CODE: 78

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 Jackie (she/they) Grace (she/her) CJ (they/them) Angel (she/her) Jackie is a white transgender Angel is a Black girl who Grace is an Asian girl who CJ is a gender fluid white girl who speaks English as speaks English as her first child who speaks English as speaks English as her first her first language. She has no language. She has an IEP for their first language. They have language. She has no identified disabilities. She dyslexia. She does not no identified disabilities, and identified disabilities, and she receives free or reduced receive free or reduced lunch. they do not receive free or does not receive free or lunch. She has a history of She has a history of low reduced lunch. They have a reduced lunch. She has a average success and low success and average history of high success and history of low success and low participation during math participation during math average participation during participation during math lessons. She also loves lessons. She also plays math lessons. They also love lessons. She also enjoys animals. basketball. to draw and paint. making origami. Strategy B Strategy A 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 Camille (she/her) Ava (she/her) Oliver (he/him) Alejandro (he/him) Camille is a white girl who Ava is a white girl who speaks Oliver is a white boy who Alejandro is a Latino boy who speaks French as her first English as her first language. speaks English as his first speaks Spanish as his first language. She is an EL She has no identified language. He has no language. He is an EL student student who speaks English disabilities. She receives free identified disabilities, and he who speaks English at a at an advanced level. She has or reduced lunch. She has a does not receive free or beginner level. He has no no identified disabilities, and history of low success and low reduced lunch. He has a identified disabilities. He she does not receive free or participation during math history of high success and receives free or reduced reduced lunch. She has a lessons. She also loves high participation during math lunch. He has a history of low history of high success and gardening. lessons. He also enjoys riding success and low participation high participation during math his bike. during math lessons. He also lessons. She also does loves to play Minecraft. 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, 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.

Carter (he/him) Liam (he/him) Daniela (she/her) Adriel (he/him) Carter is a Black boy who Liam is a white boy who Daniela is a Latina girl who Adriel is an Indigenous boy speaks English as his first speaks English as his first speaks English as her first who speaks English as his language. She has no language. He has no language. He has no first language. He has no identified disabilities, and she identified disabilities, and he identified disabilities, and he identified disabilities, and he receives free or reduced does not receive free or does not receive free or receives free or reduced lunch. He has a history of reduced lunch. He has a reduced lunch. She has a lunch. He has a history of average success and little to history of average success average success and low history of average success and low participation during no participation during math and average participation participation during math lessons. He also loves to cook during math lessons. He also math lessons. She also loves lessons. He also loves to play and bake. loves comic books. to dance. soccer. 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 Mateo (he/him) Mason (he/him) Jada (she/her) Valentina (she/her) Mateo is a Latino boy who Jada is a Black girl who Mason is a white boy who Valentina is a Latina girl who speaks Spanish as his first speaks English as her first speaks English as his first speaks English as her first language. He is an EL student language. She has no language. He is on an IEP for language. She has an IEP for who speaks English at an identified disabilities, and she severe ADHD. He receives speech impairment intermediate level. He has no does not receive free or free or reduced lunch. He has (stuttering). She does not a history of high success and receive free or reduced lunch. identified disabilities. He reduced lunch. She has a receives free or reduced history of high success and low participation during math She has a history of average lessons. He also enjoys success and low participation lunch. He has a history of high high participation during math success and average lessons. She also plays on a during math lessons. She also singing. participation during math softball team. enjoys spending time in lessons. He also likes to play nature. 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