CODE: 243

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 Angel (she/her) Jada (she/her) Carter (he/him) Adriel (he/him) Angel is a Black girl who Jada is a Black girl who Carter is a Black boy who Adriel is an Indigenous boy speaks English as her first speaks English as her first speaks English as his first who speaks English as his language. She has no language. She has no language. He has no first language. He has no identified disabilities, and she identified disabilities, and she identified disabilities, and he identified disabilities, and he does not receive free or does not receive free or receives free or reduced receives free or reduced reduced lunch. She has a reduced lunch. She has a lunch. He has a history of lunch. He has a history of history of low success and low history of high success and average success and little to average success and low participation during math high participation during math no participation during math participation during math lessons. She also enjoys lessons. She also plays on a lessons. He also loves to cook lessons. He also loves to play making origami. softball team. and bake. soccer. Strategy A Strategy B 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 Jackie (she/they) Alejandro (he/him) Daniela (she/her) CJ (they/them) Jackie is a white transgender Alejandro is a Latino boy who Daniela is a Latina girl who CJ is a gender fluid white girl who speaks English as speaks Spanish as his first speaks English as her first child who speaks English as her first language. She has no language. He is an EL student language. She has no their first language. They have identified disabilities. She who speaks English at a identified disabilities, and she no identified disabilities, and receives free or reduced beginner level. He has no does not receive free or they do not receive free or lunch. She has a history of identified disabilities. He reduced lunch. She has a reduced lunch. They have a average success and low receives free or reduced history of average success history of high success and participation during math lunch. He has a history of low and low participation during average participation during math lessons. She also loves lessons. She also loves success and low participation math lessons. They also love animals. during math lessons. He also to dance. to draw and paint. loves to play Minecraft. 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 n 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.

and got 50.

Then I only needed to add 25 more, so I made another jump

Oliver (he/him) Grace (she/her) Ava (she/her) Liam (he/him) Oliver is a white boy who Grace is an Asian girl who Ava is a white girl who speaks Liam is a white boy who English as her first language. speaks English as his first speaks English as her first speaks English as his first She has no identified language. He has no language. She has an IEP for language. He has no disabilities. She receives free identified disabilities, and he dyslexia. She does not identified disabilities, and he does not receive free or receive free or reduced lunch. or reduced lunch. She has a does not receive free or reduced lunch. He has a She has a history of low history of low success and low reduced lunch. He has a history of high success and success and average participation during math history of average success and average participation lessons. She also loves high participation during math participation during math during math lessons. He also lessons. He also enjoys riding lessons. She also plays gardening. his bike. basketball. loves comic books. Strategy E Strategy F First, I added 7 and 3 23 + 27 27 to get 10. I put a zero I made it 23 + 27 because that's easier for + 23 under the 7. me to think about. 23 + (2 + 25) 50 Then I put the 1 up Then I broke the 27 into 2 and 25. (23 + 2) = 25above the 2. Last I Then I combined the 2 with the 23, and I got added 1 + 2 + 2 to get Camille (she/her) Valentina (she/her) Mateo (he/him) Mason (he/him) Camille is a white girl who Valentina is a Latina girl who Mateo is a Latino boy who Mason is a white boy who speaks French as her first speaks English as her first speaks Spanish as his first speaks English as his first language. She is an EL language. She has an IEP for language. He is an EL student language. He is on an IEP for student who speaks English speech impairment who speaks English at an severe ADHD. He receives at an advanced level. She has (stuttering). She does not intermediate level. He has no free or reduced lunch. He has receive free or reduced lunch. identified disabilities. He a history of high success and no identified disabilities, and she does not receive free or She has a history of average receives free or reduced low participation during math reduced lunch. She has a success and low participation lunch. He has a history of high lessons. He also enjoys history of high success and during math lessons. She also success and average singing. high participation during math enjoys spending time in participation during math lessons. She also does nature. lessons. He also likes to play karate. the guitar. Strategy G Strategy H 1. I made 27 and 23 with the blocks 27 + 23• First I added 20 and 20 to get 40. 2. I pulled 2 apart from the Then I added 7 and 3 to get 10. 20 + 20 = 4027 to make 25. • Then I added 40 and 10 to get 50. 3. I put the 2 with the 23 to 7 + 3 = 10make 25. That makes 25 + 25 which is 50. 40 + 10 = 50