CODE: 81

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 Liam (he/him) Jackie (she/they) Daniela (she/her) Mateo (he/him) Jackie is a white transgender Liam is a white boy who Daniela is a Latina girl who Mateo is a Latino boy who speaks English as her first speaks English as his first girl who speaks English as speaks Spanish as his first language. He has no her first language. She has no language. She has no language. He is an EL student identified disabilities, and he identified disabilities. She identified disabilities, and she who speaks English at an does not receive free or receives free or reduced does not receive free or intermediate level. He has no reduced lunch. She has a reduced lunch. He has a lunch. She has a history of identified disabilities. He history of average success average success and low history of average success receives free or reduced and average participation participation during math and low participation during lunch. He has a history of high math lessons. She also loves during math lessons. He also lessons. She also loves success and average loves comic books. animals. to dance. participation during math lessons. He also likes to play the guitar. Strategy A Strategy B 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 Mason (he/him) Carter (he/him) Grace (she/her) Angel (she/her) Mason is a white boy who Carter is a Black boy who Grace is an Asian girl who Angel is a Black girl who speaks English as his first speaks English as his first speaks English as her first speaks English as her first language. He is on an IEP for language. He has no language. She has an IEP for language. She has no severe ADHD. He receives identified disabilities, and he dvslexia. She does not identified disabilities, and she free or reduced lunch. He has receives free or reduced receive free or reduced lunch. does not receive free or a history of high success and lunch. He has a history of She has a history of low reduced lunch. She has a low participation during math average success and little to success and average history of low success and low lessons. He also enjoys no participation during math participation during math participation during math singing. lessons. He also loves to cook lessons. She also plays lessons. She also enjoys and bake. basketball. making origami. 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.

Oliver (he/him) CJ (they/them) Adriel (he/him) Ava (she/her) Oliver is a white boy who Adriel is an Indigenous boy Ava is a white girl who speaks CJ is a gender fluid white who speaks English as his English as her first language. speaks English as his first child who speaks English as She has no identified their first language. They have first language. He has no language. He has no identified disabilities, and he disabilities. She receives free identified disabilities, and he no identified disabilities, and receives free or reduced or reduced lunch. She has a does not receive free or they do not receive free or lunch. He has a history of history of low success and low reduced lunch. He has a reduced lunch. They have a average success and low participation during math history of high success and history of high success and average participation during participation during math lessons. She also loves high participation during math lessons. He also loves to play gardening. lessons. He also enjoys riding imath lessons. They also love to draw and paint. soccer. his bike. 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 me to think about. Then I put the 1 up 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 Camille (she/her) Valentina (she/her) Jada (she/her) Alejandro (he/him) Camille is a white girl who Jada is a Black girl who Valentina is a Latina girl who Alejandro is a Latino boy who speaks French as her first speaks English as her first speaks English as her first speaks Spanish as his first language. She is an EL language. She has no language. She has an IEP for language. He is an EL student student who speaks English identified disabilities, and she speech impairment who speaks English at a at an advanced level. She has does not receive free or (stuttering). She does not beginner level. He has no receive free or reduced lunch. no identified disabilities, and reduced lunch. She has a identified disabilities. He she does not receive free or history of high success and She has a history of average receives free or reduced reduced lunch. She has a success and low participation lunch. He has a history of low high participation during math history of high success and lessons. She also plays on a during math lessons. She also success and low participation high participation during math during math lessons. He also softball team. enjoys spending time in lessons. She also does nature. loves to play Minecraft. karate. Strategy G Strategy H 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