CODE: 222

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 Grace (she/her) Alejandro (he/him) Adriel (he/him) Angel (she/her) Alejandro is a Latino boy who Angel is a Black girl who Grace is an Asian girl who Adriel is an Indigenous boy speaks English as her first speaks Spanish as his first who speaks English as his speaks English as her first language. She has an IEP for language. He is an EL student first language. He has no language. She has no dyslexia. She does not who speaks English at a identified disabilities, and he identified disabilities, and she receive free or reduced lunch. beginner level. He has no receives free or reduced does not receive free or She has a history of low identified disabilities. He lunch. He has a history of reduced lunch. She has a success and average receives free or reduced average success and low history of low success and low participation during math lunch. He has a history of low participation during math participation during math lessons. She also plays success and low participation lessons. He also loves to play lessons. She also enjoys basketball. during math lessons. He also soccer. making origami. loves to play Minecraft. 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. Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 25 40 + 3 = 4325 + 2550 Camille (she/her) Liam (he/him) Mason (he/him) Carter (he/him) Camille is a white girl who Liam is a white boy who Mason is a white boy who Carter is a Black boy who speaks French as her first speaks English as his first speaks English as his first speaks English as his first language. She is an EL language. He has no language. He is on an IEP for language. He has no student who speaks English identified disabilities, and he severe ADHD. He receives identified disabilities, and he at an advanced level. She has does not receive free or free or reduced lunch. He has i receives free or reduced no identified disabilities, and reduced lunch. He has a a history of high success and lunch. He has a history of she does not receive free or history of average success low participation during math average success and little to reduced lunch. She has a and average participation lessons. He also enjoys no participation during math history of high success and during math lessons. He also singing. lessons. He also loves to cook high participation during math loves comic books. and bake. lessons. She also does karate. 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.

Ava (she/her) CJ (they/them) Daniela (she/her) Valentina (she/her) Ava is a white girl who speaks : CJ is a gender fluid white Daniela is a Latina girl who Valentina is a Latina girl who English as her first language. child who speaks English as speaks English as her first speaks English as her first She has no identified their first language. They have language. She has no language. She has an IEP for disabilities. She receives free no identified disabilities, and identified disabilities, and she speech impairment or reduced lunch. She has a they do not receive free or does not receive free or (stuttering). She does not history of low success and low reduced lunch. They have a reduced lunch. She has a receive free or reduced lunch. She has a history of average participation during math history of high success and history of average success lessons. She also loves average participation during and low participation during success and low participation math lessons. They also love math lessons. She also loves during math lessons. She also gardening. to draw and paint. to dance. enjoys spending time in nature. Strategy F Strategy E First, I added 7 and 3 23 + 27 27 to get 10. I put a zero I made it 23 + 27 because that's easier for + 23 under the 7. me to think about. 23 + (2 + 25)50 • Then I put the 1 up Then I broke the 27 into 2 and 25. (23 + 2) = 25above the 2. Last I Then I combined the 2 with the 23, and I got added 1 + 2 + 2 to get 50. Jackie (she/they) Oliver (he/him) Mateo (he/him) Jada (she/her) Jackie is a white transgender Oliver is a white boy who Mateo is a Latino boy who Jada is a Black girl who girl who speaks English as speaks English as his first speaks Spanish as his first speaks English as her first her first language. She has no language. He has no language. He is an EL student language. She has no identified disabilities. She identified disabilities, and he who speaks English at an identified disabilities, and she receives free or reduced does not receive free or intermediate level. He has no does not receive free or lunch. She has a history of reduced lunch. He has a identified disabilities. He reduced lunch. She has a average success and low history of high success and receives free or reduced history of high success and participation during math high participation during math lunch. He has a history of high high participation during math lessons. She also loves lessons. He also enjoys riding success and average lessons. She also plays on a softball team. animals. his bike. participation during math lessons. He also likes to play the guitar. 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