CODE: 176

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) Mateo (he/him) Liam (he/him) Adriel (he/him) Carter is a Black boy who Mateo is a Latino boy who Liam is a white boy who Adriel is an Indigenous boy speaks English as his first speaks Spanish as his first speaks English as his first who speaks English as his language. He has no language. He is an EL student language. He has no first language. He has no identified disabilities, and he who speaks English at an identified disabilities, and he identified disabilities, and he receives free or reduced intermediate level. He has no does not receive free or receives free or reduced lunch. He has a history of identified disabilities. He reduced lunch. He has a lunch. He has a history of average success and little to receives free or reduced history of average success average success and low no participation during math lunch. He has a history of high and average participation participation during math lessons. He also loves to cook success and average during math lessons. He also lessons. He also loves to play and bake. participation during math loves comic books. soccer. lessons. He also likes to play the guitar. 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. 25 40 + 3 = 4325 + 2550 Daniela (she/her) Valentina (she/her) Alejandro (he/him) Ava (she/her) Daniela is a Latina girl who Valentina is a Latina girl who Aleiandro is a Latino boy who Ava is a white girl who speaks English as her first language. speaks English as her first speaks English as her first speaks Spanish as his first language. He is an EL student She has no identified language. She has no language. She has an IEP for identified disabilities, and she speech impairment who speaks English at a disabilities. She receives free does not receive free or (stuttering). She does not beginner level. He has no or reduced lunch. She has a reduced lunch. She has a receive free or reduced lunch. identified disabilities. He history of low success and low history of average success She has a history of average receives free or reduced participation during math and low participation during success and low participation lunch. He has a history of low lessons. She also loves math lessons. She also loves during math lessons. She also success and low participation gardening. to dance. enjoys spending time in during math lessons. He also nature. loves to play Minecraft. Strategy D Strategy C 1. I made 27 and 23 +2 Step 1 +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.

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