Two Step Word Problems

Second Grade Math Standards
Centerton Gamble Elementary
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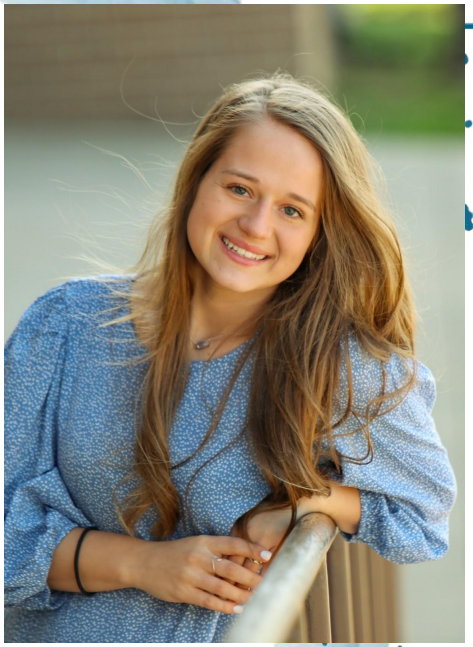
K-12 Mentor: Mary Jo Price

Introduction

We are preservice teachers at NWACC taking mathematical structures and learning about math standards. We researched and found an Arkansas K-12 mathematical standard. We then met with a 2nd grade teacher of a class in the Centerton School District to build a lesson and activity to bring to her students.

In the course we were assigned an NWACC EMPACTS project where we prepared, presented, and reported on our chosen Arkansas mathematical standard using technology to incorporate it into the EMPACTS program

The Team



Braydin

Keeli

Maddie

Charmayne

K-12 Lesson Goals and Objectives

Math standard 2.0A.A.1

- Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions

- Represent a strategy with a related equation including a symbol for the unknown number

Lesson Procedure and Activity

Objective: Students will be able to solve two step word problems within the range 1-100 by using manipulatives and Identifying key elements of the problem.

Materials: Pencil, worksheet, manipulatives (skittles)

Lesson: Talk with students through dissecting each part of the problem looking for keywords that tell us whether to add or subtract. Use our manipulatives to visualize the problem. Communicate the answer both verbally and through two number sentences (equations). Talk through how we got our answers and allow students to raise their hands to help solve the problem and ask questions throughout the guided lesson.

Conclusion: Students can demonstrate their understanding of two step problems verbally, through equations and with manipulatives with the use of addition and subtraction.

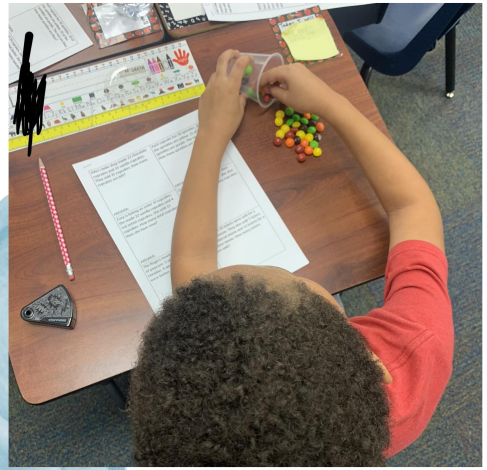
Assessment tools: Allowing students to raise their hands to answer and looking through the worksheets after the lesson was over.

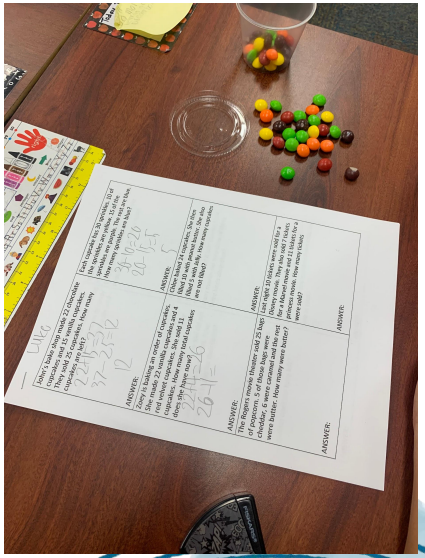
John's bake shop made 22 chocolate cupcakes and 15 vanilla cupcakes. They sold 25 cupcakes. How many cupcakes are left? ANSWER:22+15=37. 37-25=12CUPCAKES	Each cupcake has 30 sprinkles. 10 of the sprinkles are yellow. 15 of the sprinkles are purple. The rest are blue. How many sprinkles are blue? ANSWER:30-10=20. 20-15=5 SPRINKLES
Zoey is baking an order of cupcakes. She made 22 vanilla cupcakes and 4 red velvet cupcakes. She sold 11 cupcakes. How many total cupcakes does she have now? ANSWER:22+4=26. 26-11=16 CUPCAKES	Chloe baked 24 cupcakes. She then filled 10 with peanut butter. She also filled 5 with Jelly. How many cupcakes are not filled? ANSWER:24-10=14. 14-5=9 CUPCAKES
The Rogers movie theater sold 25 bags of popcorn. 5 of those bags were cheddar, 6 were caramel and the rest were butter. How many were butter? ANSWER:25-5=20. 20-6=14 POPCORN BAGS	Last night 10 tickets were sold for a Disney movie. They also sold 7 tickets for a Marvel movie and 11 tickets for a princess movie. How many tickets were sold? ANSWER:10+7=17. 17+11=28 TICKETS

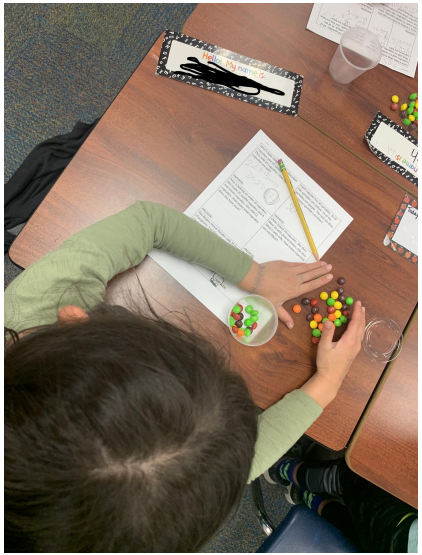
Jacob stocked 14 boxes of gummy worms and 8 boxes of M&Ms. During that day they sold 15 boxes of candy. How many boxes of candy are left? ANSWER: 14+8=22. 22-15=7 CANDY BOXES	Nick had 30 new popcorn buckets. He sold 12 popcorn buckets. He then bought 6 more popcorn buckets. How many popcorn buckets are there now? ANSWER:30-12=18. 18+6=24 POPCORN BUCKETS
On Saturday, the Rogers movie theater sold 20 tickets. On Sunday they sold 9 tickets. 12 of the customers had a coupon and did not have to pay for their ticket. How many had to pay for their ticket? ANSWER:20+9=29. 29-12=17 TICKETS	In 2020, the Rogers movie theater show 10 scary movies. They also showed 7 funny movies and 8 kids' movies. How many movies did they show of those three kinds altogether? ANSWER:10+7=17. 17+8=25 MOVIES
Chloe has 8 chocolate chip cookies and 12 strawberry cookies. She gave her sister 4 cookies. How many cookies does she have left? ANSWER:8+12=20. 20-4=16 COOKIES	Dylan has 22 marshmallows in a bag. Whenever he baked, he used 12 of them. He then buys another bag that has 16 in there. How many marshmallows does he have in total? ANSWER:22-12=10. 10+16=26 MARSHMALLOWS

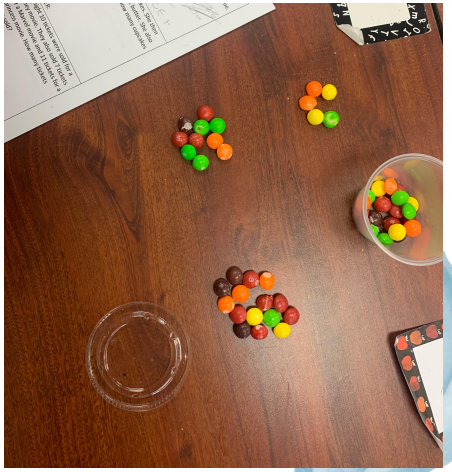
Project Results

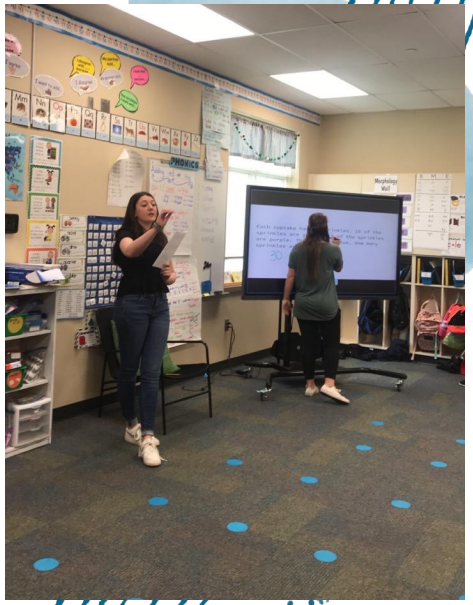
We were successfully able to teach and demonstrate two step word problems to our second grade class with an engaging activity that showed great results in students understanding and participating within the lesson.





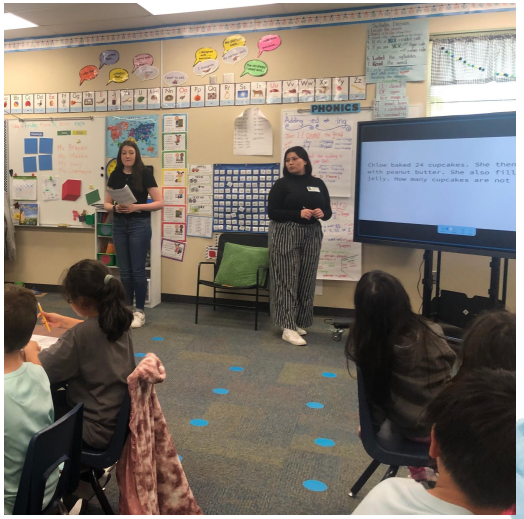






What Did We Learn?

This project gave us a first hand experience of teaching in a classroom with a new group of students. From this we were able to better understand how children of this age group learn and function in a classroom setting and what activities and lesson length worked best for the class.



College Curricular goals

1. Preparing and presenting core mathematical standards using technology for the EMPACTS Program

2. Understanding what is needed in a classroom setting to successfully teach and engage students using the guidelines given

3. showing an understanding for mathematical standards

Products Of Our Learning Experience

01
Empact skills

- Teamwork
- problem solving
- Communication
- Use of technology

02
Project Products

- Lesson plan/ worksheets
- Activities
- Grade level presentation
- Final presentation
- Webpage

03
Teaching Skills

- Classroom management
- developing lessons and activities
- time management
- Assessing students learning

Acknowledgements

Dr. Marjorie Whitmore, Mathematical Structures professor at NWACC

Dr Dianne Phillips, Empacts Project Facilitator at NWACC

Mrs Mary Jo Price, Second grade teacher/K-12 Mentor at Centerton Gamble Elementary School

Sources

- **For research of teaching strategies:**
  - https://theappliciousteacher.com/multi-step-word-problems-decoded/
  - https://magicorelearning.com/2019/04/teaching-2nd-grade-word-problems.html

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