and working in small groups as we continue to discuss using repeated addition as a strategy for multiplication. This classroom has a total of 20 students, 11 girls and 9 boys. There is one student with mild intellectual disability who needs clear and detailed directions using visuals and oral formats. One student with ADHD requires redirection, shorter assignments, and preferential seating. A special education teacher pulls into the classroom for the math and ELA sections to support the students with IEP's, both students are male. There are two female ELL students that require visual aids, pre-teaching of vocabulary and access to multi language visual glossaries. By the end of the lessons students will be able to use repeated addition as a strategy to multiply two single digits. Students will understand how to find the total number of objects arranged in a rectangular array. Students will write an equation to express the total as a sum of equal addends. 				
<p>Standards to Address:</p> <ul style="list-style-type: none"> 2.OA: Work with equal groups of objects to gain foundations for multiplication 2.OA.4: Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends. 				
<p>Academic Language and Language Demands: <i>What academic language and/or language demands (i.e., symbols, discourse, functional, contextual, procedural, etc.) will need to be part of the lesson focus?</i></p> <ul style="list-style-type: none"> Function: Write, understand, apply, and explain Vocabulary: array, digit, strategy, multiplication, repeated addition, equation, rows, columns Discourse: Discuss, collaborate Syntax: Visual representation, symbols (+, =, x) 				
<p>Assessment Plan: <i>How will you assess that students have met the standards? What formative and summative assessments will you use to monitor student learning? What criteria will you use to judge progress/mastery?</i></p>				
Objectives <i>What do you want the students to know or be able to do by the end of the lesson? (Notate the related CCSS standard.)</i>	Type of Assessment <i>Is this formative or summative?</i>	Description of Assessment Task/Type <i>How will students demonstrate progress toward mastery of the objectives?</i>	Depth of Knowledge or Bloom's Taxonomy	Adaptations/ Accommodations to Assessment for ELLs/SWDs
1. Students will be able to demonstrate an understanding of repeated addition and what a rectangular array is. (CCSS: 2.OA)	Formative	Students will write and answer questions posed by the teacher on the smartboard.	Understand	IEP - seated close to the teacher and the smartboard
2. Students will collaborate in small groups to demonstrate an understanding of an array. (CCSS: 2.OA)	Formative	Card game with small blocks, the card will have how many rows and columns they need to show using the blocks. Write an equation. Collaborate with your group.	Remember Understand Create	ELL - working in small collaborative groups to help with vocabulary and language. Visual vocabulary cards will be provided

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<p>3. Students will be able to record and draw answers independently with 80% accuracy (CCSS: 2.OA.4)</p>	<p>Summative</p>	<p>Multiplication/array worksheet</p>	<p>Apply Evaluate</p>	<p>IEP - worksheets will have some answers filled to help with remembrance.</p>
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Materials/Resources/Media Technology Needed:

- Book: A Walk in New York
- Smartboard
- Cards and Blocks
- Multiplication Worksheet

INSTRUCTION AND ASSESSMENT

Minutes	INTRODUCTION	Accommodations
20 min	<p>Anticipatory Set – <i>How do you... capture students' interest? activate prior knowledge? Introduce topic and learning objectives? make it relevant to students?</i></p> <ul style="list-style-type: none"> ● The teacher will introduce the concept of multiplication is just repeated addition by reading the story A Walk in New York. ● The teacher will ask the students if they ever visited New York City and discuss the skyscrapers, how tall and large they are. ● The teacher will ask if anyone ever noticed that skyscrapers have rows and columns of windows and show a picture of a skyscraper on the smartboard. ● The teacher will introduce the concept of an array which describes the number of rows and columns. ● The teacher will explain that using an array helps us count things in an organized way. ● Have the students chant “an array helps us count things in an organized way” ● The teacher will use the students prior knowledge of repeated addition to connect multiplication and explain that multiplication is another way to add equal groups. ● Students will describe and discuss the characteristics of an array with examples that the teacher writes on the smartboard 	<p><i>Individualized attention-getting strategies to promote interest</i></p> <ul style="list-style-type: none"> ● IEP - seated close to teacher and pause to ask if they understand or have questions
Minutes	LESSON DEVELOPMENT	Accommodations
6 min	<p>Step-by-Step Input, Checks for Understanding, and Modeling (“I do”) – <i>Essential instruction to meet the objectives; What strategies do you use to teach the lesson? How do you teach the necessary academic language and language demands?</i></p> <ul style="list-style-type: none"> ● The teacher will write down the word array and use academic vocabulary to define and describe the characteristics. (what is a row and column) ● The teacher will illustrate 3 rows and 5 columns, and write the repeated addition equations for what was drawn as well as the multiplication equations. ● The teacher will continue with 2 or 3 more examples on the smartboard with students answering the number or rows and columns and which equation they used and why. The teacher will be able to evaluate if students are continuing with repeated addition or using multiplication. <ol style="list-style-type: none"> 2 rows or 4, draw triangles, how many equations can we write? 4 rows of 5, draw smiley faces, how many equations can we write? ● The teacher will ask the students if they have any questions before moving forward to playing a small group game. 	<p><i>Multiple means of input representation</i></p> <ul style="list-style-type: none"> ● ELL - provide a visual vocabulary card for definitions of array, row, column, repeated addition ● IEP - seated close to the teacher and smartboard. Provide visual vocabulary card, pause for understanding
Minutes	GUIDED PRACTICE	Accommodations
20 min	<p>Activities (“We do”) – <i>What research-based activities do you provide students to practice what they have learned? How do you monitor student use of the academic language and language demands? Do they work in groups or individually? How do you scaffold the practice? How do you provide feedback? Will success on guided practice activities lead toward success on the independent practice?</i></p> <ul style="list-style-type: none"> ● The students will be placed into groups of 3 or 4 	<p><i>Differentiation of activities and formative assessments</i></p> <ul style="list-style-type: none"> ● ELL - small collaborative groups

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	<ul style="list-style-type: none"> • The teacher will hand them a box of blocks and a 5 cards that states a number or rows and a number of column on it, the students will demonstrate what is on the card with the blocks • Students will work collaboratively to make sure that they have demonstrated that the blocks match the card • All students must record an equation in their math journals after they have completed the blocks • Groups will repeat this activity until all 5 cards have been demonstrated and they have 5 written equations in their math journals. • The teacher will make the rounds to see how the students are progressing, how they are discussing, and if they are writing the equations in their math journals. • Once all of the students are complete with the group activity the teacher will ask two students per table to clean up the cards and clean up the blocks and place them on the teachers desk 	<ul style="list-style-type: none"> • IEP - the choice to work independently or with a group
Minutes	INDEPENDENT PRACTICE	Accommodations
10 min	<p>Assignments (“You do”) – <i>What assignment(s) do you use in class to check independent progress/mastery of objectives? How do you monitor student use of the academic language and language demands? How will you provide feedback on these assignments?</i></p> <ul style="list-style-type: none"> • The teacher will hand out a multiplication worksheet on arrays • Students will work independently and hand in the worksheet on the teachers desk once completed • As the students are completing the worksheet the teacher will walk around the room to check on their progress and provide positive feedback and encouragement 	<p><i>Differentiation of summative assessments</i></p> <ul style="list-style-type: none"> • IEP - receive a partially filled worksheet
Minutes	CLOSURE	
3 min	<p>Summary and Connection – <i>How do you end the lesson to reinforce learning objectives? How do you connect this lesson to the next lesson?</i></p> <ul style="list-style-type: none"> • The teacher will ask the students to describe the characteristics of an array • The teacher will ask the students if using multiplication to figure out how many in all was an easier strategy than using repeated addition, why or why not? • The teacher will explain that the students will be able to use graph paper in the next lesson to color in an array that represents an equation. 	
Minutes	FURTHER INDEPENDENT PRACTICE AT HOME	Accommodations
1 min	<p>Homework (“You do”) – <i>Describe the homework assignment and how you introduce it to the class. What are the... purpose and goals of the assignment? format? skill level required? possible opportunities for confusion?</i></p> <ul style="list-style-type: none"> • The teacher will give a multiplication worksheet for homework to continue the skills that were taught in the lesson. • The teacher will state that if any questions are confusing to mark it with a question mark and we can go over them in class the following day. 	<p><i>Differentiation of homework tasks or support materials for students or family to accompany tasks</i></p> <ul style="list-style-type: none"> • IEP - receive a partially filled worksheet with stapled vocabulary card to homework • ELL - stapled vocabulary card to homework

VIDEO LINK: <https://youtu.be/COGnKd BbPo>

Name _____

Multiplication Repeated Addition with Arrays  ①

Directions: Write a repeated addition and multiplication sentence to match the model. (Example - $4 + 4 + 4 = 12$ and $3 \times 4 = 12$)

<p>1. </p> <p>$_ + _ + _ = _$ $_ \times _ = _$</p>	<p>2. </p> <p>$_ + _ + _ = _$ $_ \times _ = _$</p>
<p>3. </p> <p>$_ + _ = _$ $_ \times _ = _$</p>	<p>4. </p> <p>$_ + _ + _ = _$ $_ \times _ = _$</p>
<p>5. </p> <p>$_ + _ + _ + _ = _$ $_ \times _ = _$</p>	<p>6. </p> <p>$_ + _ + _ + _ + _ = _$ $_ \times _ = _$</p>

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In class worksheet:

Name _____

Multiplication Repeated Addition Matching with Arrays  ①

Directions: Match the array model with the correct repeated addition and multiplication sentence. Fill in the answer to each problem.

		
$2 + 2 + 2 + 2 + 2 = _$ $5 \times 2 = _$	$3 + 3 = _$ $2 \times 3 = _$	$6 + 6 + 6 + 6 + 6 = _$ $5 \times 6 = _$
		
$1 + 1 + 1 + 1 = _$ $4 \times 1 = _$	$5 + 5 + 5 + 5 + 5 = _$ $6 \times 5 = _$	$4 + 4 + 4 = _$ $3 \times 4 = _$

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Homework worksheet: