CODE: 50

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) Oliver (he/him) Grace (she/her) Angel (she/her) Grace is an Asian girl who Angel is a Black girl who Carter is a Black boy who Oliver is a white boy who speaks English as his first speaks English as his first speaks English as her first speaks English as her first language. He has no language. He has no language. She has an IEP for language. She has no identified disabilities, and he identified disabilities, and he dyslexia. She does not identified disabilities, and she receives free or reduced does not receive free or receive free or reduced lunch. I does not receive free or reduced lunch. She has a lunch. He has a history of reduced lunch. He has a She has a history of low average success and little to history of high success and success and average history of low success and low no participation during math high participation during math participation during math participation during math lessons. He also loves to cook lessons. He also enjoys riding lessons. She also plays lessons. She also enjoys his bike. and bake. basketball. making origami. 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. 40 40 + 3 = 4325 + 2550 Liam (he/him) Jada (she/her) Mateo (he/him) Camille (she/her) Liam is a white boy who Jada is a Black girl who Mateo is a Latino boy who Camille is a white girl who speaks English as his first speaks English as her first speaks Spanish as his first speaks French as her first language. He has no language. She has no language. He is an EL student language. She is an EL identified disabilities, and he identified disabilities, and she who speaks English at an student who speaks English intermediate level. He has no does not receive free or does not receive free or at an advanced level. She has reduced lunch. He has a reduced lunch. She has a identified disabilities. He no identified disabilities, and history of average success history of high success and receives free or reduced she does not receive free or and average participation high participation during math lunch. He has a history of high reduced lunch. She has a during math lessons. He also lessons. She also plays on a success and average history of high success and loves comic books. participation during math softball team. high participation during math lessons. He also likes to play lessons. She also does the guitar. karate. 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.

Alejandro (he/him) Valentina (she/her) Daniela (she/her) Jackie (she/they) Daniela is a Latina girl who Jackie is a white transgender Alejandro is a Latino boy who Valentina is a Latina girl who speaks English as her first girl who speaks English as speaks Spanish as his first speaks English as her first her first language. She has no language. He is an EL student language. She has an IEP for language. She has no identified disabilities. She identified disabilities, and she who speaks English at a speech impairment does not receive free or receives free or reduced beginner level. He has no (stuttering). She does not reduced lunch. She has a lunch. She has a history of identified disabilities. He receive free or reduced lunch. receives free or reduced history of average success average success and low She has a history of average and low participation during lunch. He has a history of low success and low participation participation during math during math lessons. She also math lessons. She also loves lessons. She also loves success and low participation to dance. animals. during math lessons. He also enjoys spending time in loves to play Minecraft. 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. Ava (she/her) Adriel (he/him) Mason (he/him) CJ (they/them) Ava is a white girl who speaks Adriel is an Indigenous boy CJ is a gender fluid white Mason is a white boy who English as her first language. who speaks English as his speaks English as his first child who speaks English as She has no identified first language. He has no language. He is on an IEP for their first language. They have disabilities. She receives free identified disabilities, and he severe ADHD. He receives no identified disabilities, and or reduced lunch. She has a receives free or reduced free or reduced lunch. He has they do not receive free or history of low success and low lunch. He has a history of a history of high success and reduced lunch. They have a participation during math average success and low low participation during math history of high success and participation during math lessons. She also loves average participation during lessons. He also enjoys gardening. lessons. He also loves to play singing. math lessons. They also love to draw and paint. Strategy G Strategy H 1. 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