

ADDITION STRATEGIES

Age Level: Kindergarten (Ages 4-5)

Subject(s) Area: Math

Materials Needed: Clear the Board game sheets, cubes, anchor chart, 2 dice, and pencil

Standards:

K.CC.5 Count to answer “how many?” questions.

- a. Tell how many objects up to 20 are in an arranged pattern (e.g., a line or an array) or up to 10 objects in a scattered configuration.

K.OA.1 Represent addition and subtraction in a variety of ways.

Objectives:

TLW **recall** basic addition strategies. (Knowledge)

TLW **identify** how to add two numbers under 20. (Knowledge)

TLW **describe** the different strategies that can be used to add numbers. (Understand)

TLW **demonstrate** basic addition through playing ‘Clear the Board.’ (Apply)

Learning Activities:

Technology: NA

Required Vocabulary: addition, add, sum, strategy

Opening Element: In a small group of 4-5 students, ask them what they know about addition. What is it? How does it work? What happens when you add? Why is it important to know? Next, test their knowledge of addition by laying out two piles of cubes and counting them with the students (ex. one pile of five cubes plus another pile of two cubes equals 7 cubes). The concept of sum should also be introduced here. Ask the students if they know what sum means and tell them that the sum is the answer when two things are added together (ex. the sum of five plus two is 7). This can be done until the teacher has a good understanding of what the students know about adding.

Instructional Methods:

Guided Practice Strategies: Next, ask the students about the different addition strategies they know of such as counting on, counting all, and knowing the facts. As the students come up with these, write them down on an anchor chart to use as a quick reference back to later. Also, on the chart give examples of each strategy. If time allows, and the teacher feels the students need a better understanding of these strategies, the students can be given cubes to practice the strategies with. Next, tell the students that they will be playing an addition game next. Hand out the ‘Clear the Board’ game board, 10 cubes to each player, and have two dice ready to play. Have the students put all 10 of their cubes in different squares on their game board. Explain the directions of the game to the students and how they can win. (If needed, the teacher can demonstrate how to play the game or play the game with the students.)

Independent Concrete Practice/Application: Play the game until a student wins or as time allows. If during the course of play, the students are having trouble, refer back to the anchor chart for strategies they can use for help. If the game finishes before time is up, it can be replayed. To speed up gameplay, each student can be given their own dice. During this time, ask the students reflective questions about the strategies they are using to count their dice.

Differentiation: This lesson allows for a variety of learners. Visual learners can learn through the anchor chart and being able to see the number of dots on the dice and add them accordingly. Auditory learners can learn through the discussion about addition and by hearing themselves and others counting out the numbers on the dice. Tactile/kinesthetic learners can learn through playing the game and manipulating the dice to count the correct number. If the elements of this lesson are too hard for learners, they will be given further instruction and help with their addition. If the elements of this lesson are too easy for learners, they will be asked to count without using their fingers or manipulatives and to add sets of three numbers instead of two to form a number.

Reflective Questions: What is addition? How does it work? What happens when you add? What is it important to know addition? Is there more than one way to add two numbers? What does the word sum mean? Can you give an example of a sum? What are some different strategies we can use to add? Can you give me some examples of the strategies?

Wrap-Up: To wrap-up the lesson, review the addition strategies with the students referring back to the anchor chart as a guide. Go over the concepts of sum and addition to gauge knowledge, ask for any questions, and dismiss the students.

Assessment:

Formative- The students will be assessed on participation, their recall of basic addition facts and strategies, and teacher guided check-ins during the course of guided practice and game play.

Summative: At the end of learning, the students will be assessed on participation, their ability to use basic addition strategies when prompted, and their recall of basic addition facts, definitions, and strategies.

Reflection:

I think this lesson went really well! The learners were engaged, had fun, were able to learn more about addition, and practice it in a fun way. Right away after creating this lesson, I was super excited, and going in to teach it today, I was very confident in the lesson and my ability to teach it. Each of the elements of my lesson were engaging, taught the learners a different way to use addition, and were nicely managed throughout. I also think I did a wonderful job on time management with this lesson.

To begin the lesson, I asked the learners if they knew what addition was, and when they didn't, I asked them if they knew how to add, which they did. I then asked them for some examples of addition as well as laid out an addition example with cubes. Next, I asked the learners what strategies they knew for addition, and we wrote them down on an anchor chart. Beside each of the three strategies, we also came up with examples that were easy to reference back to. After this, we had a brief discussion about how the strategies were different. Lastly, I explained the directions for the game and allowed the learners to play the game together in partners. Playing with partners was a great idea because the learners were engaged, encouraging each other, and helping with the facts. They really enjoyed this game. During the game, I simply asked what strategies the learners were using to add the numbers on the dice as well as encouraged them. To close, I went back to the chart, went over the different strategies and examples, asked for questions, and dismissed them.

My strengths in this lesson were my enthusiasm, the use of an anchor chart for easy reference, my reflective questioning, and simply my kindness. During the observation, Mrs. Bassingthwaite said she heard two little girls discussing how much they like me which I really enjoyed hearing because when the students like their teacher, it is so much easier to get them engaged and interested. It also made me feel good. My weaknesses in this lesson were noise management and explaining directions. At times my group got very loud which probably made it hard for Mrs. Selensky's large group to concentrate. I did try to reel them back in to quiet voices once, but I should have made it a point to keep their voices at a level 1. I say my weakness was explaining directions only because one group didn't understand and would take a random block off with every roll. So, I could have gone back and explained this further, which I eventually did. In the future, something I would be sure to incorporate is having the learners say the number sentence when rolling the die in the game. So, if they find the answer is 8 then they would have to say $5+3=8$ just to get the fast facts of addition in their brains. I would also give each learner 10 turns and the one with the most cubes off is the winner after that. While this game was good for my group, other learners may get bored since it does take a while to win. So, putting a limit on the turns would ensure the game doesn't last too long. Overall, I had fun teaching this lesson, the learners had a ton of fun, and the use of the anchor chart helped bring this lesson to the next level.

