CODE: 29

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 Jada (she/her) Carter (he/him) Alejandro (he/him) Ava (she/her) Jada is a Black girl who Carter is a Black boy who Alejandro is a Latino boy who : Ava is a white girl who speaks speaks Spanish as his first English as her first language. speaks English as her first speaks English as his first language. She has no language. He has no language. He is an EL student She has no identified identified disabilities, and she identified disabilities, and he who speaks English at a disabilities. She receives free beginner level. He has no does not receive free or receives free or reduced or reduced lunch. She has a identified disabilities. He reduced lunch. She has a lunch. He has a history of history of low success and low history of high success and average success and little to receives free or reduced participation during math high participation during math no participation during math lunch. He has a history of low lessons. She also loves lessons. She also plays on a lessons. He also loves to cook success and low participation gardening. softball team. and bake. during math lessons. He also loves to play Minecraft. 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. Then I knew that 25 plus 25 is 50 because 2 quarters are 50 cents. 40 + 3 = 4325 + 2550 Oliver (he/him) Daniela (she/her) CJ (they/them) Mateo (he/him) Oliver is a white boy who Daniela is a Latina girl who CJ is a gender fluid white Mateo is a Latino boy who speaks English as his first speaks English as her first child who speaks English as speaks Spanish as his first language. He has no language. She has no their first language. They have language. He is an EL student identified disabilities, and he identified disabilities, and she no identified disabilities, and who speaks English at an does not receive free or does not receive free or they do not receive free or intermediate level. He has no reduced lunch. He has a reduced lunch. She has a reduced lunch. They have a identified disabilities. He history of high success and history of average success history of high success and receives free or reduced high participation during math and low participation during average participation during lunch. He has a history of high math lessons. They also love lessons. He also enjoys riding math lessons. She also loves success and average his bike. to dance. to draw and paint. participation during math lessons. He also likes to play the guitar. Strategy C Strategy D +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, 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) Camille (she/her) Grace (she/her) Mason (he/him) Adriel is an Indigenous boy Grace is an Asian girl who Camille is a white girl who Mason is a white boy who who speaks English as his speaks English as her first speaks French as her first speaks English as his first language. He is on an IEP for first language. He has no language. She has an IEP for language. She is an EL identified disabilities, and he dyslexia. She does not student who speaks English severe ADHD. He receives receives free or reduced receive free or reduced lunch. at an advanced level. She has free or reduced lunch. He has lunch. He has a history of She has a history of low no identified disabilities, and a history of high success and she does not receive free or average success and low success and average low participation during math participation during math participation during math reduced lunch. She has a lessons. He also enjoys lessons. He also loves to play lessons. She also plays history of high success and sinaina. basketball. high participation during math soccer. lessons. She also does karate. 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 Angel (she/her) Jackie (she/they) Valentina (she/her) Liam (he/him) Angel is a Black girl who Valentina is a Latina girl who Liam is a white boy who Jackie is a white transgender speaks English as her first girl who speaks English as speaks English as her first speaks English as his first language. She has no her first language. She has no language. She has an IEP for language. He has no identified disabilities, and she identified disabilities. She identified disabilities, and he speech impairment does not receive free or receives free or reduced (stuttering). She does not does not receive free or reduced lunch. She has a receive free or reduced lunch. Freduced lunch. He has a lunch. She has a history of history of low success and low average success and low She has a history of average history of average success participation during math participation during math success and low participation and average participation lessons. She also enjoys lessons. She also loves during math lessons. She also during math lessons. He also making origami. animals. enjoys spending time in loves comic books. nature. 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