

Multiplication and Division – A Co-Teaching Lesson Plan

Co-Teaching Approaches

A “(Y)” in front of the following list items indicates the approach is outlined in the lesson. An “(N)” in front of the following list items indicates the approach is not outlined in the lesson.

- (Y) Parallel Teaching
- (Y) Team Teaching
- (Y) Station Teaching
- (N) One Teach/One Observe
- (N) Alternative Teaching
- (N) One Teach/One Assist

Subject

Grade 3 Mathematics

Strand

Computation and Estimation

Topic

Multiplication and division facts with factors of 0, 1, 2, 5, and 10.

SOL

3.4 The student will

- a) represent multiplication and division through 10×10 , using a variety of approaches and models;
- b) create and solve single-step practical problems that involve multiplication and division through 10×10 ;
- c) demonstrate fluency with multiplication facts of 0, 1, 2, 5, and 10; and
- d) solve single-step practical problems involving multiplication of whole numbers, where one factor is 99 or less and the second factor is 5 or less.

Outcomes

The students will be able to recall multiplication and division with factors of 0, 1, 2, 5, and 10.

Materials

- Index cards with the basic multiplication and division facts for factors of 0, 1, 2, 5, and 10 written on them.
- Dry-erase materials (boards, markers, and erasers)

Vocabulary

array, divide, dividend, divisor, fact family, multiply, number sense, numeral, product, quotient

Co-Teacher Actions

Lesson Component	Co-Teaching Approach(es)	General Educator (GE)	Special Educator (SE)
Anticipatory Set	Team Teaching	<p>Explain that the class is going to play a game of baseball, but rather than using a bat and a ball, students are going to use multiplication and division facts. An incorrect answer will be an out. Randomly divide the class into two groups, and then split those two groups into two teams. Try to have the same number of students on each team. If there are remaining students, designate one to be the home plate umpire, one or two to be the scorekeeper(s)—one to keep the actual score and to keep track of outs and innings, and the other to be the commissioner. Label home plate, first, second, and third bases, and the pitcher’s mound for each group. The umpire will be armed with a calculator. (This could also be a teacher.) Toss a coin to determine who bats first.</p>	<p>Assist in guiding the discussion and forming groups.</p> <p>Monitor and assist students as needed.</p>
Lesson Activities/ Procedures	Parallel Teaching	<p>Give the pitcher the set of index cards with the multiplication and division facts on them. The first batter goes to the plate, and the pitcher orally “tosses” a fact to the batter. The batter responds. The umpire determines whether the response is correct. If the answer is correct, the umpire calls, “Hit,” and the batter proceeds to first base. If the response is incorrect, the umpire calls, “Out” and the next batter comes to the plate.</p>	<p>The SE will be running a group following the same procedures detailed for the GE.</p> <p>Both teachers are formatively assessing students who will need further guided practice.</p>

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		<p>(Note: Record hits and outs for all students as they come to bat, including the mathematical fact. Watch for common mistakes and correct errors.)</p> <p>Play continues until three outs have been accumulated. At that point, the teams trade places.</p> <p>Play continues until nine innings have been played. The team with the most runs at the end of nine innings wins. In case of a tie, the game can be extended into extra innings.</p>	
Guided/Independent Practice	Station Teaching	<p>Independent Practice Group</p> <p>Students will work independently to create a multiplication/division fact family story problem. Once the teacher has checked that the story problem is accurate, they may illustrate the problem.</p>	<p>Guided Practice Group</p> <p>Students will work with a teacher to make arrays for commonly missed multiplication facts during the baseball game. They will then practice making multiplication fact families. If students have mastered the facts they were not getting correct, they can move to independent practice.</p>
Closure	Team Teaching	Assists SE with discussion.	Debrief the baseball game activity with the students to talk about strategies for improving their “play,” just like a real baseball player might analyze his or her own strengths and weaknesses to improve.
Formative Assessment Strategies	Team Teaching	<p>GE and SE share notes from the baseball game.</p> <p>As an exit ticket, the class will use their mathematics journals to create one</p>	SE and GE discuss observations from station teaching.

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		multiplication fact family and one division fact family.	
Homework	Team Teaching	<ul style="list-style-type: none"> Give students a multiplication problem to illustrate with an array. Then students should write the related fact family for the same multiplication expression. 	Same as GE.

Specially Designed Instruction

- Use multi-sensory strategies and manipulatives to assist in the conceptual understanding of the meaning of multiplication.
- Color-code multiplication facts to assist with recognizing patterns and related facts.

Accommodations

- Multiplication chart or other mathematics aids for students with memory difficulties.
- Vocabulary flash cards for words such as numeral, fact family, number sense, array, multiply, product, divide, dividend, divisor, and quotient.
- Groups should be small to assist students who have difficulty participating in large-group activities.
- For students who have a hard time with games where one side wins, ask those students to help “pitch.”
- Posters of mathematics vocabulary words are posted in the room for students to reference.

Modifications

- For those students who need a modified curriculum, addition or subtraction facts could be used.

Notes

- “Special educator” as noted in this lesson plan might be an ELL teacher, speech pathologist, or other specialist co-teaching with a general educator.