CODE: 47

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) Angel (she/her) Mateo (he/him) Jackie (she/they) Angel is a Black girl who Mateo is a Latino boy who Carter is a Black boy who Jackie is a white transgender speaks English as his first speaks English as her first speaks Spanish as his first girl who speaks English as language. He has no language. She has no language. He is an EL student her first language. She has no identified disabilities, and he identified disabilities, and she who speaks English at an identified disabilities. She receives free or reduced does not receive free or intermediate level. He has no receives free or reduced lunch. He has a history of reduced lunch. She has a identified disabilities. He lunch. She has a history of average success and little to history of low success and low receives free or reduced average success and low no participation during math participation during math lunch. He has a history of high participation during math lessons. He also loves to cook lessons. She also enjoys success and average lessons. She also loves animals and bake. making origami. participation during math lessons. He also likes to play the guitar. 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. 25 40 + 3 = 4325 + 2550 Jada (she/her) Mason (he/him) Oliver (he/him) Alejandro (he/him) Jada is a Black girl who Mason is a white boy who Oliver is a white boy who Aleiandro is a Latino boy who speaks English as her first speaks English as his first speaks English as his first speaks Spanish as his first language. She has no language. He is on an IEP for language. He has no language. He is an EL student identified disabilities, and she severe ADHD. He receives identified disabilities, and he who speaks English at a does not receive free or free or reduced lunch. He has does not receive free or beginner level. He has no reduced lunch. She has a a history of high success and reduced lunch. He has a identified disabilities. He history of high success and low participation during math history of high success and receives free or reduced high participation during math lessons. He also enjoys high participation during math lunch. He has a history of low lessons. She also plays on a singing. lessons. He also enjoys riding success and low participation softball team. his bike. during math lessons. He also loves to play Minecraft. 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, 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.

Daniela (she/her) Grace (she/her) Ava (she/her) Adriel (he/him) Daniela is a Latina girl who Grace is an Asian girl who Ava is a white girl who speaks : Adriel is an Indigenous boy English as her first language. speaks English as her first speaks English as her first who speaks English as his language. She has no She has no identified language. She has an IEP for first language. He has no disabilities. She receives free identified disabilities, and she dyslexia. She does not identified disabilities, and he does not receive free or receive free or reduced lunch. or reduced lunch. She has a receives free or reduced reduced lunch. She has a She has a history of low history of low success and low lunch. He has a history of history of average success success and average participation during math average success and low and low participation during lessons. She also loves participation during math participation during math math lessons. She also loves lessons. She also plays lessons. He also loves to play gardening. to dance. basketball. soccer. 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 CJ (they/them) Camille (she/her) Liam (he/him) Valentina (she/her) Camille is a white girl who Liam is a white boy who CJ is a gender fluid white Valentina is a Latina girl who speaks French as her first speaks English as his first child who speaks English as speaks English as her first language. She is an EL their first language. They have language. She has an IEP for language. He has no student who speaks English identified disabilities, and he no identified disabilities, and speech impairment at an advanced level. She has does not receive free or they do not receive free or (stuttering). She does not no identified disabilities, and reduced lunch. They have a receive free or reduced lunch. reduced lunch. He has a she does not receive free or history of average success history of high success and She has a history of average reduced lunch. She has a average participation during success and low participation and average participation history of high success and during math lessons. He also math lessons. They also love during math lessons. She also high participation during math loves comic books. to draw and paint. 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