CODE: 129

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 Jackie (she/they) Angel (she/her) Valentina (she/her) Ava (she/her) Angel is a Black girl who Valentina is a Latina girl who Jackie is a white transgender Ava is a white girl who speaks English as her first language. girl who speaks English as speaks English as her first speaks English as her first her first language. She has no language. She has no language. She has an IEP for She has no identified identified disabilities. She identified disabilities, and she speech impairment disabilities. She receives free receives free or reduced does not receive free or (stuttering). She does not or reduced lunch. She has a lunch. She has a history of reduced lunch. She has a receive free or reduced lunch. history of low success and low average success and low history of low success and low She has a history of average participation during math participation during math participation during math success and low participation lessons. She also loves lessons. She also loves lessons. She also enjoys during math lessons. She also gardening. animals. making origami. enjoys spending time in nature. 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. Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 40 + 3 = 4325 + 2550 Daniela (she/her) Grace (she/her) Mason (he/him) Alejandro (he/him) Daniela is a Latina girl who Grace is an Asian girl who Mason is a white boy who Aleiandro is a Latino boy who speaks English as her first speaks English as her first speaks English as his first speaks Spanish as his first language. She has no language. She has an IEP for language. He is on an IEP for language. He is an EL student dvslexia. She does not identified disabilities, and she severe ADHD. He receives who speaks English at a does not receive free or receive free or reduced lunch. free or reduced lunch. He has beginner level. He has no reduced lunch. She has a She has a history of low a history of high success and identified disabilities. He history of average success success and average low participation during math receives free or reduced and low participation during participation during math lessons. He also enjoys lunch. He has a history of low lessons. She also plays math lessons. She also loves singing. success and low participation to dance. basketball. during math lessons. He also loves to play Minecraft. 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) Adriel (he/him) Liam (he/him) Jada (she/her) Camille is a white girl who Adriel is an Indigenous boy Jada is a Black girl who Liam is a white boy who speaks French as her first who speaks English as his speaks English as her first speaks English as his first language. She has no language. She is an EL first language. He has no language. He has no identified disabilities, and she student who speaks English identified disabilities, and he identified disabilities, and he at an advanced level. She has receives free or reduced does not receive free or does not receive free or no identified disabilities, and lunch. He has a history of reduced lunch. She has a reduced lunch. He has a she does not receive free or average success and low history of high success and history of average success and average participation high participation during math reduced lunch. She has a participation during math history of high success and lessons. He also loves to play lessons. She also plays on a during math lessons. He also soccer. high participation during math softball team. loves comic books. lessons. She also does karate. 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 Mateo (he/him) CJ (they/them) Oliver (he/him) Carter (he/him) CJ is a gender fluid white Carter is a Black boy who Mateo is a Latino boy who Oliver is a white boy who child who speaks English as speaks English as his first speaks English as his first speaks Spanish as his first their first language. They have language. He has no language. He has no language. He is an EL student identified disabilities, and he identified disabilities, and he no identified disabilities, and who speaks English at an they do not receive free or does not receive free or receives free or reduced intermediate level. He has no reduced lunch. They have a identified disabilities. He reduced lunch. He has a lunch. He has a history of receives free or reduced history of high success and average success and little to history of high success and average participation during high participation during math no participation during math lunch. He has a history of high math lessons. They also love lessons. He also loves to cook success and average lessons. He also enjoys riding participation during math to draw and paint. his bike. and bake. lessons. He also likes to play the guitar. 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 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