CODE: 179

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 Liam (he/him) Grace (she/her) Oliver (he/him) Daniela (she/her) Liam is a white boy who Grace is an Asian girl who Oliver is a white boy who Daniela is a Latina girl who speaks English as his first speaks English as her first speaks English as his first speaks English as her first language. He has no language. She has an IEP for language. He has no language. She has no identified disabilities, and he dyslexia. She does not identified disabilities, and he identified disabilities, and she does not receive free or receive free or reduced lunch. does not receive free or does not receive free or reduced lunch. He has a She has a history of low reduced lunch. He has a reduced lunch. She has a history of average success success and average history of high success and history of average success and average participation participation during math high participation during math and low participation during during math lessons. He also lessons. She also plays lessons. He also enjoys riding imath lessons. She also loves to dance. loves comic books. basketball. his bike. Strategy A Strategy B 27 + 23 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. 40 25 40 + 3 = 4325 + 2550 Jackie (she/they) Alejandro (he/him) Jada (she/her) Ava (she/her) Jackie is a white transgender Alejandro is a Latino boy who Jada is a Black girl who Ava is a white girl who speaks girl who speaks English as speaks Spanish as his first speaks English as her first English as her first language. her first language. She has no language. He is an EL student language. She has no She has no identified identified disabilities. She who speaks English at a identified disabilities, and she disabilities. She receives free receives free or reduced beginner level. He has no does not receive free or or reduced lunch. She has a lunch. She has a history of identified disabilities. He reduced lunch. She has a history of low success and low average success and low receives free or reduced history of high success and participation during math participation during math lunch. He has a history of low high participation during math lessons. She also loves lessons. She also loves success and low participation lessons. She also plays on a gardening. animals. during math lessons. He also softball team. loves to play Minecraft. Strategy C Strategy D Step 1 1. I made 27 and 23 +2 +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 n 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.

Mason (he/him) Adriel (he/him) Valentina (she/her) Angel (she/her) Mason is a white boy who Adriel is an Indigenous boy Angel is a Black girl who Valentina is a Latina girl who speaks English as his first who speaks English as his speaks English as her first speaks English as her first language. He is on an IEP for language. She has no language. She has an IEP for first language. He has no identified disabilities, and she severe ADHD. He receives identified disabilities, and he speech impairment free or reduced lunch. He has receives free or reduced does not receive free or (stuttering). She does not a history of high success and lunch. He has a history of reduced lunch. She has a receive free or reduced lunch. low participation during math average success and low history of low success and low She has a history of average success and low participation lessons. He also enjoys participation during math participation during math lessons. He also loves to play lessons. She also eniovs during math lessons. She also singing. making origami. enjoys spending time in soccer. nature. Strategy E Strategy F First, I added 7 and 3 27 to get 10. I put a zero 23 + 27 + 23 under the 7. I made it 23 + 27 because that's easier for 50 • Then I put the 1 up me to think about. 23 + (2 + 25)Then I broke the 27 into 2 and 25. above the 2. Last I (23 + 2) = 25Then I combined the 2 with the 23, and I got added 1 + 2 + 2 to get 50. Carter (he/him) CJ (they/them) Mateo (he/him) Camille (she/her) Carter is a Black boy who CJ is a gender fluid white Mateo is a Latino boy who Camille is a white girl who speaks English as his first child who speaks English as speaks Spanish as his first speaks French as her first language. He has no their first language. They have language. He is an EL student language. She is an EL identified disabilities, and he no identified disabilities, and who speaks English at an student who speaks English receives free or reduced intermediate level. He has no at an advanced level. She has they do not receive free or lunch. He has a history of reduced lunch. They have a identified disabilities. He no identified disabilities, and average success and little to history of high success and she does not receive free or receives free or reduced no participation during math average participation during lunch. He has a history of high reduced lunch. She has a lessons. He also loves to cook math lessons. They also love success and average history of high success and participation during math high participation during math and bake. to draw and paint. lessons. He also likes to play lessons. She also does the guitar. karate. Strategy G Strategy H 1. 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