CODE: 89

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 Mateo (he/him) Alejandro (he/him) Camille (she/her) Angel (she/her) Alejandro is a Latino boy who Camille is a white girl who Angel is a Black girl who Mateo is a Latino boy who speaks French as her first speaks Spanish as his first speaks Spanish as his first speaks English as her first language. He is an EL student language. He is an EL student language. She is an EL language. She has no who speaks English at an who speaks English at a student who speaks English identified disabilities, and she intermediate level. He has no beginner level. He has no at an advanced level. She has idoes not receive free or identified disabilities. He identified disabilities. He no identified disabilities, and reduced lunch. She has a receives free or reduced receives free or reduced she does not receive free or history of low success and low lunch. He has a history of high lunch. He has a history of low reduced lunch. She has a participation during math success and average success and low participation history of high success and lessons. She also enjoys high participation during math making origami. participation during math during math lessons. He also lessons. He also likes to play loves to play Minecraft. lessons. She also does karate. 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) Oliver (he/him) Liam (he/him) Jackie (she/they) Adriel is an Indigenous boy Oliver is a white boy who Liam is a white boy who Jackie is a white transgender who speaks English as his speaks English as his first speaks English as his first girl who speaks English as first language. He has no language. He has no language. He has no her first language. She has no identified disabilities, and he identified disabilities, and he identified disabilities, and he identified disabilities. She receives free or reduced does not receive free or does not receive free or receives free or reduced lunch. He has a history of reduced lunch. He has a reduced lunch. He has a lunch. She has a history of average success and low history of high success and history of average success average success and low participation during math high participation during math and average participation participation during math lessons. He also loves to play lessons. He also enjoys riding during math lessons. He also lessons. She also loves his bike. soccer. loves comic books. animals. 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.

Mason (he/him) CJ (they/them) Grace (she/her) Daniela (she/her) Mason is a white boy who CJ is a gender fluid white Grace is an Asian girl who Daniela is a Latina girl who speaks English as his first child who speaks English as speaks English as her first speaks English as her first language. He is on an IEP for their first language. They have language. She has an IEP for language. She has no severe ADHD. He receives no identified disabilities, and dyslexia. She does not identified disabilities, and she free or reduced lunch. He has they do not receive free or receive free or reduced lunch. does not receive free or a history of high success and reduced lunch. They have a She has a history of low reduced lunch. She has a low participation during math history of high success and success and average history of average success and low participation during average participation during lessons. He also enjoys participation during math math lessons. They also love lessons. She also plays math lessons. She also loves singing. to draw and paint. basketball. to dance. 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 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 Carter (he/him) Valentina (she/her) Ava (she/her) Jada (she/her) Carter is a Black boy who Valentina is a Latina girl who Ava is a white girl who speaks Jada is a Black girl who speaks English as his first speaks English as her first English as her first language. speaks English as her first She has no identified language. He has no language. She has an IEP for language. She has no identified disabilities, and he speech impairment disabilities. She receives free identified disabilities, and she receives free or reduced (stuttering). She does not or reduced lunch. She has a does not receive free or receive free or reduced lunch. history of low success and low reduced lunch. She has a lunch. He has a history of average success and little to She has a history of average participation during math history of high success and no participation during math high participation during math success and low participation lessons. She also loves lessons. He also loves to cook during math lessons. She also lessons. She also plays on a gardening. and bake. enjoys spending time in softball team. 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