CODE: 125

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) Valentina (she/her) Mason (he/him) Camille (she/her) Valentina is a Latina girl who Mason is a white boy who Camille is a white girl who Jada is a Black girl who speaks French as her first speaks English as her first speaks English as her first speaks English as his first language. She has no language. She has an IEP for language. He is on an IEP for language. She is an EL identified disabilities, and she speech impairment severe ADHD. He receives student who speaks English does not receive free or (stuttering). She does not free or reduced lunch. He has at an advanced level. She has receive free or reduced lunch. reduced lunch. She has a a history of high success and no identified disabilities, and history of high success and She has a history of average low participation during math she does not receive free or high participation during math success and low participation lessons. He also enjoys reduced lunch. She has a lessons. She also plays on a during math lessons. She also singing. history of high success and high participation during math softball team. enjoys spending time in nature. lessons. She also does karate. Strategy A Strategy B • 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 + 3 = 4325 + 2550 Ava (she/her) CJ (they/them) Oliver (he/him) Daniela (she/her) Ava is a white girl who speaks : CJ is a gender fluid white Oliver is a white boy who Daniela is a Latina girl who English as her first language. child who speaks English as speaks English as his first speaks English as her first She has no identified their first language. They have language. He has no language. She has no disabilities. She receives free no identified disabilities, and identified disabilities, and he identified disabilities, and she or reduced lunch. She has a they do not receive free or does not receive free or does not receive free or history of low success and low reduced lunch. They have a reduced lunch. He has a reduced lunch. She has a participation during math history of high success and history of high success and history of average success lessons. She also loves average participation during high participation during math and low participation during math lessons. She also loves gardening. math lessons. They also love lessons. He also enjoys riding to draw and paint. his bike. to dance. Strategy D Strategy C 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.

Mateo (he/him) Angel (she/her) Carter (he/him) Grace (she/her) Mateo is a Latino boy who Angel is a Black girl who Carter is a Black boy who Grace is an Asian girl who speaks Spanish as his first speaks English as her first speaks English as his first speaks English as her first language. She has an IEP for language. He is an EL student language. She has no language. He has no who speaks English at an identified disabilities, and she identified disabilities, and he dyslexia. She does not intermediate level. He has no does not receive free or receives free or reduced receive free or reduced lunch. identified disabilities. He reduced lunch. She has a lunch. He has a history of She has a history of low receives free or reduced history of low success and low average success and little to success and average lunch. He has a history of high participation during math no participation during math participation during math success and average lessons. She also enjoys lessons. He also loves to cook lessons. She also plays participation during math making origami. and bake. basketball. lessons. He also likes to play 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 Liam (he/him) Adriel (he/him) Jackie (she/they) Alejandro (he/him) Adriel is an Indigenous boy Jackie is a white transgender Liam is a white boy who Aleiandro is a Latino boy who who speaks English as his girl who speaks English as speaks English as his first speaks Spanish as his first first language. He has no her first language. She has no language. He has no language. He is an EL student identified disabilities, and he identified disabilities. She identified disabilities, and he who speaks English at a receives free or reduced receives free or reduced does not receive free or beginner level. He has no lunch. He has a history of identified disabilities. He lunch. She has a history of reduced lunch. He has a average success and low average success and low receives free or reduced history of average success participation during math participation during math and average participation lunch. He has a history of low lessons. He also loves to play during math lessons. He also success and low participation lessons. She also loves loves comic books. soccer. animals. during math lessons. He also loves to play Minecraft. Strategy G Strategy H 1. I made 27 and 23 with 1. 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