CODE: 204

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 Daniela (she/her) Jackie (she/they) Grace (she/her) Camille (she/her) Jackie is a white transgender Grace is an Asian girl who Camille is a white girl who Daniela is a Latina girl who speaks English as her first speaks French as her first girl who speaks English as speaks English as her first language. She has no her first language. She has no language. She has an IEP for language. She is an EL identified disabilities, and she identified disabilities. She dyslexia. She does not student who speaks English does not receive free or receives free or reduced receive free or reduced lunch. at an advanced level. She has reduced lunch. She has a lunch. She has a history of She has a history of low no identified disabilities, and history of average success average success and low success and average she does not receive free or and low participation during participation during math participation during math reduced lunch. She has a math lessons. She also loves lessons. She also loves lessons. She also plays history of high success and high participation during math to dance. animals. basketball. lessons. She also does karate. 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) CJ (they/them) Oliver (he/him) Angel (she/her) Mason is a white boy who CJ is a gender fluid white Oliver is a white boy who Angel is a Black girl who speaks English as his first child who speaks English as speaks English as his first speaks English as her first language. He is on an IEP for their first language. They have language. He has no language. She has no severe ADHD. He receives no identified disabilities, and identified disabilities, and he identified disabilities, and she free or reduced lunch. He has they do not receive free or does not receive free or does not receive free or a history of high success and reduced lunch. They have a reduced lunch. He has a reduced lunch. She has a low participation during math history of high success and history of high success and history of low success and low lessons. He also enjoys average participation during high participation during math participation during math singing. math lessons. They also love lessons. He also enjoys riding lessons. She also enjoys to draw and paint. his bike. 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.

Mateo (he/him) Liam (he/him) Valentina (she/her) Ava (she/her) Liam is a white boy who Mateo is a Latino boy who Valentina is a Latina girl who Ava is a white girl who speaks English as her first language. speaks Spanish as his first speaks English as her first speaks English as his first She has no identified language. He is an EL student language. She has an IEP for language. He has no disabilities. She receives free who speaks English at an speech impairment identified disabilities, and he intermediate level. He has no (stuttering). She does not does not receive free or or reduced lunch. She has a identified disabilities. He receive free or reduced lunch. reduced lunch. He has a history of low success and low receives free or reduced She has a history of average history of average success participation during math lunch. He has a history of high success and low participation lessons. She also loves and average participation success and average during math lessons. She also during math lessons. He also gardening. participation during math enjoys spending time in loves comic books. lessons. He also likes to play nature. 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 • 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 Jada (she/her) Carter (he/him) Alejandro (he/him) Adriel (he/him) Jada is a Black girl who Aleiandro is a Latino boy who Adriel is an Indigenous boy Carter is a Black boy who speaks English as her first speaks English as his first speaks Spanish as his first who speaks English as his language. She has no language. He has no language. He is an EL student first language. He has no identified disabilities, and she identified disabilities, and he identified disabilities, and he who speaks English at a does not receive free or receives free or reduced beginner level. He has no receives free or reduced reduced lunch. She has a identified disabilities. He lunch. He has a history of lunch. He has a history of history of high success and average success and little to receives free or reduced average success and low high participation during math no participation during math lunch. He has a history of low participation during math lessons. He also loves to cook lessons. She also plays on a success and low participation lessons. He also loves to play softball team. and bake. during math lessons. He also soccer. loves to play Minecraft. Strategy H Strategy G 1. I made 27 and 23 with 1. 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