CODE: 82

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 Angel (she/her) Ava (she/her) CJ (they/them) Mateo (he/him) Angel is a Black girl who Ava is a white girl who speaks CJ is a gender fluid white Mateo is a Latino boy who English as her first language. speaks English as her first child who speaks English as speaks Spanish as his first language. She has no She has no identified their first language. They have language. He is an EL student identified disabilities, and she disabilities. She receives free no identified disabilities, and who speaks English at an or reduced lunch. She has a does not receive free or they do not receive free or intermediate level. He has no reduced lunch. She has a history of low success and low reduced lunch. They have a identified disabilities. He history of low success and low participation during math history of high success and receives free or reduced participation during math lessons. She also loves average participation during lunch. He has a history of high lessons. She also enjoys gardening. math lessons. They also love success and average making origami. to draw and paint. participation during math 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 Jada (she/her) Mason (he/him) Adriel (he/him) Jackie (she/they) Jada is a Black girl who Mason is a white boy who Adriel is an Indigenous boy Jackie is a white transgender speaks English as her first speaks English as his first who speaks English as his girl who speaks English as language. She has no language. He is on an IEP for first language. He has no her first language. She has no identified disabilities, and she severe ADHD. He receives identified disabilities, and he identified disabilities. She does not receive free or free or reduced lunch. He has receives free or reduced receives free or reduced reduced lunch. She has a a history of high success and lunch. He has a history of lunch. She has a history of history of high success and low participation during math average success and low average success and low high participation during math lessons. He also enjoys participation during math participation during math lessons. She also plays on a singing. lessons. He also loves to play !lessons. She also loves softball team. soccer. animals. 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.

Oliver (he/him) Liam (he/him) Grace (she/her) Carter (he/him) Oliver is a white boy who Grace is an Asian girl who Liam is a white boy who Carter is a Black boy who speaks English as his first speaks English as her first speaks English as his first speaks English as his first language. He has no language. She has an IEP for language. He has no language. He has no identified disabilities, and he dyslexia. She does not identified disabilities, and he identified disabilities, and he does not receive free or receive free or reduced lunch. does not receive free or receives free or reduced reduced lunch. He has a She has a history of low reduced lunch. He has a lunch. He has a history of history of high success and success and average history of average success average success and little to and average participation high participation during math participation during math no participation during math lessons. He also enjoys riding lessons. She also plays during math lessons. He also lessons. He also loves to cook his bike. basketball. loves comic books. and bake. 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 Daniela (she/her) Camille (she/her) Valentina (she/her) Alejandro (he/him) Daniela is a Latina girl who Camille is a white girl who Valentina is a Latina girl who Alejandro is a Latino boy who speaks English as her first speaks French as her first speaks English as her first speaks Spanish as his first language. She has an IEP for language. She has no language. She is an EL language. He is an EL student identified disabilities, and she student who speaks English speech impairment who speaks English at a does not receive free or at an advanced level. She has (stuttering). She does not beginner level. He has no reduced lunch. She has a no identified disabilities, and receive free or reduced lunch. identified disabilities. He history of average success she does not receive free or She has a history of average receives free or reduced lunch. He has a history of low and low participation during reduced lunch. She has a success and low participation math lessons. She also loves history of high success and during math lessons. She also success and low participation high participation during math during math lessons. He also to dance. enjoys spending time in lessons. She also does nature. loves to play Minecraft. 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. 2. 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