CODE: 126

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 Jada (she/her) Jackie (she/they) Valentina (she/her) Grace (she/her) Jackie is a white transgender Valentina is a Latina girl who Jada is a Black girl who Grace is an Asian girl who speaks English as her first girl who speaks English as speaks English as her first speaks English as her first language. She has no her first language. She has no language. She has an IEP for language. She has an IEP for identified disabilities, and she identified disabilities. She speech impairment dyslexia. She does not does not receive free or receives free or reduced (stuttering). She does not receive free or reduced lunch. reduced lunch. She has a lunch. She has a history of receive free or reduced lunch. She has a history of low history of high success and average success and low She has a history of average success and average high participation during math participation during math success and low participation participation during math lessons. She also plays on a lessons. She also loves during math lessons. She also lessons. She also plays softball team. animals. enjoys spending time in basketball. nature. 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. Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 40 + 3 = 4325 + 2550 Liam (he/him) Mason (he/him) Adriel (he/him) CJ (they/them) Liam is a white boy who Mason is a white boy who Adriel is an Indigenous boy CJ is a gender fluid white speaks English as his first speaks English as his first who speaks English as his child who speaks English as language. He has no language. He is on an IEP for first language. He has no their first language. They have identified disabilities, and he severe ADHD. He receives identified disabilities, and he no identified disabilities, and does not receive free or free or reduced lunch. He has receives free or reduced they do not receive free or lunch. He has a history of reduced lunch. He has a a history of high success and reduced lunch. They have a history of average success low participation during math average success and low history of high success and and average participation lessons. He also enjoys participation during math average participation during during math lessons. He also singing. lessons. He also loves to play math lessons. They also love loves comic books. soccer. to draw and paint. 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 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) Alejandro (he/him) Carter (he/him) Daniela (she/her) Mateo is a Latino boy who Alejandro is a Latino boy who Carter is a Black boy who Daniela is a Latina girl who speaks Spanish as his first speaks Spanish as his first speaks English as his first speaks English as her first language. She has no language. He is an EL student language. He is an EL student language. He has no who speaks English at an who speaks English at a identified disabilities, and he identified disabilities, and she intermediate level. He has no beginner level. He has no receives free or reduced does not receive free or identified disabilities. He identified disabilities. He lunch. He has a history of reduced lunch. She has a receives free or reduced receives free or reduced average success and little to history of average success lunch. He has a history of high lunch. He has a history of low and low participation during no participation during math success and average success and low participation lessons. He also loves to cook math lessons. She also loves participation during math during math lessons. He also and bake. to dance. lessons. He also likes to play 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 Oliver (he/him) Ava (she/her) Angel (she/her) Camille (she/her) Oliver is a white boy who Ava is a white girl who speaks Angel is a Black girl who Camille is a white girl who speaks English as his first English as her first language. speaks English as her first speaks French as her first language. He has no She has no identified language. She has no language. She is an EL identified disabilities, and he disabilities. She receives free identified disabilities, and she student who speaks English does not receive free or or reduced lunch. She has a does not receive free or at an advanced level. She has reduced lunch. He has a reduced lunch. She has a no identified disabilities, and history of low success and low participation during math history of low success and low she does not receive free or history of high success and high participation during math lessons. She also loves participation during math reduced lunch. She has a lessons. He also enjoys riding gardening. history of high success and lessons. She also enjoys his bike. making origami. high participation during math lessons. She also does karate. Strategy H Strategy G 1. 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