CODE: 84

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