CODE: 237

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 Carter (he/him) Angel (she/her) Jada (she/her) Liam (he/him) Angel is a Black girl who Jada is a Black girl who Carter is a Black boy who Liam is a white boy who speaks English as his first speaks English as her first speaks English as her first speaks English as his first language. He has no language. She has no language. She has no language. He has no identified disabilities, and he identified disabilities, and she identified disabilities, and she identified disabilities, and he receives free or reduced does not receive free or does not receive free or does not receive free or reduced lunch. She has a lunch. He has a history of reduced lunch. She has a reduced lunch. He has a average success and little to history of low success and low history of high success and history of average success no participation during math participation during math high participation during math and average participation lessons. He also loves to cook lessons. She also enjoys lessons. She also plays on a during math lessons. He also and bake. making origami. softball team. loves comic books. 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 25 40 + 3 = 4325 + 2550 Mateo (he/him) Alejandro (he/him) Mason (he/him) Daniela (she/her) Mateo is a Latino boy who Alejandro is a Latino boy who Mason is a white boy who Daniela is a Latina girl who speaks Spanish as his first speaks Spanish as his first speaks English as his first speaks English as her first language. He is an EL student language. He is an EL student language. He is on an IEP for language. She has no who speaks English at an who speaks English at a severe ADHD. He receives identified disabilities, and she intermediate level. He has no beginner level. He has no free or reduced lunch. He has does not receive free or identified disabilities. He identified disabilities. He a history of high success and reduced lunch. She has a receives free or reduced receives free or reduced low participation during math history of average success lunch. He has a history of high lunch. He has a history of low lessons. He also enjoys and low participation during math lessons. She also loves success and average success and low participation singing. participation during math during math lessons. He also to dance. lessons. He also likes to play loves to play Minecraft. the guitar. Strategy C Strategy D 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.

Oliver (he/him) Jackie (she/they) Valentina (she/her) Ava (she/her) Oliver is a white boy who Jackie is a white transgender Valentina is a Latina girl who Ava is a white girl who speaks English as her first language. speaks English as his first girl who speaks English as speaks English as her first her first language. She has no language. She has an IEP for She has no identified language. He has no disabilities. She receives free identified disabilities, and he identified disabilities. She speech impairment does not receive free or receives free or reduced (stuttering). She does not or reduced lunch. She has a reduced lunch. He has a lunch. She has a history of receive free or reduced lunch. history of low success and low history of high success and average success and low She has a history of average participation during math success and low participation high participation during math participation during math lessons. She also loves lessons. He also enjoys riding lessons. She also loves during math lessons. She also gardening. his bike. animals. enjoys spending time in nature. Strategy F Strategy E First, I added 7 and 3 23 + 27 27 to get 10. I put a zero I made it 23 + 27 because that's easier for + 23 under the 7. me to think about. 23 + (2 + 25)50 • Then I put the 1 up Then I broke the 27 into 2 and 25. (23 + 2) = 25above the 2. Last I Then I combined the 2 with the 23, and I got added 1 + 2 + 2 to get 50. Grace (she/her) CJ (they/them) Camille (she/her) Adriel (he/him) CJ is a gender fluid white Camille is a white girl who Grace is an Asian girl who Adriel is an Indigenous boy child who speaks English as speaks French as her first speaks English as her first who speaks English as his their first language. They have language. She is an EL language. She has an IEP for first language. He has no no identified disabilities, and student who speaks English dyslexia. She does not identified disabilities, and he at an advanced level. She has receive free or reduced lunch. receives free or reduced they do not receive free or reduced lunch. They have a no identified disabilities, and She has a history of low lunch. He has a history of history of high success and she does not receive free or success and average average success and low reduced lunch. She has a average participation during participation during math participation during math math lessons. They also love lessons. She also plays history of high success and lessons. He also loves to play high participation during math to draw and paint. basketball. soccer. lessons. She also does karate. Strategy H Strategy G 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