CODE: 46

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 Camille (she/her) Liam (he/him) Grace (she/her) Angel (she/her) Grace is an Asian girl who Angel is a Black girl who Camille is a white girl who Liam is a white boy who speaks French as her first speaks English as his first speaks English as her first speaks English as her first language. She is an EL language. He has no language. She has an IEP for language. She has no student who speaks English identified disabilities, and he dyslexia. She does not identified disabilities, and she at an advanced level. She has does not receive free or receive free or reduced lunch. I does not receive free or no identified disabilities, and reduced lunch. He has a She has a history of low reduced lunch. She has a she does not receive free or history of average success success and average history of low success and low reduced lunch. She has a and average participation participation during math participation during math history of high success and during math lessons. He also lessons. She also plays lessons. She also enjoys high participation during math loves comic books. basketball. making origami. lessons. She also does karate. Strategy A Strategy B • 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) Carter (he/him) Oliver (he/him) Mateo (he/him) Carter is a Black boy who Oliver is a white boy who CJ is a gender fluid white Mateo is a Latino boy who speaks English as his first speaks English as his first child who speaks English as speaks Spanish as his first language. He has no language. He has no their first language. They have language. He is an EL student identified disabilities, and he identified disabilities, and he no identified disabilities, and who speaks English at an receives free or reduced does not receive free or they do not receive free or intermediate level. He has no lunch. He has a history of reduced lunch. He has a reduced lunch. They have a identified disabilities. He average success and little to history of high success and history of high success and receives free or reduced no participation during math high participation during math average participation during lunch. He has a history of high lessons. He also loves to cook lessons. He also enjoys riding math lessons. They also love success and average and bake. his bike. to draw and paint. participation during math lessons. He also likes to play 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, 25 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) Adriel (he/him) Ava (she/her) Jada (she/her) Alejandro is a Latino boy who Adriel is an Indigenous boy Ava is a white girl who speaks : Jada is a Black girl who English as her first language. speaks Spanish as his first who speaks English as his speaks English as her first She has no identified language. He is an EL student first language. He has no language. She has no disabilities. She receives free who speaks English at a identified disabilities, and he identified disabilities, and she beginner level. He has no receives free or reduced or reduced lunch. She has a does not receive free or identified disabilities. He lunch. He has a history of history of low success and low reduced lunch. She has a receives free or reduced average success and low participation during math history of high success and lunch. He has a history of low lessons. She also loves high participation during math participation during math success and low participation lessons. He also loves to play lessons. She also plays on a gardening. during math lessons. He also softball team. soccer. loves to play Minecraft. 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 • 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. Mason (he/him) Daniela (she/her) Jackie (she/they) Valentina (she/her) Jackie is a white transgender Mason is a white boy who Daniela is a Latina girl who Valentina is a Latina girl who speaks English as his first speaks English as her first girl who speaks English as speaks English as her first language. He is on an IEP for language. She has no her first language. She has no language. She has an IEP for identified disabilities. She severe ADHD. He receives identified disabilities, and she speech impairment free or reduced lunch. He has does not receive free or receives free or reduced (stuttering). She does not a history of high success and reduced lunch. She has a lunch. She has a history of receive free or reduced lunch. average success and low low participation during math history of average success She has a history of average and low participation during participation during math success and low participation lessons. He also enjoys math lessons. She also loves lessons. She also loves singing. during math lessons. She also to dance. animals. enjoys spending time in nature. 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. 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