CODE: 3

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

Jackie (she/they) Grace (she/her) Angel (she/her) Jada (she/her) Jackie is a white transgender Grace is an Asian girl who Angel is a Black girl who Jada is a Black girl who girl who speaks English as speaks English as her first speaks English as her first speaks English as her first her first language. She has no language. She has an IEP for language. She has no language. She has no identified disabilities, and she identified disabilities. She dyslexia. She does not identified disabilities, and she receives free or reduced receive free or reduced lunch. does not receive free or does not receive free or lunch. She has a history of She has a history of low reduced lunch. She has a reduced lunch. She has a average success and low success and average history of low success and low history of high success and participation during math participation during math participation during math high participation during math lessons. She also loves lessons. She also plays lessons. She also enjoys lessons. She also plays on a animals. basketball. making origami. softball team. 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 me to think about. Then I put the 1 up 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 Mason (he/him) Valentina (she/her) Adriel (he/him) Camille (she/her) Mason is a white boy who Valentina is a Latina girl who Adriel is an Indigenous boy Camille is a white girl who speaks English as his first speaks English as her first who speaks English as his speaks French as her first language. He is on an IEP for first language. He has no language. She is an EL language. She has an IEP for severe ADHD. He receives speech impairment identified disabilities, and he student who speaks English free or reduced lunch. He has (stuttering). She does not receives free or reduced at an advanced level. She has a history of high success and receive free or reduced lunch. lunch. He has a history of no identified disabilities, and low participation during math She has a history of average average success and low she does not receive free or success and low participation reduced lunch. She has a lessons. He also enjoys participation during math during math lessons. She also lessons. He also loves to play history of high success and singing. high participation during math enjoys spending time in soccer. nature. lessons. She also does karate. Strategy H Strategy G 1. I made 27 and 23 with the blocks 2. I pulled 2 apart from the 27 to make 25. 3. I put the 2 with the 23 to make 25. That makes 25 27 + 23• First I added 20 and 20 to get 40. + 25 which is 50. Then I added 7 and 3 to get 10. 20 + 20 = 40• Then I added 40 and 10 to get 50. 7 + 3 = 1040 + 10 = 50