CODE: 61

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 Ava (she/her) Liam (he/him) Adriel (he/him) Angel (she/her) Adriel is an Indigenous boy Angel is a Black girl who Ava is a white girl who speaks Liam is a white boy who English as her first language. speaks English as his first who speaks English as his speaks English as her first She has no identified language. He has no first language. He has no language. She has no disabilities. She receives free identified disabilities, and he identified disabilities, and he identified disabilities, and she or reduced lunch. She has a does not receive free or receives free or reduced does not receive free or history of low success and low reduced lunch. He has a lunch. He has a history of reduced lunch. She has a participation during math history of average success average success and low history of low success and low lessons. She also loves and average participation participation during math participation during math gardening. during math lessons. He also lessons. He also loves to play lessons. She also enjoys loves comic books. soccer. making origami. Strategy B Strategy A 27 + 23 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. 40 40 + 3 = 4325 + 2550 Carter (he/him) Alejandro (he/him) Jada (she/her) Daniela (she/her) Carter is a Black boy who Alejandro is a Latino boy who Jada is a Black girl who Daniela is a Latina girl who speaks English as his first speaks Spanish as his first speaks English as her first speaks English as her first language. He has no language. He is an EL student language. She has no language. She has no identified disabilities, and he who speaks English at a identified disabilities, and she identified disabilities, and she receives free or reduced beginner level. He has no does not receive free or does not receive free or lunch. He has a history of identified disabilities. He reduced lunch. She has a reduced lunch. She has a average success and little to receives free or reduced history of high success and history of average success no participation during math lunch. He has a history of low high participation during math and low participation during lessons. He also loves to cook success and low participation lessons. She also plays on a math lessons. She also loves and bake. during math lessons. He also softball team. to dance. loves to play Minecraft. Strategy C Strategy D Step 1 1. I made 27 and 23 +2 +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 n 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.

Oliver (he/him) Grace (she/her) Camille (she/her) Jackie (she/they) Grace is an Asian girl who Camille is a white girl who Oliver is a white boy who Jackie is a white transgender speaks English as her first speaks French as her first speaks English as his first girl who speaks English as language. She has an IEP for language. She is an EL her first language. She has no language. He has no identified disabilities. She dyslexia. She does not student who speaks English identified disabilities, and he receive free or reduced lunch. at an advanced level. She has does not receive free or receives free or reduced She has a history of low no identified disabilities, and reduced lunch. He has a lunch. She has a history of she does not receive free or success and average history of high success and average success and low high participation during math participation during math reduced lunch. She has a participation during math lessons. She also plays history of high success and lessons. He also enjoys riding lessons. She also loves basketball. high participation during math his bike. animals. 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 • 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) Mason (he/him) CJ (they/them) Valentina (she/her) CJ is a gender fluid white Valentina is a Latina girl who Mateo is a Latino boy who Mason is a white boy who speaks English as his first child who speaks English as speaks English as her first speaks Spanish as his first language. He is on an IEP for their first language. They have language. She has an IEP for language. He is an EL student no identified disabilities, and speech impairment severe ADHD. He receives who speaks English at an (stuttering). She does not free or reduced lunch. He has they do not receive free or intermediate level. He has no reduced lunch. They have a receive free or reduced lunch. identified disabilities. He a history of high success and low participation during math history of high success and She has a history of average receives free or reduced success and low participation lessons. He also enjoys average participation during lunch. He has a history of high singing. math lessons. They also love during math lessons. She also success and average participation during math to draw and paint. enjoys spending time in nature. 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