CODE: 220

Background

Imagine you are teaching a math lesson to a class of 16 second grade students. The purpose of this lesson is to examine the ways properties of operations can be used to add numbers.

You have asked the students to work with a partner to solve the problem 27 + 23 using any method that works best for them. The partners have completed their work. Now you plan to select 3 individual students to present their work to the class.

Look at the strategies below and the descriptions of the students. Then choose which three students you would like to have present.

The Problem

27 + 23

Learning Goal

Your goal is for the students to be able to understand how properties of operation can be used to add numbers.

- · You want the students to understand that two numbers can be added in any order (commutative property).
 - Example: 3 + 4 = 4 + 3
- You also want the students to understand that 3 numbers can be regrouped and added in any order (associative property).
 - Example: 9 + (1 + 7) = (9 + 1) + 7

2nd Grade Student Descriptions Daniela (she/her) Mason (he/him) Mateo (he/him) Jackie (she/they) Mateo is a Latino boy who Daniela is a Latina girl who Mason is a white boy who Jackie is a white transgender speaks English as her first speaks English as his first speaks Spanish as his first girl who speaks English as language. She has no language. He is on an IEP for language. He is an EL student her first language. She has no identified disabilities, and she severe ADHD. He receives who speaks English at an identified disabilities. She does not receive free or free or reduced lunch. He has intermediate level. He has no receives free or reduced reduced lunch. She has a a history of high success and identified disabilities. He lunch. She has a history of history of average success low participation during math receives free or reduced average success and low and low participation during lessons. He also enjoys lunch. He has a history of high participation during math math lessons. She also loves singing. success and average lessons. She also loves animals to dance. participation during math lessons. He also likes to play the guitar. Strategy B Strategy A 27 + 23• I broke the 27 into 25 and 2. First I added 20 and 20 to get 40. Then I added the 2 and 23 to make 25. Then I added 3 more to get 43. 25 + 2Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 25 40 + 3 = 4325 + 2550 Alejandro (he/him) Valentina (she/her) Carter (he/him) Oliver (he/him) Aleiandro is a Latino boy who Valentina is a Latina girl who Carter is a Black boy who Oliver is a white boy who speaks Spanish as his first speaks English as her first speaks English as his first speaks English as his first language. He is an EL student language. She has an IEP for language. He has no language. He has no who speaks English at a speech impairment identified disabilities, and he identified disabilities, and he beginner level. He has no (stuttering). She does not receives free or reduced does not receive free or identified disabilities. He receive free or reduced lunch. lunch. He has a history of reduced lunch. He has a receives free or reduced She has a history of average average success and little to history of high success and lunch. He has a history of low success and low participation no participation during math high participation during math success and low participation during math lessons. She also lessons. He also loves to cook lessons. He also enjoys riding during math lessons. He also enjoys spending time in and bake. his bike. loves to play Minecraft. nature. Strategy C Strategy D +2 Step 1 1. I made 27 and 23 +25 with the blocks. 2. I combined the tens together. Then I combined the ones. That's 4 tens, which is 40. Plus 10 ones, 23 50 which is 50 I started at 23. Step 2 Then I took 2 from the 27 to make a jump of 2. That makes 25. Then I only needed to add 25 more, so I made another jump

and got 50.

Ava (she/her) Adriel (he/him) Grace (she/her) Jada (she/her) Ava is a white girl who speaks Grace is an Asian girl who Adriel is an Indigenous boy Jada is a Black girl who English as her first language. speaks English as her first who speaks English as his speaks English as her first She has no identified first language. He has no language. She has no language. She has an IEP for disabilities. She receives free identified disabilities, and he identified disabilities, and she dyslexia. She does not or reduced lunch. She has a receive free or reduced lunch. receives free or reduced does not receive free or history of low success and low. She has a history of low lunch. He has a history of reduced lunch. She has a participation during math success and average average success and low history of high success and lessons. She also loves high participation during math participation during math participation during math lessons. She also plays lessons. He also loves to play lessons. She also plays on a gardening. basketball. softball team. soccer. Strategy E Strategy F First, I added 7 and 3 23 + 27 27 to get 10. I put a zero I made it 23 + 27 because that's easier for + 23 under the 7. me to think about. 23 + (2 + 25)50 Then I put the 1 up Then I broke the 27 into 2 and 25. (23 + 2) = 25above the 2. Last I Then I combined the 2 with the 23, and I got added 1 + 2 + 2 to get CJ (they/them) Angel (she/her) Camille (she/her) Liam (he/him) Angel is a Black girl who Camille is a white girl who CJ is a gender fluid white Liam is a white boy who speaks English as her first speaks French as her first child who speaks English as speaks English as his first their first language. They have language. He has no language. She has no language. She is an EL identified disabilities, and she student who speaks English no identified disabilities, and identified disabilities, and he does not receive free or at an advanced level. She has they do not receive free or does not receive free or reduced lunch. She has a no identified disabilities, and reduced lunch. They have a reduced lunch. He has a history of low success and low she does not receive free or history of high success and history of average success reduced lunch. She has a participation during math average participation during and average participation lessons. She also enjoys history of high success and math lessons. They also love during math lessons. He also high participation during math to draw and paint. loves comic books. making origami. lessons. She also does karate. Strategy H Strategy G 1. I made 27 and 23 with the blocks 27 + 23• First I added 20 and 20 to get 40. 2. I pulled 2 apart from the Then I added 7 and 3 to get 10. 20 + 20 = 4027 to make 25. • Then I added 40 and 10 to get 50. 3. I put the 2 with the 23 to 7 + 3 = 10make 25. That makes 25 + 25 which is 50. 40 + 10 = 50