CODE: 23

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 Alejandro (he/him) Grace (she/her) Carter (he/him) Mateo (he/him) Carter is a Black boy who Alejandro is a Latino boy who Grace is an Asian girl who Mateo is a Latino boy who speaks Spanish as his first speaks English as her first speaks English as his first speaks Spanish as his first language. He is an EL student language. She has an IEP for language. He has no language. He is an EL student who speaks English at a dyslexia. She does not identified disabilities, and he who speaks English at an beginner level. He has no receive free or reduced lunch. receives free or reduced intermediate level. He has no identified disabilities. He She has a history of low lunch. He has a history of identified disabilities. He receives free or reduced success and average average success and little to receives free or reduced lunch. He has a history of low participation during math no participation during math lunch. He has a history of high success and low participation lessons. She also plays lessons. He also loves to cook success and average during math lessons. He also basketball. and bake. participation during math loves to play Minecraft. lessons. He also likes to play the guitar. 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. 25 + 2Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 25 40 + 3 = 4325 + 2550 Angel (she/her) Jackie (she/they) Ava (she/her) Camille (she/her) Angel is a Black girl who Jackie is a white transgender Ava is a white girl who speaks Camille is a white girl who speaks English as her first girl who speaks English as English as her first language. speaks French as her first language. She has no her first language. She has no She has no identified language. She is an EL identified disabilities, and she identified disabilities. She disabilities. She receives free student who speaks English does not receive free or receives free or reduced or reduced lunch. She has a at an advanced level. She has reduced lunch. She has a lunch. She has a history of history of low success and low no identified disabilities, and history of low success and low average success and low participation during math she does not receive free or participation during math participation during math lessons. She also loves reduced lunch. She has a lessons. She also enjoys lessons. She also loves gardening. history of high success and making origami. animals. high participation during math lessons. She also does karate. Strategy C Strategy D 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, 25 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.

Mason (he/him) Jada (she/her) Valentina (she/her) Daniela (she/her) Mason is a white boy who Jada is a Black girl who Valentina is a Latina girl who Daniela is a Latina girl who speaks English as his first speaks English as her first speaks English as her first speaks English as her first language. He is on an IEP for language. She has an IEP for language. She has no language. She has no severe ADHD. He receives identified disabilities, and she speech impairment identified disabilities, and she free or reduced lunch. He has does not receive free or (stuttering). She does not does not receive free or a history of high success and reduced lunch. She has a receive free or reduced lunch. reduced lunch. She has a low participation during math history of high success and She has a history of average history of average success success and low participation lessons. He also enjoys high participation during math and low participation during lessons. She also plays on a during math lessons. She also math lessons. She also loves singing. softball team. enjoys spending time in to dance. nature. Strategy F Strategy E 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 50. CJ (they/them) Liam (he/him) Adriel (he/him) Oliver (he/him) CJ is a gender fluid white Liam is a white boy who Adriel is an Indigenous boy Oliver is a white boy who child who speaks English as speaks English as his first who speaks English as his speaks English as his first their first language. They have language. He has no first language. He has no language. He has no identified disabilities, and he no identified disabilities, and identified disabilities, and he identified disabilities, and he does not receive free or receives free or reduced does not receive free or they do not receive free or reduced lunch. They have a reduced lunch. He has a lunch. He has a history of reduced lunch. He has a history of high success and average success and low history of average success history of high success and average participation during and average participation high participation during math participation during math math lessons. They also love during math lessons. He also lessons. He also loves to play lessons. He also enjoys riding to draw and paint. loves comic books. soccer. his bike. 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