CODE: 40

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 Daniela (she/her) Alejandro (he/him) Adriel (he/him) Jackie (she/they) Alejandro is a Latino boy who Daniela is a Latina girl who Adriel is an Indigenous boy Jackie is a white transgender speaks English as her first speaks Spanish as his first who speaks English as his girl who speaks English as language. She has no language. He is an EL student first language. He has no her first language. She has no identified disabilities, and she who speaks English at a identified disabilities, and he identified disabilities. She does not receive free or beginner level. He has no receives free or reduced receives free or reduced reduced lunch. She has a identified disabilities. He lunch. He has a history of lunch. She has a history of history of average success receives free or reduced average success and low average success and low and low participation during lunch. He has a history of low participation during math participation during math math lessons. She also loves success and low participation lessons. He also loves to play !lessons. She also loves to dance. during math lessons. He also soccer. animals. 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 Jada (she/her) Oliver (he/him) CJ (they/them) Valentina (she/her) Jada is a Black girl who Oliver is a white boy who CJ is a gender fluid white Valentina is a Latina girl who speaks English as her first speaks English as his first child who speaks English as speaks English as her first language. She has no language. He has no their first language. They have language. She has an IEP for identified disabilities, and she identified disabilities, and he no identified disabilities, and speech impairment (stuttering). She does not does not receive free or does not receive free or they do not receive free or reduced lunch. She has a reduced lunch. He has a reduced lunch. They have a receive free or reduced lunch. history of high success and history of high success and history of high success and She has a history of average high participation during math high participation during math average participation during success and low participation math lessons. They also love lessons. She also plays on a lessons. He also enjoys riding during math lessons. She also softball team. his bike. to draw and paint. enjoys spending time in nature. 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, 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.

Liam (he/him) Grace (she/her) Carter (he/him) Angel (she/her) Liam is a white boy who Grace is an Asian girl who Carter is a Black boy who Angel is a Black girl who speaks English as his first speaks English as her first speaks English as his first speaks English as her first language. She has no language. He has no language. She has an IEP for language. He has no identified disabilities, and she identified disabilities, and he dyslexia. She does not identified disabilities, and he does not receive free or receive free or reduced lunch. receives free or reduced does not receive free or reduced lunch. He has a She has a history of low lunch. He has a history of reduced lunch. She has a history of average success success and average average success and little to history of low success and low and average participation participation during math no participation during math participation during math during math lessons. He also lessons. She also plays lessons. He also loves to cook lessons. She also enjoys loves comic books. basketball. and bake. making origami. 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) Mateo (he/him) Mason (he/him) Ava (she/her) Camille is a white girl who Mateo is a Latino boy who Mason is a white boy who Ava is a white girl who speaks English as her first language. speaks French as her first speaks Spanish as his first speaks English as his first language. She is an EL She has no identified language. He is an EL student language. He is on an IEP for student who speaks English who speaks English at an severe ADHD. He receives disabilities. She receives free at an advanced level. She has intermediate level. He has no free or reduced lunch. He has or reduced lunch. She has a identified disabilities. He a history of high success and history of low success and low no identified disabilities, and she does not receive free or receives free or reduced low participation during math participation during math reduced lunch. She has a lessons. He also enjoys lessons. She also loves lunch. He has a history of high history of high success and success and average singing. gardening. high participation during math participation during math lessons. She also does lessons. He also likes to play karate. the guitar. Strategy G Strategy H 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