CODE: 57

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

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