CODE: 15

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 Jada (she/her) Alejandro (he/him) Oliver (he/him) Grace (she/her) Alejandro is a Latino boy who Jada is a Black girl who Oliver is a white boy who Grace is an Asian girl who speaks English as her 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 has no language. She has an IEP for identified disabilities, and she who speaks English at a identified disabilities, and he dyslexia. She does not does not receive free or beginner level. He has no does not receive free or receive free or reduced lunch. reduced lunch. She has a identified disabilities. He reduced lunch. He has a She has a history of low history of high success and receives free or reduced history of high success and success and average high participation during math lunch. He has a history of low high participation during math participation during math lessons. She also plays on a success and low participation lessons. He also enjoys riding lessons. She also plays softball team. during math lessons. He also his bike. basketball. 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 Mateo (he/him) Liam (he/him) Angel (she/her) Daniela (she/her) Mateo is a Latino boy who Liam is a white boy who Angel is a Black girl who Daniela is a Latina girl who speaks Spanish as his first speaks English as his first speaks English as her first speaks English as her first language. He is an EL student language. He has no language. She has no language. She has no who speaks English at an identified disabilities, and he identified disabilities, and she identified disabilities, and she intermediate level. He has no does not receive free or does not receive free or does not receive free or identified disabilities. He reduced lunch. He has a reduced lunch. She has a reduced lunch. She has a receives free or reduced history of average success history of low success and low history of average success lunch. He has a history of high and average participation participation during math and low participation during success and average during math lessons. He also lessons. She also enjoys math lessons. She also loves participation during math loves comic books. making origami. to dance. lessons. He also likes to play the guitar. 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.

Camille (she/her) CJ (they/them) Adriel (he/him) Mason (he/him) Camille is a white girl who CJ is a gender fluid white Mason is a white boy who Adriel is an Indigenous boy speaks French as her first child who speaks English as speaks English as his first who speaks English as his their first language. They have language. He is on an IEP for first language. He has no language. She is an EL severe ADHD. He receives student who speaks English no identified disabilities, and identified disabilities, and he at an advanced level. She has they do not receive free or free or reduced lunch. He has i receives free or reduced no identified disabilities, and reduced lunch. They have a a history of high success and lunch. He has a history of she does not receive free or history of high success and low participation during math average success and low average participation during reduced lunch. She has a lessons. He also eniovs participation during math history of high success and math lessons. They also love lessons. He also loves to play singing. high participation during math to draw and paint. soccer. lessons. She also does karate. 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 Ava (she/her) Valentina (she/her) Carter (he/him) Jackie (she/they) Ava is a white girl who speaks Carter is a Black boy who Jackie is a white transgender Valentina is a Latina girl who girl who speaks English as English as her first language. speaks English as his first speaks English as her first She has no identified language. He has no her first language. She has no language. She has an IEP for disabilities. She receives free identified disabilities, and he identified disabilities. She speech impairment or reduced lunch. She has a receives free or reduced receives free or reduced (stuttering). She does not receive free or reduced lunch. history of low success and low lunch. He has a history of lunch. She has a history of participation during math average success and little to average success and low She has a history of average success and low participation lessons. She also loves no participation during math participation during math lessons. He also loves to cook gardening. lessons. She also loves during math lessons. She also and bake. animals. enjoys spending time in nature. Strategy G Strategy H 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