CODE: 213

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 Jackie (she/they) Adriel (he/him) Liam (he/him) Angel (she/her) Angel is a Black girl who Jackie is a white transgender Adriel is an Indigenous boy Liam is a white boy who girl who speaks English as who speaks English as his speaks English as his first speaks English as her first her first language. She has no first language. He has no language. He has no language. She has no identified disabilities. She identified disabilities, and he identified disabilities, and he identified disabilities, and she receives free or reduced receives free or reduced does not receive free or does not receive free or lunch. She has a history of lunch. He has a history of reduced lunch. He has a reduced lunch. She has a average success and low average success and low history of average success history of low success and low participation during math participation during math and average participation participation during math lessons. She also loves lessons. He also loves to play during math lessons. He also lessons. She also enjoys animals. soccer. loves comic books. making origami. 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 CJ (they/them) Valentina (she/her) Mateo (he/him) Grace (she/her) CJ is a gender fluid white Valentina is a Latina girl who Mateo is a Latino boy who Grace is an Asian girl who child who speaks English as speaks English as her first speaks Spanish as his first speaks English as her first their first language. They have language. She has an IEP for language. He is an EL student language. She has an IEP for no identified disabilities, and speech impairment who speaks English at an dyslexia. She does not they do not receive free or (stuttering). She does not intermediate level. He has no receive free or reduced lunch. reduced lunch. They have a receive free or reduced lunch. identified disabilities. He She has a history of low history of high success and She has a history of average receives free or reduced success and average average participation during success and low participation lunch. He has a history of high participation during math during math lessons. She also math lessons. They also love success and average lessons. She also plays to draw and paint. enjoys spending time in participation during math basketball. nature. lessons. He also likes to play the guitar. Strategy D Strategy C +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.

Camille (she/her) Oliver (he/him) Mason (he/him) Ava (she/her) Camille is a white girl who Mason is a white boy who Ava is a white girl who speaks : Oliver is a white boy who English as her first language. speaks French as her first speaks English as his first speaks English as his first language. He is on an IEP for She has no identified language. She is an EL language. He has no disabilities. She receives free student who speaks English severe ADHD. He receives identified disabilities, and he at an advanced level. She has free or reduced lunch. He has or reduced lunch. She has a does not receive free or no identified disabilities, and a history of high success and history of low success and low reduced lunch. He has a she does not receive free or low participation during math participation during math history of high success and lessons. She also loves high participation during math reduced lunch. She has a lessons. He also enjoys history of high success and lessons. He also enjoys riding singing. gardening. high participation during math his bike. lessons. She also does 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 • 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 Daniela (she/her) Jada (she/her) Carter (he/him) Alejandro (he/him) Daniela is a Latina girl who Jada is a Black girl who Carter is a Black boy who Aleiandro is a Latino boy who speaks English as her first speaks English as her first speaks English as his first speaks Spanish as his first language. She has no language. She has no language. He has no language. He is an EL student identified disabilities, and she identified disabilities, and she identified disabilities, and he who speaks English at a does not receive free or does not receive free or receives free or reduced beginner level. He has no reduced lunch. She has a reduced lunch. She has a identified disabilities. He lunch. He has a history of history of average success history of high success and average success and little to receives free or reduced and low participation during high participation during math no participation during math lunch. He has a history of low math lessons. She also loves lessons. He also loves to cook success and low participation lessons. She also plays on a to dance. softball team. and bake. during math lessons. He also loves to play Minecraft. Strategy G Strategy H 1. 1. I made 27 and 23 with the blocks. 27 + 23• First I added 20 and 20 to get 40. 2. I pulled 2 apart from the Then I added 7 and 3 to get 10. 20 + 20 = 4027 to make 25. • Then I added 40 and 10 to get 50. 3. I put the 2 with the 23 to 7 + 3 = 10make 25. That makes 25 + 25 which is 50. 40 + 10 = 50