CODE: 206

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

Mateo (he/him) Oliver (he/him) Jackie (she/they) Adriel (he/him) Mateo is a Latino boy who Jackie is a white transgender Oliver is a white boy who Adriel is an Indigenous boy speaks Spanish as his first girl who speaks English as speaks English as his first who speaks English as his language. He is an EL student her first language. She has no first language. He has no language. He has no identified disabilities. She who speaks English at an identified disabilities, and he identified disabilities, and he intermediate level. He has no receives free or reduced does not receive free or receives free or reduced identified disabilities. He lunch. She has a history of reduced lunch. He has a lunch. He has a history of receives free or reduced average success and low history of high success and average success and low lunch. He has a history of high participation during math high participation during math participation during math success and average lessons. She also loves lessons. He also enjoys riding lessons. He also loves to play participation during math animals. his bike. soccer. lessons. He also likes to play the guitar. 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 Carter (he/him) Liam (he/him) Angel (she/her) Daniela (she/her) Liam is a white boy who Angel is a Black girl who Daniela is a Latina girl who Carter is a Black boy who speaks English as his first speaks English as her first speaks English as her first speaks English as his first language. He has no language. She has no language. She has no language. He has no identified disabilities, and he identified disabilities, and she identified disabilities, and she identified disabilities, and he does not receive free or does not receive free or does not receive free or receives free or reduced reduced lunch. He has a reduced lunch. She has a reduced lunch. She has a lunch. He has a history of history of low success and low history of average success history of average success average success and little to and average participation participation during math and low participation during no participation during math during math lessons. He also lessons. She also enjoys math lessons. She also loves lessons. He also loves to cook loves comic books. making origami. to dance. and bake. Strategy G Strategy H 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