CODE: 71

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 Valentina (she/her) Carter (he/him) Camille (she/her) Daniela (she/her) Camille is a white girl who Valentina is a Latina girl who Carter is a Black boy who Daniela is a Latina girl who speaks French as her first speaks English as her first speaks English as his first speaks English as her first language. She has an IEP for language. He has no language. She is an EL language. She has no speech impairment identified disabilities, and he student who speaks English identified disabilities, and she (stuttering). She does not receives free or reduced at an advanced level. She has idoes not receive free or receive free or reduced lunch. lunch. He has a history of no identified disabilities, and reduced lunch. She has a She has a history of average average success and little to she does not receive free or history of average success success and low participation no participation during math reduced lunch. She has a and low participation during during math lessons. She also lessons. He also loves to cook history of high success and math lessons. She also loves high participation during math to dance. enjoys spending time in and bake. nature. lessons. She also does karate. Strategy B Strategy A • 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 CJ (they/them) Jackie (she/they) Oliver (he/him) Mateo (he/him) Jackie is a white transgender CJ is a gender fluid white Oliver is a white boy who Mateo is a Latino boy who girl who speaks English as child who speaks English as speaks English as his first speaks Spanish as his first her first language. She has no their first language. They have language. He has no language. He is an EL student identified disabilities. She no identified disabilities, and identified disabilities, and he who speaks English at an they do not receive free or receives free or reduced does not receive free or intermediate level. He has no lunch. She has a history of reduced lunch. They have a reduced lunch. He has a identified disabilities. He average success and low history of high success and history of high success and receives free or reduced participation during math average participation during high participation during math lunch. He has a history of high lessons. She also loves math lessons. They also love lessons. He also enjoys riding success and average animals. to draw and paint. his bike. participation during math lessons. He also likes to play 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, 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.

Adriel (he/him) Liam (he/him) Alejandro (he/him) Angel (she/her) Angel is a Black girl who Adriel is an Indigenous boy Liam is a white boy who Alejandro is a Latino boy who speaks English as her first who speaks English as his speaks English as his first speaks Spanish as his first language. She has no first language. He has no language. He has no language. He is an EL student identified disabilities, and she identified disabilities, and he identified disabilities, and he who speaks English at a does not receive free or receives free or reduced does not receive free or beginner level. He has no reduced lunch. She has a lunch. He has a history of reduced lunch. He has a identified disabilities. He receives free or reduced history of low success and low average success and low history of average success lunch. He has a history of low participation during math participation during math and average participation lessons. She also eniovs lessons. He also loves to play during math lessons. He also success and low participation making origami. loves comic books. during math lessons. He also soccer. loves to play Minecraft. 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. Grace (she/her) Ava (she/her) Jada (she/her) Mason (he/him) Ava is a white girl who speaks Jada is a Black girl who Mason is a white boy who Grace is an Asian girl who English as her first language. speaks English as her first speaks English as his first speaks English as her first She has no identified language. She has no language. He is on an IEP for language. She has an IEP for disabilities. She receives free identified disabilities, and she severe ADHD. He receives dyslexia. She does not free or reduced lunch. He has or reduced lunch. She has a does not receive free or receive free or reduced lunch. history of low success and low reduced lunch. She has a a history of high success and She has a history of low participation during math low participation during math success and average history of high success and high participation during math lessons. She also loves participation during math lessons. He also enjoys gardening. lessons. She also plays on a singing. lessons. She also plays softball team. basketball. Strategy G Strategy H 1. 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