CODE: 195

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 Adriel (he/him) Carter (he/him) Liam (he/him) Jackie (she/they) Adriel is an Indigenous boy Carter is a Black boy who Liam is a white boy who Jackie is a white transgender who speaks English as his speaks English as his first speaks English as his first girl who speaks English as first language. He has no language. He has no language. He has no her first language. She has no identified disabilities, and he identified disabilities, and he identified disabilities, and he identified disabilities. She receives free or reduced receives free or reduced does not receive free or receives free or reduced lunch. He has a history of lunch. He has a history of reduced lunch. He has a lunch. She has a history of average success and low average success and little to history of average success average success and low participation during math no participation during math and average participation participation during math lessons. He also loves to play lessons. He also loves to cook during math lessons. He also lessons. She also loves and bake. animals. soccer. loves comic books. 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. 40 25 40 + 3 = 4325 + 2550 Mateo (he/him) CJ (they/them) Alejandro (he/him) Oliver (he/him) CJ is a gender fluid white Mateo is a Latino boy who Alejandro is a Latino boy who Oliver is a white boy who speaks Spanish as his first child who speaks English as speaks Spanish as his first speaks English as his first language. He is an EL student their first language. They have language. He is an EL student language. He has no who speaks English at an no identified disabilities, and who speaks English at a identified disabilities, and he intermediate level. He has no they do not receive free or beginner level. He has no does not receive free or identified disabilities. He reduced lunch. They have a identified disabilities. He reduced lunch. He has a receives free or reduced history of high success and receives free or reduced history of high success and lunch. He has a history of high average participation during lunch. He has a history of low high participation during math success and average math lessons. They also love success and low participation lessons. He also enjoys riding participation during math to draw and paint. during math lessons. He also his bike. lessons. He also likes to play loves to play Minecraft. the guitar. 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, 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.

Camille (she/her) Mason (he/him) Valentina (she/her) Grace (she/her) Camille is a white girl who Mason is a white boy who Valentina is a Latina girl who Grace is an Asian girl who speaks French as her first speaks English as his first speaks English as her first speaks English as her first language. She has an IEP for language. She has an IEP for language. She is an EL language. He is on an IEP for student who speaks English severe ADHD. He receives speech impairment dyslexia. She does not at an advanced level. She has free or reduced lunch. He has (stuttering). She does not receive free or reduced lunch. no identified disabilities, and a history of high success and receive free or reduced lunch. She has a history of low she does not receive free or low participation during math She has a history of average success and average success and low participation reduced lunch. She has a lessons. He also enjoys participation during math history of high success and during math lessons. She also lessons. She also plays singing. high participation during math enjoys spending time in basketball. lessons. She also does nature. karate. 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 Daniela (she/her) Jada (she/her) Angel (she/her) Ava (she/her) Daniela is a Latina girl who Jada is a Black girl who Angel is a Black girl who Ava is a white girl who speaks speaks English as her first speaks English as her first speaks English as her first English as her first language. She has no identified language. She has no language. She has no language. She has no disabilities. She receives free identified disabilities, and she identified disabilities, and she identified disabilities, and she does not receive free or does not receive free or does not receive free or or reduced lunch. She has a history of low success and low history of average success history of low success and low participation during math history of high success and and low participation during high participation during math participation during math lessons. She also loves math lessons. She also loves lessons. She also plays on a lessons. She also enjoys gardening. to dance. softball team. making origami. Strategy G Strategy H 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