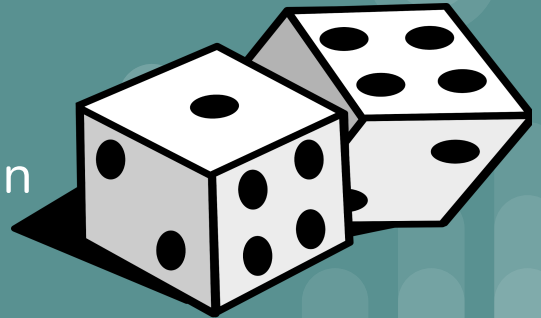
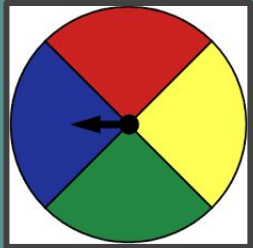


# *The Power of Probability*

Hellstern Middle School  
Seventh Grade

Jaxiry Gutierrez  
K-12 teaching mentor: Brandi Morgan



# *Project Introduction*

I am currently a Pre-service Teacher enrolled in Survey of Math Structures II course at NWACC. As part of our EMPACTS project, we are tasked with applying the knowledge we gain from the course and teaching it to a classroom of students. This project involves several components, including developing a lesson plan that aligns with Arkansas standards, collaborating with a mentor, effectively managing time and the classroom, utilizing technology during the teaching process, and reporting back on our overall experience.

# *The Team*



**My Mentor:  
Brandi Morgan**



# *The School*



Hellstern Middle School



# *Math Standards*

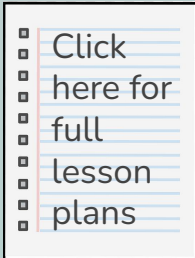
## Focus Standards:

- **AR.Math.Content.7.SP.B.3** - Draw conclusions about the degree of visual overlap of two numerical data distributions with similar variability such as interquartile range or mean absolute deviation, expressing the difference between the centers as a multiple of a measure of variability such as mean, median, or mode
- **AR.Math.Content.7.SP.C.5** - Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring
- **AR.Math.Content.7.SP.C.8** - Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation

# Lesson Objectives

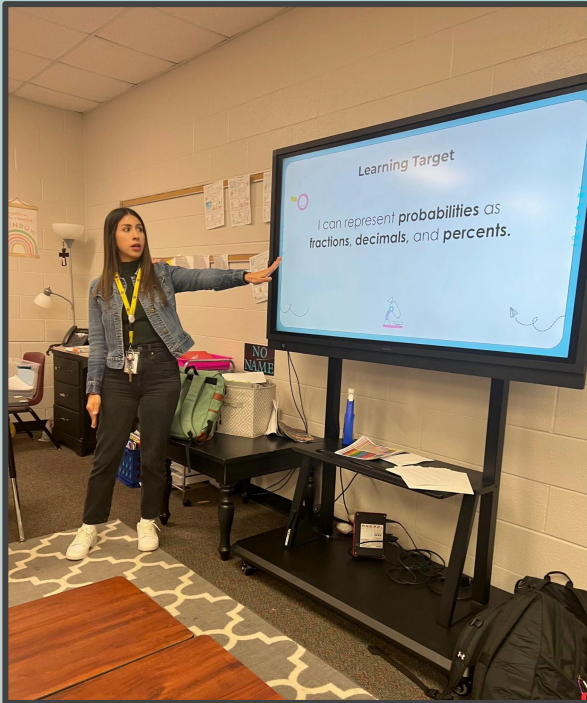
## Learning Objective

- Interpret and analyze the results of probability experiments, including determining if an event is certain, likely, unlikely, or impossible.
- Analyze and interpret data from dice rolls and spinner experiments to draw conclusions about probability.

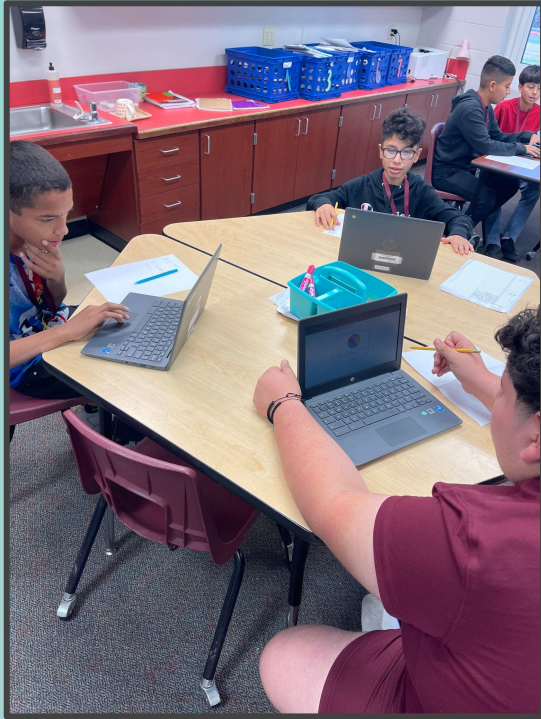




# Instructional Images



# Instructional Images



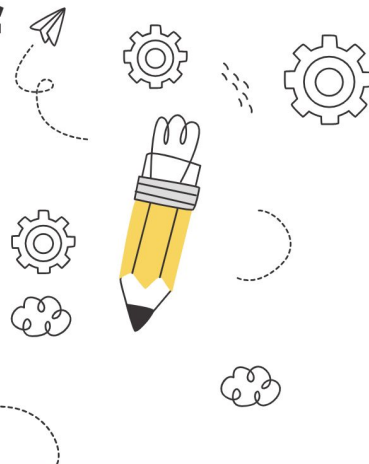


# *Class Lesson Powerpoint*

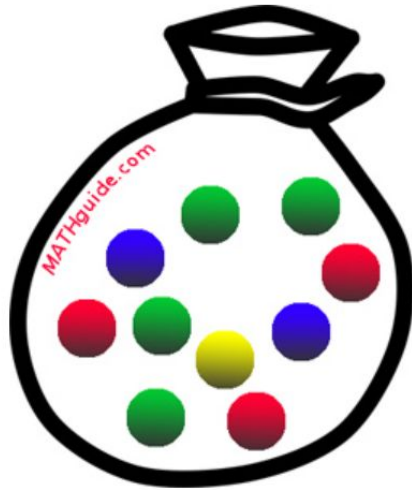
## **The Power of Probability**



**Ms. Jax**



# Project Results



**Problem:** Calculate  $P(\text{pulling a blue marble})$ .

**Solution:** The probability is  percent.



**Problem:** Calculate  $P(\text{spinning an even number that is not blue})$ .

**Solution:** The probability is  percent.

[Check Solution](#)

# *What I learned*

During my time with this 7th grade Math class, I noticed that students learn in various ways. They usually have assigned seats, but I decided to let them sit where they preferred. In middle school, students tend to have a natural divide between boys and girls. Some liked visual aids, others preferred doing activities, and some liked listening to explanations. I saw how the students behaved and interacted with each other in class. This helped me create a good learning environment. As the students were doing their activities on their chromebooks, I checked if they understood the math concepts. I could then identify which students needed more help. Each student was different, and I saw that some needed more help in certain areas. The students were great and I had no behavioural issues.



# *College Curricular Goals*

This project achieves the requirements for the course of study (Math Structures II) and the EMPACTS program. The Learning Outcome for the Math Structures II course per syllabus states that we will “Prepare and present core mathematics lessons using some form of technology that can be incorporated into the EMPACTS program and/or submit an independent research project that incorporates technology.”



# *Products of Learning Experience*

**EMPACTS Skills** • Problem solving • Time management • Communication  
• Use of technology

**Teaching Skills** • Classroom management • Used mathematical standards to develop lessons and activities • How to assess learning • Technology Integration

**Project Products** • Lesson plan • Activity • Grade level presentation • Assessment • Final Presentation • Webpage





# *My Experience*

My ultimate goal is become a 6th and 7th grade ESL/ELD teacher. I have worked with kids for the past 8 years in different positions. Actually teaching a Math class with a full lesson plan was definitely exciting and such a good experience to run a class by myself. It was just a glimpse on what my future holds for me. I love working with kids.



# *Citations*

**Probability: Marble Bag Problems:**

<https://www.mathguide.com/cgi-bin/quizmasters2/Pm.cgi>

**Probability: Spinner Problems:**

<https://www.mathguide.com/cgi-bin/quizmasters2/Ps.cgi>



# *Acknowledgements*

**Dr. Joseph Newhall** - Math Structures II Professor

**Dr. Dianne Phillips** - EMPACTS Project Facilitator at  
NWACC

**Mrs. Morgan** - 7th grade Math teacher and mentor at  
Hellstern Middle School

*Thank you*