CODE: 161

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

Mason (he/him)

Jackie (she/they)

Jackie is a white transgender

her first language. She has no

girl who speaks English as

identified disabilities. She

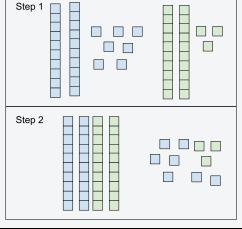
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participation during math

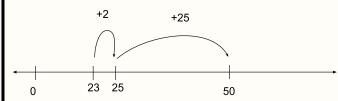
lessons. She also loves

Mason is a white boy who speaks English as his first their first language. They have language. He is on an IEP for severe ADHD. He receives free or reduced lunch. He has a history of high success and low participation during math lessons. He also enjoys singing.



- 1. I made 27 and 23 with the blocks.
- 2. I combined the tens together. Then I combined the ones. That's 4 tens, which is 40. Plus 10 ones, which is 50

Strategy D



- I started at 23.
- 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.

Adriel (he/him) Oliver (he/him) Carter (he/him) Daniela (she/her) Adriel is an Indigenous boy Carter is a Black boy who Daniela is a Latina girl who Oliver is a white boy who who speaks English as his speaks English as his first speaks English as her first speaks English as his first language. She has no first language. He has no language. He has no language. He has no identified disabilities, and he identified disabilities, and she identified disabilities, and he identified disabilities, and he receives free or reduced receives free or reduced does not receive free or does not receive free or lunch. He has a history of lunch. He has a history of reduced lunch. She has a reduced lunch. He has a average success and low average success and little to history of average success history of high success and and low participation during high participation during math participation during math no participation during math lessons. He also loves to play Hessons. He also loves to cook math lessons. She also loves lessons. He also enjoys riding his bike. and bake. 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 Valentina (she/her) Liam (he/him) Ava (she/her) Jada (she/her) Valentina is a Latina girl who Liam is a white boy who Ava is a white girl who speaks Jada is a Black girl who speaks English as her first speaks English as his first English as her first language. speaks English as her first She has no identified language. She has an IEP for Ilanguage. He has no language. She has no speech impairment identified disabilities, and he disabilities. She receives free identified disabilities, and she (stuttering). She does not does not receive free or or reduced lunch. She has a does not receive free or history of low success and low reduced lunch. She has a receive free or reduced lunch. reduced lunch. He has a She has a history of average history of average success participation during math history of high success and success and low participation and average participation lessons. She also loves high participation during math during math lessons. She also during math lessons. He also lessons. She also plays on a gardening. enjoys spending time in loves comic books. softball team. nature. Strategy G Strategy H 1. 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