ARTS + ACADEMIC EXTENSIONS

GRADES 1-2: MATH/MUSIC

Singing is Commutative (and Associative!)

Having trouble remembering the Commutative and Associative Properties of Math? Sing away those troubles! Our Artist has created a fun song to reinforce both of them. Just sing the steps that the students will take to solve the math problems.

CONNECTED OBJECTIVE: Addition Properties are explained and reinforced through song lyrics.

MATERIALS NEEDED DURING EPISODE: paper, pencil

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Standards:

CCSS.MATH.CONTENT.1.OA.B.3: Apply properties of operations as strategies to add and subtract. Examples:

- If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.)
- To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)

MU:Cr1.1.1.a. With limited guidance, create musical ideas (such as answering a musical question) for a specific purpose. MU:Cr3.1.1.a. With limited guidance, discuss and apply personal, peer, and teacher feedback to refine personal musical ideas.

ARTS EXTENSIONS:

Have a "Counts to Ten" singalong and dance party as a class to remember combinations that make 10. The full song in the episode occurs at minute 29:35.

Find 10 of something in your house (legos, crayons, pretzels) Make all the combinations that you can think of that make ten and write them as addition problems. Draw a line connecting the problems that show the commutative property.

ACADEMIC EXTENSIONS:

Teachers can make up their own word problems to match to practice the associative property.

- Jake went to the store to buy fruit. He bought 7 oranges, 3 apples, and 4 pineapples. How many pieces of fruit did he buy in all?
- Fred went to the flower shop. He bought 5 roses, 6 tulips, and 5 daisies. How many flowers did he buy in all?
- De'Asia wanted to play with some balloons she found in the house. She grabbed 9 red balloons, 1 yellow balloon, and 5 blue balloons. How many balloons does she have altogether? Can you draw it?

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Reflection questions:
- How many addends do we need for the associative property? If I switch the two addends, is the sum the same?
- How many addends do we need for the commutative property? If I switch the addends around, is the sum the same?
- When we use the associative property, what's the trick that we have to do first? And then what do we do next?
- We added numbers in different orders. When we did this, did we get the same amount? Is this always true?
- How would you organize your drawings to show the three different amounts? How did you show that you used the "make ten" strategy in your drawing?

HELPFUL LINKS:
Mini-Lesson: https://www.youtube.com/watch?v=HB6_uXIEZ1g
Number pairs to 10 song: https://www.youtube.com/watch?v=ch7KzI3n2Zk