

Interpreting Tally Tables, Bar Graphs, & Picture Graphs

Presented by: Sarah Jackson



Project Introduction

- ▶ I am a preservice teacher at NWACC currently enrolled in Math Structures II. My assignment for this class consist of using one of the mathematical standards for the state of Arkansas K-6th grade. In this course I was assigned this EMPACTS project where I prepared and presented a core mathematical lesson using education technology that can be incorporated in the EMPACTS programs.
- ▶ I collaborated with a teacher in the Rogers school district and conducted my lesson with her 1st grade class.

Math Standard & Objectives

Math Standard

AR.Math.Content.1.MD.C.6 • Organize, represent, and interpret data with up to three categories, using tally tables, picture graphs and bar graphs • Ask and answer questions about the total number represented, how many in each category, and how many more or less are in one category than in another.

Objectives

- ▶ **Students will be able to interpret data using tally tables, bar graphs, & picture graphs by counting the differences in the objects used and then displaying them in a table and graph.**
- ▶ **Students will be able to identify the differences in the data they've interpreted using counting and the visual representation of a graph.**

Lesson Plan

Materials

- Picture graph, tally table, and bar graph worksheet.
- Different colored pencils that correspond to the different candy colors.
- Assorted colorful candies.

Objectives

- Students will be able to identify different tables and graphing methods that can be used to visually illustrate data sets.
- Students will be able to organize different objects into categories and then represent those objects using tables and graphs.

Lesson Instructions

1. I will introduce different tally/graphing methods one at a time with the worksheets provided.
2. After students gain some familiarity to the different graphing styles, I will provide an example and work it through with the class. I will provide feedback for students who may not understand the concepts and will provide alternate methods to demonstrate.
3. After students demonstrate grasping the concepts, each student will be provided two worksheet along with the other materials so they can demonstrate their understanding with my assistance.

Assessment

Students will be assessed with one of the worksheets to demonstrate their independent understanding.

Conclusion

Students are able to demonstrate how to graph using different methods as a way to visually interpret data.

| LEARNING OBJECTIVE | STANDARD | MATERIALS |
|---|---|---|
| <p>STUDENTS WILL BE ABLE TO INTERPRET DATA USING TALLY TABLES, BAR GRAPHS, AND PICTURE GRAPHS BY COUNTING THE DIFFERENCES IN THE OBJECTS USED AND THEN DISPLAYING THEM IN A TABLE AND GRAPH.</p> <p>STUDENTS WILL BE ABLE TO IDENTIFY THE DIFFERENCES IN THE DATA THEY'VE INTERPRETED USING COUNTING AND THE VISUAL REPRESENTATION OF A GRAPH.</p> | <p>AR.Math.Content.1.MD.C.6:</p> <ul style="list-style-type: none"> Organize, represent, and interpret data with up to three categories, using tally tables, picture graphs and bar graphs. Ask and answer questions about the total number represented, how many in each category, and how many more or less are in one category than in another. | <p>Picture graph, tally table, and bar graph worksheet.</p> <p>Different colored crayons that correspond to the different candy colors.</p> <p>Assorted colorful candies.</p> |
| LESSON | Independent Work | Conclusion |
| <p>BRIEF INTRODUCTION OF MYSELF</p> <p>EXPLAIN TO THE STUDENTS HOW DIFFERENT FORMS OF GRAPHS ARE USED TO COLLECT AND INTERPRET DATA.</p> <p>INTRODUCE AND HAND OUT WORKSHEET 1 (PICTURE GRAPH) I WILL ASK THE STUDENTS HOW MANY GREEN, RED, YELLOW, ETC. CANDIES THERE ARE ON THE SHEET. THEN TOGETHER WE WILL PLACE THE TOTALS IN THE CORRESPONDING BOXES.</p> <p>INTRODUCE AND HAND OUT WORKSHEET 2 (BAR GRAPH) ALONG WITH ASSORTED CANDIES AND HAVE STUDENTS SEPARATE THEIR CANDIES INTO DIFFERENT COLORS, THEN COUNT EACH COLOR. WE WILL THEN FILL IN THE COLORS OF THE CANDIES UPWARD ON A BAR GRAPH.</p> <p>INTRODUCE AND HANDOUT WORKSHEET 3 (TALLY TABLE) WE WILL USE TALLY MARKS IN DIFFERENT BOXES TO REPRESENT HOW MANY DIFFERENT COLORED CANDIES THEY PHYSICALLY HAVE AND EXPLAIN THAT TO THEM THAT ONE TALLY MARK WILL REPRESENT ONE CANDY, TWO TALLIES REPRESENTS TWO CANDIES, AND SO ON.</p> | <p>Engage with students and check their progress throughout each worksheet.</p> <p>Based on their graphs, I will ask the students to determine which candies had the most, which candies had the least, and how many of each.</p> <p>Provide positive feedback to students who may not have gotten the answers exactly right. Ask some of the students to demonstrate their thought process in completing the graphs.</p> | <p>Students demonstrated complete understanding of different graphing methods and how to collect and represent data using them.</p> |



Lesson Procedure & Activities

Myself & My Mentor



Madilyn Moses
1st grade
teacher

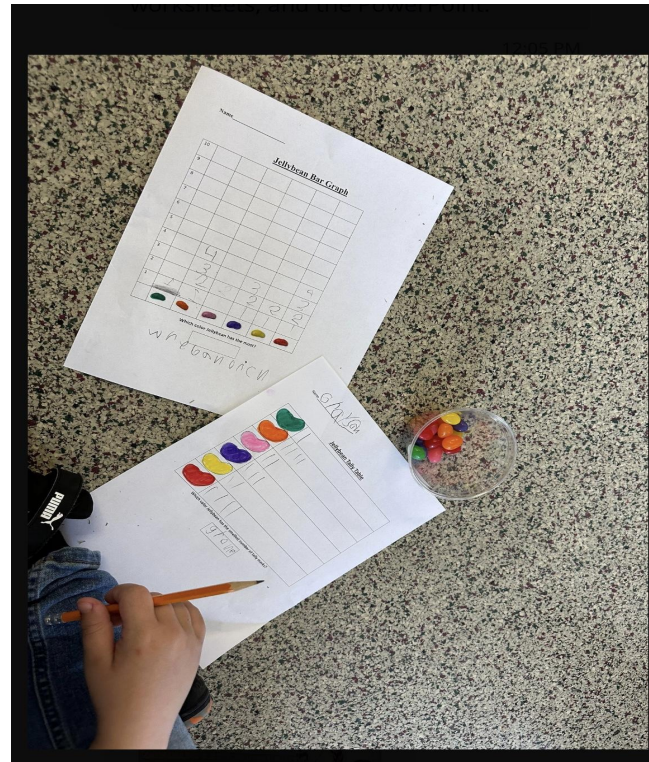
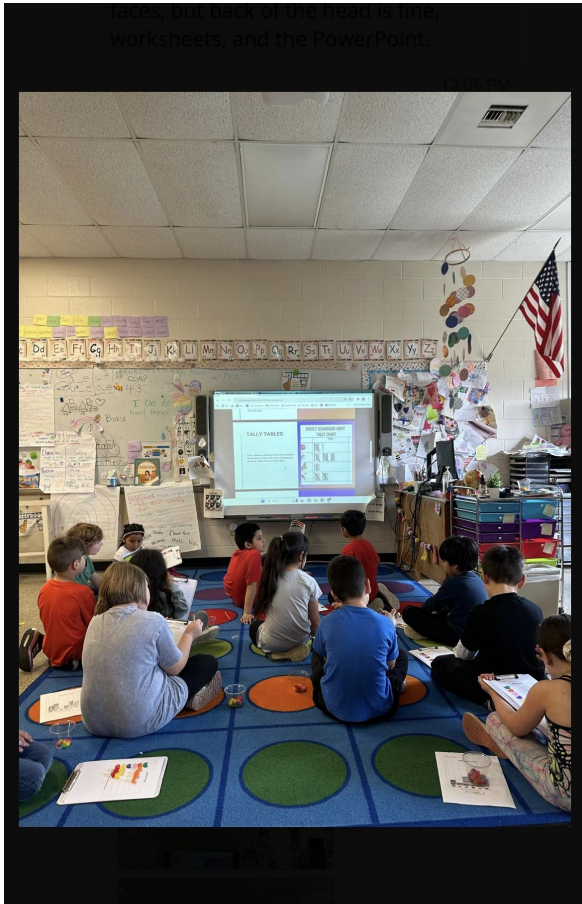


The School

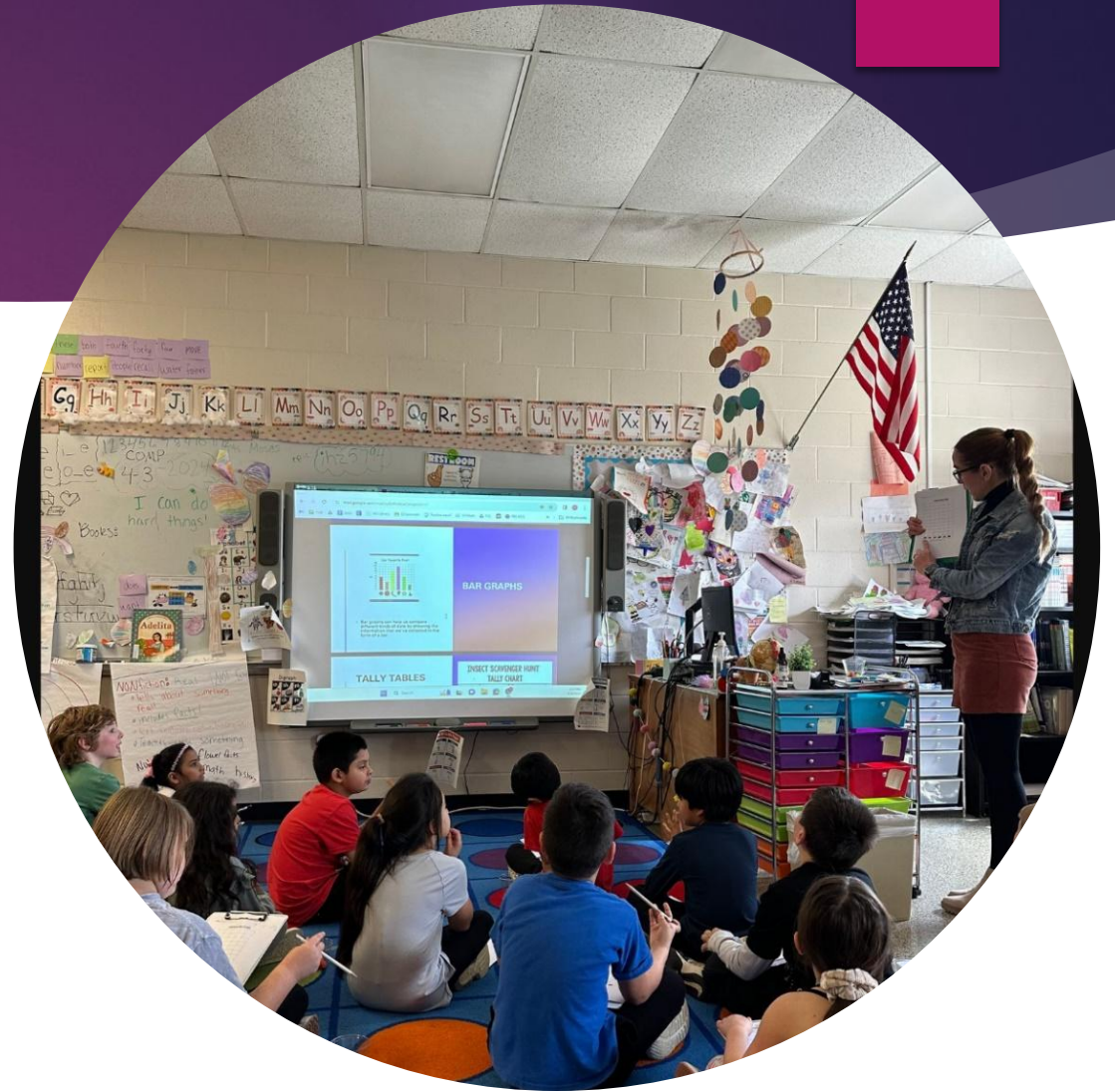
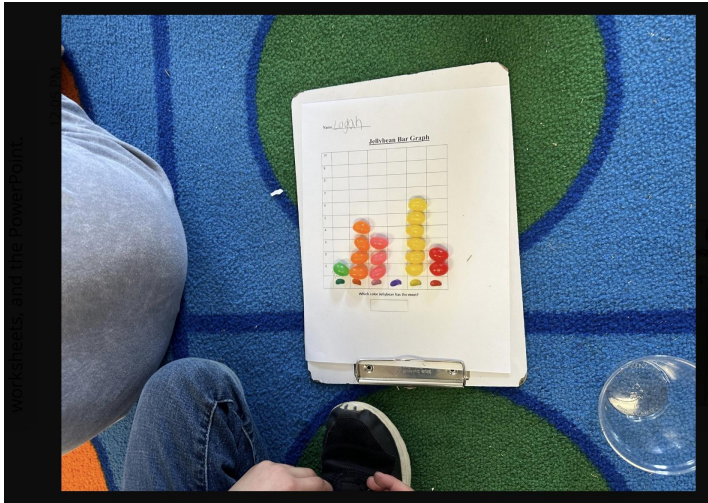


- ▶ Reagan Elementary School
- ▶ Rogers, Arkansas

Instructional Images



Instructional Images



Name _____

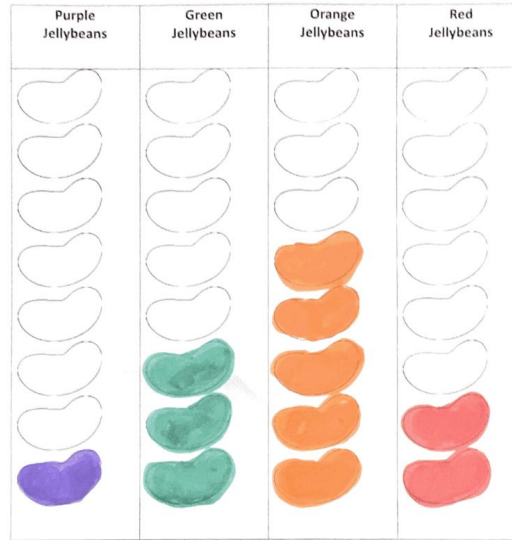
Jellybean Bar Graph



Which color Jellybean has the most?

Name _____

Jellybean Picture Graph



How many total Jellybeans are colored?

Project Results

What I Learned

- Better understanding about what teaching will be like.
- General understanding of this age group and their abilities to complete assignments.
- Not every student will complete the assignment as instructed.
- All students completed each worksheet and were capable of finding their own method to getting the right answer.

College Curricular Goals

- Demonstrate understanding of K-6 mathematical systems.
- Prepare and present Arkansas mathematical standard.
- Understand what is necessary to be an effective teacher using technology and other manipulatives.

Acknowledgments

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mentor at Reagan Elementary School

Citations

All materials were developed by Sarah Jackson, NWACC Student
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