CODE: 203

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 Mason (he/him) Mateo (he/him) Daniela (she/her) CJ (they/them) Mason is a white boy who Mateo is a Latino boy who Daniela is a Latina girl who CJ is a gender fluid white speaks English as his first speaks Spanish as his first speaks English as her first child who speaks English as language. He is on an IEP for language. He is an EL student language. She has no their first language. They have severe ADHD. He receives who speaks English at an identified disabilities, and she no identified disabilities, and free or reduced lunch. He has intermediate level. He has no does not receive free or they do not receive free or reduced lunch. She has a a history of high success and identified disabilities. He reduced lunch. They have a low participation during math receives free or reduced history of average success history of high success and lessons. He also enjoys lunch. He has a history of high and low participation during average participation during singing. success and average math lessons. She also loves math lessons. They also love participation during math to dance. to draw and paint. lessons. He also likes to play the guitar. 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 Adriel (he/him) Alejandro (he/him) Carter (he/him) Angel (she/her) Adriel is an Indigenous boy Aleiandro is a Latino boy who Carter is a Black boy who Angel is a Black girl who who speaks English as his speaks Spanish as his first speaks English as his first speaks English as her first first language. He has no language. He is an EL student language. He has no language. She has no identified disabilities, and he who speaks English at a identified disabilities, and he identified disabilities, and she receives free or reduced beginner level. He has no receives free or reduced does not receive free or lunch. He has a history of identified disabilities. He lunch. He has a history of reduced lunch. She has a average success and low receives free or reduced average success and little to history of low success and low participation during math lunch. He has a history of low no participation during math participation during math lessons. He also loves to play success and low participation lessons. He also loves to cook lessons. She also enjoys and bake. soccer. during math lessons. He also making origami. loves to play Minecraft. 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, 23 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.

and got 50.

Then I only needed to add 25 more, so I made another jump

Oliver (he/him) Valentina (she/her) Ava (she/her) Jada (she/her) Oliver is a white boy who Ava is a white girl who speaks Valentina is a Latina girl who Jada is a Black girl who speaks English as his first English as her first language. speaks English as her first speaks English as her first She has no identified language. She has an IEP for language. She has no language. He has no identified disabilities, and he disabilities. She receives free speech impairment identified disabilities, and she does not receive free or or reduced lunch. She has a (stuttering). She does not does not receive free or reduced lunch. He has a history of low success and low receive free or reduced lunch. reduced lunch. She has a history of high success and participation during math She has a history of average history of high success and high participation during math lessons. She also loves success and low participation high participation during math lessons. He also enjoys riding gardening. during math lessons. She also lessons. She also plays on a his bike. enjoys spending time in softball team. nature. 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 50. Grace (she/her) Jackie (she/they) Liam (he/him) Camille (she/her) Grace is an Asian girl who Jackie is a white transgender Liam is a white boy who Camille is a white girl who speaks French as her first speaks English as her first girl who speaks English as speaks English as his first language. She has an IEP for her first language. She has no language. He has no language. She is an EL dyslexia. She does not identified disabilities. She identified disabilities, and he student who speaks English receive free or reduced lunch. receives free or reduced does not receive free or at an advanced level. She has She has a history of low lunch. She has a history of reduced lunch. He has a no identified disabilities, and average success and low she does not receive free or success and average history of average success participation during math participation during math reduced lunch. She has a and average participation lessons. She also plays lessons. She also loves during math lessons. He also history of high success and high participation during math basketball. animals. loves comic books. lessons. She also does karate. Strategy G Strategy H 1. 1. I made 27 and 23 with the blocks. 27 + 23• First I added 20 and 20 to get 40. 2. I pulled 2 apart from the Then I added 7 and 3 to get 10. 20 + 20 = 4027 to make 25. • Then I added 40 and 10 to get 50. 3. I put the 2 with the 23 to 7 + 3 = 10make 25. That makes 25 + 25 which is 50. 40 + 10 = 50