CODE: 149

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).
 - 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 Angel (she/her) Jackie (she/they) Camille (she/her) Oliver (he/him) Angel is a Black girl who Jackie is a white transgender Camille is a white girl who Oliver is a white boy who speaks English as her first girl who speaks English as speaks French as her first speaks English as his first language. She has no her first language. She has no language. She is an EL language. He has no identified disabilities, and she identified disabilities. She student who speaks English identified disabilities, and he does not receive free or receives free or reduced at an advanced level. She has does not receive free or reduced lunch. She has a lunch. She has a history of no identified disabilities, and reduced lunch. He has a history of low success and low average success and low she does not receive free or history of high success and participation during math participation during math reduced lunch. She has a high participation during math lessons. She also enjoys lessons. She also loves history of high success and lessons. He also enjoys riding making origami. animals. high participation during math his bike. lessons. She also does karate. Strategy D Strategy C Step 1 1. I made 27 and 23 +2 +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.

Carter (he/him) Alejandro (he/him) Daniela (she/her) Jada (she/her) Carter is a Black boy who Alejandro is a Latino boy who Daniela is a Latina girl who Jada is a Black girl who speaks English as his first speaks Spanish as his first speaks English as her first speaks English as her first language. She has no language. He has no language. He is an EL student language. She has no identified disabilities, and he who speaks English at a identified disabilities, and she identified disabilities, and she receives free or reduced beginner level. He has no does not receive free or does not receive free or lunch. He has a history of identified disabilities. He reduced lunch. She has a reduced lunch. She has a average success and little to receives free or reduced history of average success history of high success and no participation during math lunch. He has a history of low and low participation during high participation during math lessons. He also loves to cook success and low participation math lessons. She also loves lessons. She also plays on a and bake. during math lessons. He also to dance. softball team. 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. Valentina (she/her) Ava (she/her) CJ (they/them) Mason (he/him) CJ is a gender fluid white Valentina is a Latina girl who Ava is a white girl who speaks Mason is a white boy who English as her first language. speaks English as her first child who speaks English as speaks English as his first language. She has an IEP for She has no identified their first language. They have language. He is on an IEP for speech impairment disabilities. She receives free no identified disabilities, and severe ADHD. He receives (stuttering). She does not or reduced lunch. She has a free or reduced lunch. He has they do not receive free or receive free or reduced lunch. history of low success and low reduced lunch. They have a a history of high success and She has a history of average history of high success and low participation during math participation during math success and low participation lessons. She also loves average participation during lessons. He also enjoys math lessons. They also love during math lessons. She also gardening. singing. enjoys spending time in to draw and paint. nature. 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