

Creative Dance Lesson Plan on 2-Digit Addition with Regrouping

Grade: 2nd

Length: 45 minutes

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Student Learning Outcome: The students will demonstrate an understanding of 2-digit addition and how numbers are divided into ones, tens, and hundreds, by creating representative shapes and movement.

Equipment Needed: Hand Drum; CD player; CD with creative dance music; Poster to write math facts on, as needed; pictures of dancers making number shapes; The Human Alphabet by Pilobolus (optional).

Utah Core – Mathematics

Standard 1: Students will acquire number sense with whole numbers and fractions and perform operations with whole numbers.

Objective 3: Estimate, model, illustrate, describe, and solve problems involving two- and three-digit addition and subtraction.

- a. Model addition and subtraction of two- and three-digit whole numbers (sums and minuends to 1000) in a variety of ways.
- b. Write a story problem that relates to a given addition or subtraction equation, and write a number sentence to solve a story problem that is related to the environment.

Behavioral Expectations: (3 minutes)

We have two rules for class today:

1. Always keep space around yourself. Never touch anyone else, the walls, or the steps unless I ask you to.
2. When the music or the drumming stops, you must freeze!

Let's practice. When the music starts, slide around the room, but when it stops you must freeze! Don't move even one eyelash!

Experience/Identify: (15 minutes)

Straight, Bent, and Curved shapes

Introduce three dance vocabulary words to students about shapes: straight, bent, and curved. Practice each shape with students. Challenge them to make new shapes: Make a straight shape in a low level. Make a curved shape with three curves. Make a bent shape in a low level. Make a curved shape with your head lower than your feet. Make a bent shape where three bodies parts are touching the ground. Make a straight shape where only one body part touches the ground.

Ones, Tens, and Hundreds Shapes:

Randomly choose three students (by birthday in a certain month, color they are wearing, likes to eat spinach, what they ate for breakfast, etc.) and ask them to make a curved shape. Have entire class mimic each shape one at a time, then assign a number amount to each shape, either ones, tens, or hundreds. When I turn on the music, move in curved shapes throughout the space. Create new curved shapes. Change the shape you are moving in. When the music stops, freeze in one of our three numbers shapes. When everyone freezes, practice adding the shapes together. Do this on a poster or the board as well as orally.

Curved, Bent, and Straight Lands

Divide the room into three sections: Curved, Bent, and Straight. If possible, label each area with posters. When I turn on the music, begin to move. If you are in curved land, you may only move in curvy ways. If you are in bent land, you may only move in bent ways. If you are in straight land, you can only move in straight ways. However, you can change the land you are in whenever you want to. When you move from one land to another, you must change the way that you are moving. When the music stops, everyone freeze. Assign a number value to each land (ones, tens, or hundreds) and add up the students in the class. For example, five students in bent land (hundreds), twelve students in curved land (tens), and eight students in straight land (ones) would equal 628. Repeat with the class and practice adding up the class together.

Explore/Investigate: (10 minutes)

Number Shapes:

Create a number shape with your body. The number has to be between 0 and 9. What numbers can you make? Make a different number shape. Everyone make a number 1. (go through 0-9 together). Is there more than one way you could make a number shape with your body? Show pictures of Pilobolus or other dancers creating number shapes with their bodies. What if I made a number with a partner? Then how would it look? Demonstrate with a student how two people can work together to make one number shape. By the time I count to three, be standing elbow to elbow with a partner. Together with your partner, create a number shape that uses both of your bodies.

Create/Perform: (12 minutes)

Shape Trios:

Divide students into groups of three. Each person will create a number with their body, and the trio will decide how to order those numbers into a 3-digit number. This number is their starting and ending shape. Once the music starts, students will move from their beginning shape in a curving way to a new place in the room, then end in their ending 3-digit number shape. Once they have all practiced, have two trios perform at one time while the rest of the class observes. At the end of each trio, practice adding the two groups' numbers. Ask children to identify any numbers they saw during the performance.

Connect/Analyze: (5 minutes)

Look at the math problems you have completed together as a class. What would happen if instead of regrouping the ones in the tens column, you left them all at the end of the number (e.g. $37+25=512$)? Then all the numbers would shift to the next higher grouping. What if we forget to carry a group of ten ones and do not add them to the tens column (e.g. $46+18=54$)? Then we miss a whole group of tens?