CODE: 76

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 Mateo (he/him) Grace (she/her) Liam (he/him) Adriel (he/him) Mateo is a Latino boy who Grace is an Asian girl who Liam is a white boy who Adriel is an Indigenous boy speaks Spanish as his first speaks English as her first speaks English as his first who speaks English as his language. He is an EL student language. She has an IEP for language. He has no first language. He has no who speaks English at an dyslexia. She does not identified disabilities, and he identified disabilities, and he intermediate level. He has no receive free or reduced lunch. does not receive free or receives free or reduced identified disabilities. He She has a history of low reduced lunch. He has a lunch. He has a history of receives free or reduced success and average history of average success average success and low lunch. He has a history of high participation during math and average participation participation during math success and average lessons. She also plays during math lessons. He also lessons. He also loves to play participation during math basketball. loves comic books. soccer. lessons. He also likes to play the guitar. 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. 25 + 2Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 25 40 + 3 = 4325 + 2550 CJ (they/them) Ava (she/her) Jackie (she/they) Angel (she/her) CJ is a gender fluid white Ava is a white girl who speaks Jackie is a white transgender Angel is a Black girl who child who speaks English as English as her first language. girl who speaks English as speaks English as her first their first language. They have She has no identified her first language. She has no language. She has no no identified disabilities, and disabilities. She receives free identified disabilities. She identified disabilities, and she they do not receive free or or reduced lunch. She has a receives free or reduced does not receive free or reduced lunch. They have a history of low success and low lunch. She has a history of reduced lunch. She has a history of high success and participation during math average success and low history of low success and low average participation during lessons. She also loves participation during math participation during math math lessons. They also love gardening. lessons. She also loves lessons. She also enjoys to draw and paint. animals. making origami. 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.

Alejandro (he/him) Carter (he/him) Daniela (she/her) Camille (she/her) Alejandro is a Latino boy who : Carter is a Black boy who Daniela is a Latina girl who Camille is a white girl who speaks Spanish as his first speaks English as his first speaks English as her first speaks French as her first language. She has no language. He is an EL student language. He has no language. She is an EL identified disabilities, and she who speaks English at a identified disabilities, and he student who speaks English beginner level. He has no receives free or reduced does not receive free or at an advanced level. She has identified disabilities. He lunch. He has a history of reduced lunch. She has a no identified disabilities, and receives free or reduced average success and little to history of average success she does not receive free or lunch. He has a history of low no participation during math and low participation during reduced lunch. She has a success and low participation lessons. He also loves to cook math lessons. She also loves history of high success and during math lessons. He also and bake. to dance. high participation during math lessons. She also does loves to play Minecraft. 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 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 Valentina (she/her) Oliver (he/him) Jada (she/her) Mason (he/him) Valentina is a Latina girl who Jada is a Black girl who Mason is a white boy who Oliver is a white boy who speaks English as her first speaks English as her first speaks English as his first speaks English as his first language. She has an IEP for language. She has no language. He is on an IEP for language. He has no identified disabilities, and she identified disabilities, and he speech impairment severe ADHD. He receives (stuttering). She does not does not receive free or free or reduced lunch. He has does not receive free or receive free or reduced lunch. reduced lunch. She has a a history of high success and reduced lunch. He has a low participation during math She has a history of average history of high success and history of high success and success and low participation high participation during math lessons. He also enjoys high participation during math during math lessons. She also lessons. She also plays on a singing. lessons. He also enjoys riding enjoys spending time in softball team. his bike. nature. Strategy G Strategy H 1. I made 27 and 23 with 1. 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