Life Changing Education®

STANDARDS

MGSE4.NBT.5 MULTIPLY A WHOLE NUMBER OF UP TO FOUR DIGITS BY A ONE-DIGIT WHOLE NUMBER, AND MULTIPLY TWO TWO-DIGIT NUMBERS, USING STRATEGIES BASED ON PLACE VALUE AND THE PROPERTIES OF OPERATIONS. ILLUSTRATE AND EXPLAIN THE CALCULATION BY USING EQUATIONS, RECTANGULAR ARRAYS, AND/OR AREA MODELS.

MGSE4.NBT.2 READ AND WRITE MULTI DIGIT WHOLE NUMBERS USING BASE TEN NUMERALS, NUMBER NAMES, AND EXPANDED FORM. COMPARE TWO MULTI-DIGIT NUMBERS BASED ON MEANINGS OF THE DIGITS IN EACH PLACE, USING >, =, AND < SYMBOLS TO RECORD THE RESULTS OF COMPARISONS.

VOCABULARY

multiply, whole numbers, four digits, one-digit, place value, properties of operations, illustrate, explain, equations, rectangular arrays, area models, base-ten numerals, number names, expanded form, compare

MATERIALS

Cones, Speed Cone movement cards, polyhedral dice, blank Speed Cone cards, multiplication charts, manipulatives, dry erase markers

ESSENTIAL QUESTIONS

Speed Cones

Instruction:

1. During your whole group instruction, use this game as your hook to teach this standard as well as a station for your math centers.
2. Begin by setting up 5 cones in a row 8 to 10 feet away from you. Place 5 animal movement cards on the cone. Tell students the pictures will represent how you move once you solve a given multiplication problem. Pick out 5 pictures to set out on the cones.
3. Now place the blank sets of Speed Cone Cards, red and blue dry erase markers, and polyhedral dice an equal distance away from the cones. Tell students that these are the materials that will be used to play the game.
4. Now put students into two teams. Have one group be team blue (dry erase markers represent which team they are on) and the other group be team red. When demonstrating pick 4 students to play.
5. To play each team needs to pick a Blank Speed Cone card out of the pile of game cards (or give each team 5 cards each). The students then need to create a problem by using the polyhedral dice. One team will roll 2 to 4 dice and the other team will roll 1 or 2 dice. These numbers will be used to create a multiplication problem.
6. For example, the blue team rolled, 3, 4, and 7, for 347 and the blue team rolled 7. Each team will then need to solve 347 x 7 on their blank speed cone card.

How can I multiply whole numbers up to four digits by a one-digit whole number?

ESSENTIAL QUESTIONS CONT'D

How can I multiply two two-digit numbers?
How can I compare multi-digit numbers using >, <, and = symbols?

I CAN STATEMENTS

I can multiply whole numbers up to four digits by a one-digit whole number.
I can multiply two two-digit numbers.
I can compare multi-digit numbers using >, <, and = symbols.

DIFFERENTIATION

Students can work with partners to solve equations as they compete against the other team. Allow students to utilize calculators and multiplication charts to avoid frustration.

EDUSCIZE IT YOUR WAY™

Pick any standard and use the game cards to make your own game. Be creative, let your pedagogy shine! You are a Rockstar! Imagine the possibilities you could modify Speed Cones with other Math Content. Make it work for YOU so you can meet your student's needs! Could you use the blue and red game card numbers to represent tens and ones? How else could you use the game to teach other content?

LET THE KIDS PLAY! STEM THAT EDUSCIZE GAME™

Let students come up with their own rules and variations of how to play the game. Have your students write, draw, or state new rules to the game Speed Cones. Can they use the cones in different variations? Could they design their own animal movement cards? Could they create exercise cards instead? Could they find a new way to learn other standards?

7. Once a team answers the problem, one teammate must move like one of the picture cards to the cone. They will place the speed cone card in front of the cone then grab the animal card. This will represent a point. If both teams solve the problem and get an animal card that is ok, students will check each other's work to help determine the final winner.
8. After solving the first problem the teams then need to roll the dice again to create a new problem.
9. Students continue to play speed cones until one team has the most cards from the cones. The winner must have 3 or more to win the game.
10. Students will then check each other's work to determine the winning team. The winning team must have all answers correct to earn a point for that round.
11. After a team wins, students will pick out 5 new movement cards to add to the top of the cones and will continue to play the game again.
12. To practice the game, continue to use it in whole group/small group instruction until students are ready to play independently.

NBT.2 Version

1. As an extension or review of NBT.2 have students take the speed cone answer cards after playing a round and have students compare 2 of the cards and determine if it is >, <, or = to another speed cone game card.