CODE: 131

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