CODE: 33

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 Valentina (she/her) Oliver (he/him) Carter (he/him) CJ (they/them) Carter is a Black boy who Valentina is a Latina girl who Oliver is a white boy who CJ is a gender fluid white speaks English as her first speaks English as his first speaks English as his first child who speaks English as language. She has an IEP for language. He has no language. He has no their first language. They have speech impairment identified disabilities, and he identified disabilities, and he no identified disabilities, and (stuttering). She does not does not receive free or receives free or reduced they do not receive free or receive free or reduced lunch. reduced lunch. He has a lunch. He has a history of reduced lunch. They have a She has a history of average history of high success and average success and little to history of high success and success and low participation high participation during math no participation during math average participation during during math lessons. She also lessons. He also enjoys riding lessons. He also loves to cook math lessons. They also love enjoys spending time in his bike. and bake. to draw and paint. 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 Ava (she/her) Angel (she/her) Mateo (he/him) Grace (she/her) Ava is a white girl who speaks. Angel is a Black girl who Mateo is a Latino boy who Grace is an Asian girl who speaks English as her first English as her first language. speaks Spanish as his first speaks English as her first She has no identified language. She has no language. He is an EL student language. She has an IEP for disabilities. She receives free identified disabilities, and she who speaks English at an dyslexia. She does not or reduced lunch. She has a does not receive free or intermediate level. He has no receive free or reduced lunch. history of low success and low reduced lunch. She has a identified disabilities. He She has a history of low participation during math history of low success and low receives free or reduced success and average lessons. She also loves participation during math lunch. He has a history of high participation during math gardening. lessons. She also enjoys success and average lessons. She also plays making origami. participation during math basketball. lessons. He also likes to play the guitar. Strategy D Strategy C +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. Then I only needed to add 25 more, so I made another jump and got 50.

Adriel (he/him) Jada (she/her) Camille (she/her) Daniela (she/her) Adriel is an Indigenous boy Jada is a Black girl who Camille is a white girl who Daniela is a Latina girl who speaks English as her first speaks French as her first who speaks English as his speaks English as her first language. She has no first language. He has no language. She has no language. She is an EL identified disabilities, and she student who speaks English identified disabilities, and he identified disabilities, and she does not receive free or at an advanced level. She has receives free or reduced does not receive free or reduced lunch. She has a no identified disabilities, and lunch. He has a history of reduced lunch. She has a she does not receive free or history of high success and average success and low history of average success and low participation during high participation during math reduced lunch. She has a participation during math lessons. She also plays on a history of high success and lessons. He also loves to play imath lessons. She also loves softball team. high participation during math to dance. soccer. 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 Liam (he/him) Jackie (she/they) Alejandro (he/him) Mason (he/him) Aleiandro is a Latino boy who Liam is a white boy who Jackie is a white transgender Mason is a white boy who girl who speaks English as speaks Spanish as his first speaks English as his first speaks English as his first her first language. She has no language. He is an EL student language. He has no language. He is on an IEP for identified disabilities. She identified disabilities, and he who speaks English at a severe ADHD. He receives receives free or reduced beginner level. He has no does not receive free or free or reduced lunch. He has identified disabilities. He lunch. She has a history of reduced lunch. He has a a history of high success and low participation during math receives free or reduced average success and low history of average success participation during math lunch. He has a history of low and average participation lessons. He also enjoys success and low participation during math lessons. He also lessons. She also loves singing. during math lessons. He also animals. loves comic books. 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