CODE: 59

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 Carter (he/him) Valentina (she/her) Angel (she/her) Camille (she/her) Angel is a Black girl who Camille is a white girl who Carter is a Black boy who Valentina is a Latina girl who speaks English as her first speaks French as her first speaks English as his first speaks English as her first language. He has no language. She has an IEP for language. She has no language. She is an EL identified disabilities, and he speech impairment identified disabilities, and she student who speaks English receives free or reduced (stuttering). She does not does not receive free or at an advanced level. She has receive free or reduced lunch. reduced lunch. She has a lunch. He has a history of no identified disabilities, and average success and little to She has a history of average history of low success and low she does not receive free or no participation during math success and low participation participation during math reduced lunch. She has a lessons. He also loves to cook during math lessons. She also lessons. She also enjoys history of high success and high participation during math and bake. enjoys spending time in making origami. nature. lessons. She also does karate. 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. 25 + 2Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 40 + 3 = 4325 + 2550 Oliver (he/him) Adriel (he/him) Ava (she/her) Jada (she/her) Oliver is a white boy who Adriel is an Indigenous boy Ava is a white girl who speaks. Jada is a Black girl who speaks English as his first who speaks English as his English as her first language. speaks English as her first language. He has no first language. He has no She has no identified language. She has no identified disabilities, and he identified disabilities, and he disabilities. She receives free identified disabilities, and she does not receive free or receives free or reduced or reduced lunch. She has a does not receive free or reduced lunch. He has a lunch. He has a history of history of low success and low reduced lunch. She has a history of high success and average success and low participation during math history of high success and high participation during math participation during math lessons. She also loves high participation during math lessons. He also enjoys riding lessons. He also loves to play gardening. lessons. She also plays on a his bike. soccer. softball team. 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.

Daniela (she/her) Mason (he/him) Jackie (she/they) Mateo (he/him) Mason is a white boy who Daniela is a Latina girl who Jackie is a white transgender Mateo is a Latino boy who speaks English as her first speaks English as his first girl who speaks English as speaks Spanish as his first her first language. She has no language. He is an EL student language. She has no language. He is on an IEP for identified disabilities. She identified disabilities, and she severe ADHD. He receives who speaks English at an does not receive free or free or reduced lunch. He has receives free or reduced intermediate level. He has no reduced lunch. She has a a history of high success and lunch. She has a history of identified disabilities. He history of average success low participation during math average success and low receives free or reduced lunch. He has a history of high and low participation during lessons. He also enjoys participation during math math lessons. She also loves lessons. She also loves success and average singing. to dance. animals. participation during math lessons. He also likes to play 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 Liam (he/him) CJ (they/them) Grace (she/her) Alejandro (he/him) CJ is a gender fluid white Grace is an Asian girl who Aleiandro is a Latino boy who Liam is a white boy who speaks English as his first speaks English as her first speaks Spanish as his first child who speaks English as their first language. They have language. She has an IEP for language. He has no language. He is an EL student identified disabilities, and he no identified disabilities, and dyslexia. She does not who speaks English at a they do not receive free or receive free or reduced lunch. does not receive free or beginner level. He has no reduced lunch. They have a She has a history of low reduced lunch. He has a identified disabilities. He history of high success and receives free or reduced success and average history of average success average participation during participation during math and average participation lunch. He has a history of low during math lessons. He also success and low participation math lessons. They also love lessons. She also plays to draw and paint. basketball. loves comic books. during math lessons. He also loves to play Minecraft. Strategy G Strategy H 1. I made 27 and 23 with 1. 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