CODE: 2

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

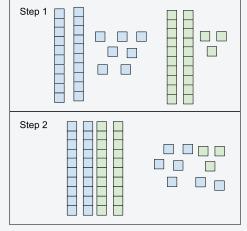
27 + 23

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

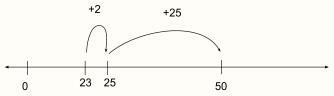
2nd Grade Student Descriptions Jada (she/her) CJ (they/them) Camille (she/her) Daniela (she/her) Camille is a white girl who Jada is a Black girl who CJ is a gender fluid white Daniela is a Latina girl who speaks French as her first speaks English as her first child who speaks English as speaks English as her first language. She has no their first language. They have language. She is an EL language. She has no identified disabilities, and she no identified disabilities, and student who speaks English identified disabilities, and she does not receive free or they do not receive free or at an advanced level. She has idoes not receive free or reduced lunch. She has a reduced lunch. They have a no identified disabilities, and reduced lunch. She has a history of high success and history of high success and she does not receive free or history of average success high participation during math average participation during reduced lunch. She has a and low participation during lessons. She also plays on a math lessons. They also love history of high success and math lessons. She also loves high participation during math to dance. softball team. to draw and paint. lessons. She also does karate. 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 Jackie (she/they) Carter (he/him) Oliver (he/him) Jackie is a white transgender Carter is a Black boy who Oliver is a white boy who girl who speaks English as speaks English as his first speaks English as his first her first language. She has no language. He has no language. He has no identified disabilities. She identified disabilities, and he identified disabilities, and he receives free or reduced receives free or reduced does not receive free or lunch. She has a history of lunch. He has a history of reduced lunch. He has a average success and low average success and little to history of high success and participation during math no participation during math high participation during math lessons. She also loves lessons. He also loves to cook lessons. He also enjoys riding animals. and bake. his bike. Strategy D Strategy C +2 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, which is 50.

Angel (she/her)

Angel is a Black girl who speaks English as her first language. She has no identified disabilities, and she does not receive free or reduced lunch. She has a history of low success and low participation during math lessons. She also enjoys making origami.



- 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.

Valentina (she/her) Mason (he/him) Mateo (he/him) Ava (she/her) Mason is a white boy who Mateo is a Latino boy who Ava is a white girl who speaks: Valentina is a Latina girl who speaks English as his first speaks Spanish as his first English as her first language. speaks English as her first She has no identified language. She has an IEP for language. He is on an IEP for language. He is an EL student severe ADHD. He receives who speaks English at an disabilities. She receives free speech impairment free or reduced lunch. He has intermediate level. He has no or reduced lunch. She has a (stuttering). She does not a history of high success and identified disabilities. He history of low success and low receive free or reduced lunch. low participation during math receives free or reduced participation during math She has a history of average lunch. He has a history of high lessons. She also loves success and low participation lessons. He also enjoys during math lessons. She also success and average singing. gardening. participation during math enjoys spending time in lessons. He also likes to play nature. the guitar. 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 Alejandro (he/him) Liam (he/him) Grace (she/her) Adriel (he/him) Aleiandro is a Latino boy who Grace is an Asian girl who Liam is a white boy who Adriel is an Indigenous boy speaks Spanish as his first speaks English as her first speaks English as his first who speaks English as his language. He is an EL student language. She has an IEP for language. He has no first language. He has no identified disabilities, and he identified disabilities, and he who speaks English at a dyslexia. She does not beginner level. He has no receive free or reduced lunch. does not receive free or receives free or reduced lunch. He has a history of identified disabilities. He She has a history of low reduced lunch. He has a receives free or reduced average success and low success and average history of average success lunch. He has a history of low participation during math and average participation participation during math during math lessons. He also success and low participation lessons. She also plays lessons. He also loves to play during math lessons. He also basketball. loves comic books. soccer. loves to play Minecraft. 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 27 + 23• 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