CODE: 42

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 Valentina (she/her) Adriel (he/him) Grace (she/her) Liam (he/him) Grace is an Asian girl who Valentina is a Latina girl who Adriel is an Indigenous boy Liam is a white boy who speaks English as her first who speaks English as his speaks English as her first speaks English as his first language. She has an IEP for first language. He has no language. She has an IEP for language. He has no speech impairment identified disabilities, and he dyslexia. She does not identified disabilities, and he (stuttering). She does not receives free or reduced receive free or reduced lunch. does not receive free or receive free or reduced lunch. lunch. He has a history of She has a history of low reduced lunch. He has a She has a history of average average success and low success and average history of average success success and low participation participation during math participation during math and average participation during math lessons. She also lessons. He also loves to play lessons. She also plays during math lessons. He also enjoys spending time in soccer. basketball. loves comic books. nature. 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. Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 25 40 + 3 = 4325 + 2550 Jada (she/her) Oliver (he/him) Camille (she/her) Mateo (he/him) Jada is a Black girl who Oliver is a white boy who Camille is a white girl who Mateo is a Latino boy who speaks English as her first speaks English as his first speaks French as her first speaks Spanish as his first language. She has no language. He has no language. She is an EL language. He is an EL student identified disabilities, and she identified disabilities, and he student who speaks English who speaks English at an does not receive free or does not receive free or at an advanced level. She has intermediate level. He has no reduced lunch. She has a reduced lunch. He has a no identified disabilities, and identified disabilities. He history of high success and history of high success and she does not receive free or receives free or reduced high participation during math high participation during math reduced lunch. She has a lunch. He has a history of high lessons. She also plays on a lessons. He also enjoys riding history of high success and success and average softball team. his bike. high participation during math participation during math lessons. She also does lessons. He also likes to play karate. 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, 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.

Alejandro (he/him) Jackie (she/they) Angel (she/her) Daniela (she/her) Jackie is a white transgender : Angel is a Black girl who Alejandro is a Latino boy who Daniela is a Latina girl who girl who speaks English as speaks English as her first speaks Spanish as his first speaks English as her first her first language. She has no language. She has no language. He is an EL student language. She has no identified disabilities. She identified disabilities, and she who speaks English at a identified disabilities, and she receives free or reduced does not receive free or beginner level. He has no does not receive free or lunch. She has a history of reduced lunch. She has a identified disabilities. He reduced lunch. She has a receives free or reduced average success and low history of low success and low history of average success lunch. He has a history of low participation during math participation during math and low participation during lessons. She also loves lessons. She also enjoys success and low participation math lessons. She also loves animals. during math lessons. He also to dance. making origami. loves to play Minecraft. Strategy F Strategy E 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) Mason (he/him) Ava (she/her) CJ (they/them) Carter is a Black boy who Mason is a white boy who Ava is a white girl who speaks CJ is a gender fluid white speaks English as his first speaks English as his first English as her first language. child who speaks English as language. He has no language. He is on an IEP for She has no identified their first language. They have identified disabilities, and he severe ADHD. He receives disabilities. She receives free no identified disabilities, and free or reduced lunch. He has receives free or reduced or reduced lunch. She has a they do not receive free or lunch. He has a history of a history of high success and history of low success and low reduced lunch. They have a average success and little to low participation during math participation during math history of high success and no participation during math lessons. She also loves average participation during lessons. He also enjoys lessons. He also loves to cook singing. gardening. math lessons. They also love and bake. to draw and paint. 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