CODE: 212

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 Valentina (she/her) Mason (he/him) Carter (he/him) Liam (he/him) Carter is a Black boy who Valentina is a Latina girl who Mason is a white boy who Liam is a white boy who speaks English as her first speaks English as his first speaks English as his first speaks English as his first language. She has an IEP for language. He is on an IEP for language. He has no language. He has no speech impairment severe ADHD. He receives identified disabilities, and he identified disabilities, and he (stuttering). She does not free or reduced lunch. He has receives free or reduced does not receive free or receive free or reduced lunch. a history of high success and lunch. He has a history of reduced lunch. He has a She has a history of average low participation during math average success and little to history of average success success and low participation lessons. He also enjoys no participation during math and average participation during math lessons. She also singing. lessons. He also loves to cook during math lessons. He also enjoys spending time in and bake. loves comic books. nature. Strategy A Strategy B 27 + 23 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. Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 25 40 + 3 = 4325 + 2550 Jackie (she/they) Daniela (she/her) Ava (she/her) Oliver (he/him) Jackie is a white transgender Daniela is a Latina girl who Ava is a white girl who speaks: Oliver is a white boy who girl who speaks English as speaks English as her first English as her first language. speaks English as his first her first language. She has no language. She has no She has no identified language. He has no identified disabilities. She identified disabilities, and she disabilities. She receives free identified disabilities, and he receives free or reduced does not receive free or or reduced lunch. She has a does not receive free or lunch. She has a history of reduced lunch. She has a history of low success and low reduced lunch. He has a average success and low history of average success participation during math history of high success and lessons. She also loves participation during math and low participation during high participation during math gardening. lessons. She also loves math lessons. She also loves lessons. He also enjoys riding animals. to dance. his bike. Strategy C Strategy D 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, 23 Λ 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.

CJ (they/them) Adriel (he/him) Jada (she/her) Grace (she/her) CJ is a gender fluid white Jada is a Black girl who Adriel is an Indigenous boy Grace is an Asian girl who child who speaks English as speaks English as her first who speaks English as his speaks English as her first language. She has an IEP for their first language. They have language. She has no first language. He has no no identified disabilities, and identified disabilities, and she identified disabilities, and he dyslexia. She does not they do not receive free or does not receive free or receives free or reduced receive free or reduced lunch. reduced lunch. They have a reduced lunch. She has a lunch. He has a history of She has a history of low history of high success and history of high success and average success and low success and average average participation during high participation during math participation during math participation during math math lessons. They also love lessons. She also plays on a lessons. He also loves to play !lessons. She also plays to draw and paint. softball team. soccer. basketball. 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 me to think about. Then I put the 1 up 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 Camille (she/her) Alejandro (he/him) Angel (she/her) Mateo (he/him) Camille is a white girl who Alejandro is a Latino boy who Angel is a Black girl who Mateo is a Latino boy who speaks French as her first speaks Spanish as his first speaks English as her first speaks Spanish as his first language. She has no language. She is an EL language. He is an EL student language. He is an EL student student who speaks English who speaks English at a identified disabilities, and she who speaks English at an at an advanced level. She has beginner level. He has no does not receive free or intermediate level. He has no reduced lunch. She has a identified disabilities. He no identified disabilities, and identified disabilities. He she does not receive free or receives free or reduced history of low success and low receives free or reduced reduced lunch. She has a lunch. He has a history of low participation during math lunch. He has a history of high history of high success and success and low participation lessons. She also enjoys success and average high participation during math during math lessons. He also making origami. participation during math lessons. She also does loves to play Minecraft. lessons. He also likes to play karate. the guitar. 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