CODE: 11

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