CODE: 214

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 Liam (he/him) Jackie (she/they) Mateo (he/him) Oliver (he/him) Jackie is a white transgender Mateo is a Latino boy who Liam is a white boy who Oliver is a white boy who speaks English as his first girl who speaks English as speaks Spanish as his first speaks English as his first language. He has no her first language. She has no language. He is an EL student language. He has no identified disabilities, and he identified disabilities. She who speaks English at an identified disabilities, and he does not receive free or receives free or reduced intermediate level. He has no does not receive free or reduced lunch. He has a lunch. She has a history of identified disabilities. He reduced lunch. He has a history of average success average success and low receives free or reduced history of high success and and average participation participation during math lunch. He has a history of high high participation during math during math lessons. He also lessons. She also loves success and average lessons. He also enjoys riding loves comic books. animals. participation during math his bike. 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 CJ (they/them) Mason (he/him) Daniela (she/her) Jada (she/her) CJ is a gender fluid white Mason is a white boy who Daniela is a Latina girl who Jada is a Black girl who child who speaks English as speaks English as his first speaks English as her first speaks English as her first their first language. They have language. He is on an IEP for language. She has no language. She has no no identified disabilities, and severe ADHD. He receives identified disabilities, and she identified disabilities, and she they do not receive free or free or reduced lunch. He has does not receive free or does not receive free or reduced lunch. They have a a history of high success and reduced lunch. She has a reduced lunch. She has a history of high success and low participation during math history of average success history of high success and average participation during lessons. He also enjoys and low participation during high participation during math math lessons. They also love singing. math lessons. She also loves lessons. She also plays on a softball team. to draw and paint. to dance. 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.

Camille (she/her) Alejandro (he/him) Valentina (she/her) Angel (she/her) Valentina is a Latina girl who Angel is a Black girl who Camille is a white girl who Alejandro is a Latino boy who speaks English as her first speaks English as her first speaks French as her first speaks Spanish as his first language. She has an IEP for language. She has no language. She is an EL language. He is an EL student speech impairment identified disabilities, and she student who speaks English who speaks English at a (stuttering). She does not does not receive free or at an advanced level. She has beginner level. He has no receive free or reduced lunch. reduced lunch. She has a no identified disabilities, and identified disabilities. He she does not receive free or receives free or reduced She has a history of average history of low success and low success and low participation lunch. He has a history of low participation during math reduced lunch. She has a during math lessons. She also lessons. She also enjoys history of high success and success and low participation enjoys spending time in making origami. high participation during math during math lessons. He also lessons. She also does loves to play Minecraft. nature. 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 • 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 Carter (he/him) Ava (she/her) Grace (she/her) Adriel (he/him) Grace is an Asian girl who Ava is a white girl who speaks Adriel is an Indigenous boy Carter is a Black boy who speaks English as his first speaks English as her first English as her first language. who speaks English as his language. He has no language. She has an IEP for She has no identified first language. He has no identified disabilities, and he disabilities. She receives free identified disabilities, and he dyslexia. She does not receives free or reduced receive free or reduced lunch. or reduced lunch. She has a receives free or reduced history of low success and low lunch. He has a history of lunch. He has a history of She has a history of low participation during math average success and low average success and little to success and average no participation during math participation during math lessons. She also loves participation during math lessons. He also loves to play lessons. He also loves to cook lessons. She also plays gardening. and bake. basketball. soccer. 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