



Operations and Algebraic Thinking

June Bray

Math Structures II, Spring 2022

EMPACTS Project

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Bentonville, AR, 72712



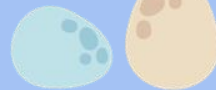
What is My Standard?

1.OA.D.7

Operations & Algebraic Thinking (first grade)

Is this TRUE or FALSE?

$$6+6+4=10+6$$





Grace Brownell and Team:

Least Effective:

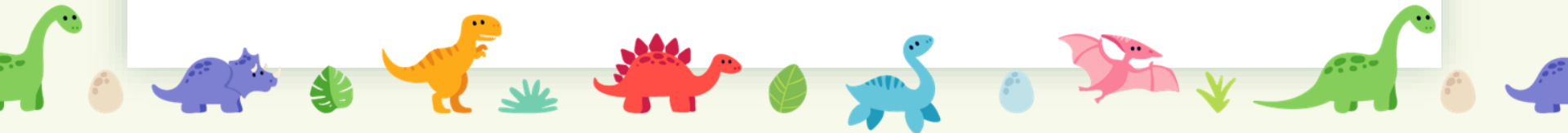
Having the students try to solve the problems without discussing the signs.

Having them solve the problem like a regular equation vs. having them solve one side and then the other.

At the staff meeting, Mrs. Brownell stated that using these cubes really helps the students to be able to visualize the equation and see if it is a true or false statement.

Most Effective:

The students need a solid foundation of math symbols. Every day when doing the problems Mrs. Brownell and her team review what each symbol means ($-$, $+$, $=$), to make sure students have it fresh in their mind.





“Students use linking cubes to write expressions and to demonstrate that they are equivalent by using the equal sign. For example, they divide one group of 5 into 3 and 2, and another group of 5 into 4 and 1, and write the equation $3 + 2 = 4 + 1$.”

https://teacheradvisor.org/1/activities/chunk_1-1-17-5





Mrs. Brownells Thoughts on This Activity:

- “I haven’t done it that way, but I can see it helping them! Make sure they know how to decompose a number first.”
- Mrs. Brownell’s team agreed saying that if the students don’t understand the composition of the numbers, then they will not be able to successfully do it that way.





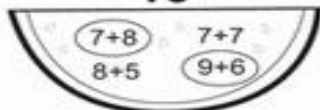
SIMPLE ADDITION



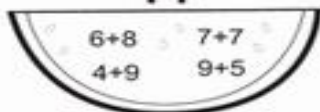
Single Digit Addition

Add the numbers inside the watermelon and circle the ones that add up to the number on the top.

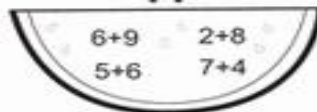
15



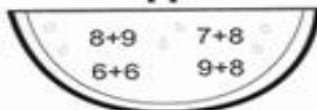
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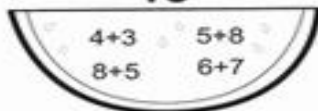
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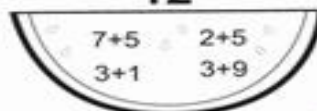
17



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12



<https://www.education.com/worksheets/article/simple-addition-watermelons/>

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Mrs. Brownell & Team's Thoughts on This Activity:

- “I love the way the worksheets are set up. I think this would be very affective for our students and would help them learn the material in a fun way because of the shapes and colors.”
- Mrs. Brownell and her team stated that this way would be a little more confusing due to the fact the “15” and “11” and answers are not split up into 2 separate numbers and on the other side of the equal sign.





Big Idea

“Make sure students are comfortable with the equal sign and its definition of “same as””.

– Mrs. Brownell



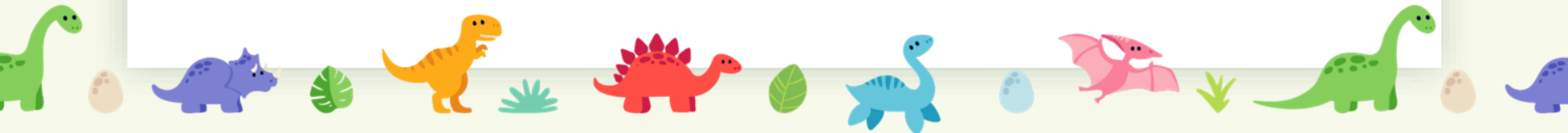
What I learned:

Effective:

Really just making sure that the students know and understand what the equal sign and addition and subtraction symbols truly mean. Before every lesson discuss what they mean and refresh their memory.

Ineffective:

Having the students solve without discussing first. Having the student solve it going into it thinking that both sides genuinely automatically equal each other. Students have to be reminded of what each symbol means.



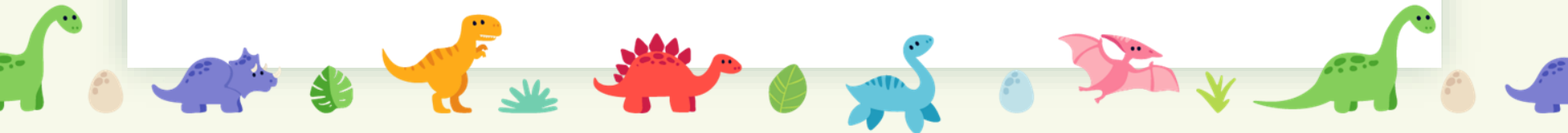
Thanks!





Credits

- https://teacheradvisor.org/1/activities/chunk_1-1-17-5
- <https://www.education.com/worksheet/article/simple-addition-watermelons/>





Acknowledgements:

- Apple Glen Elementary, Bentonville AR
- Thank you, Grace Brownell, 1st grade teacher/mentor
- Dr. William Hammack

