CODE: 162

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).
 - \cdot Example: 9 + (1 + 7) = (9 + 1) + 7

2nd Grade Student Descriptions Angel (she/her) Mason (he/him) CJ (they/them) Mateo (he/him) Angel is a Black girl who CJ is a gender fluid white Mason is a white boy who Mateo is a Latino boy who speaks English as her first speaks English as his first child who speaks English as speaks Spanish as his first language. She has no language. He is on an IEP for their first language. They have language. He is an EL student identified disabilities, and she severe ADHD. He receives no identified disabilities, and who speaks English at an does not receive free or free or reduced lunch. He has they do not receive free or intermediate level. He has no reduced lunch. She has a a history of high success and reduced lunch. They have a identified disabilities. He history of low success and low low participation during math history of high success and receives free or reduced participation during math lessons. He also enjoys average participation during lunch. He has a history of high lessons. She also enjoys singing. math lessons. They also love success and average making origami. to draw and paint. participation during math lessons. He also likes to play the guitar. Strategy A Strategy B 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 Daniela (she/her) Camille (she/her) Ava (she/her) Jackie (she/they) Daniela is a Latina girl who Camille is a white girl who Ava is a white girl who speaks. Jackie is a white transgender speaks English as her first speaks French as her first English as her first language. girl who speaks English as language. She has no language. She is an EL She has no identified her first language. She has no identified disabilities, and she student who speaks English disabilities. She receives free identified disabilities. She does not receive free or at an advanced level. She has or reduced lunch. She has a receives free or reduced reduced lunch. She has a no identified disabilities, and history of low success and low lunch. She has a history of history of average success she does not receive free or participation during math average success and low and low participation during reduced lunch. She has a lessons. She also loves participation during math math lessons. She also loves history of high success and gardening. lessons. She also loves to dance. high participation during math animals. lessons. She also does karate. Strategy C Strategy D 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, 25 23 0 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.

Valentina (she/her) Adriel (he/him) Alejandro (he/him) Grace (she/her) Valentina is a Latina girl who Adriel is an Indigenous boy Alejandro is a Latino boy who Grace is an Asian girl who speaks English as her first who speaks English as his speaks Spanish as his first speaks English as her first language. She has an IEP for language. He is an EL student language. She has an IEP for first language. He has no speech impairment identified disabilities, and he who speaks English at a dyslexia. She does not (stuttering). She does not receives free or reduced beginner level. He has no receive free or reduced lunch. receive free or reduced lunch. lunch. He has a history of identified disabilities. He She has a history of low She has a history of average receives free or reduced average success and low success and average success and low participation lunch. He has a history of low participation during math participation during math during math lessons. She also lessons. He also loves to play success and low participation lessons. She also plays enjoys spending time in during math lessons. He also basketball. soccer. loves to play Minecraft. 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. Liam (he/him) Carter (he/him) Jada (she/her) Oliver (he/him) Liam is a white boy who Carter is a Black boy who Jada is a Black girl who Oliver is a white boy who speaks English as her first speaks English as his first speaks English as his first speaks English as his first language. He has no language. He has no language. She has no language. He has no identified disabilities, and she identified disabilities, and he identified disabilities, and he identified disabilities, and he does not receive free or receives free or reduced does not receive free or does not receive free or reduced lunch. He has a lunch. He has a history of reduced lunch. She has a reduced lunch. He has a average success and little to history of high success and history of average success history of high success and and average participation no participation during math high participation during math high participation during math during math lessons. He also lessons. He also loves to cook lessons. She also plays on a lessons. He also enjoys riding loves comic books. and bake. softball team. Strategy G Strategy H 1. 1. I made 27 and 23 with 27 + 23 the blocks • 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