

Bean Bag Fraction Fun!

Lesson Overview

In this lesson, Albie will move from abstract numbers to hands-on math by using bean bags to understand fractions as "parts of a set." By the end of this session, Albie will be able to identify, name, and create fractions using physical objects and a "Fraction Toss" game.

Learning Objectives

- **Identify:** Albie will identify the numerator (top number) and denominator (bottom number) of a fraction.
- **Represent:** Albie will represent a set of objects as a fraction (e.g., "3 out of 5 bean bags are red").
- **Apply:** Albie will solve real-world "toss" challenges by calculating his success rate as a fraction.

Materials Needed

- 10-12 Bean bags (ideally in at least two different colors)
- A bucket, hula hoop, or a taped square on the floor (the "Target")
- Masking tape or chalk
- Paper and markers (to create a "Fraction Scorecard")
- A small tray or plate

1. Introduction: The Carnival Hook (5 Minutes)

The Hook: "Albie, imagine you are at a backyard carnival. To win the giant stuffed panda, the sign says you must land 'half' of your bags in the bucket. But wait—how do we know what 'half' looks like if we have 6 bags? Or 10 bags? Today, we are going to use our tossing skills to master the language of fractions!"

The Big Idea: Fractions aren't just for pizzas and pies. They help us describe groups of things. A fraction tells us: *How many do we have out of how many are there in total?*

2. Body: The "I Do, We Do, You Do" Model (20 Minutes)

Step 1: I Do (Demonstration)

Place 4 bean bags on a tray (3 red, 1 blue).

- **The Denominator:** "First, I count the whole group. 1, 2, 3, 4. This is our 'Bottom Number' or the **Denominator**. It tells us how many bags are on the tray in total."
- **The Numerator:** "Next, I want to know the fraction of *red* bags. I count just the red ones: 1, 2, 3. This is our 'Top Number' or the **Numerator**."

- **The Result:** "So, $\frac{3}{4}$ (three-fourths) of the bags are red!"

Step 2: We Do (Guided Practice)

Set up the Target (the bucket or hoop) about 5 feet away. Give Albie 5 bean bags.

- **The Challenge:** "Albie, toss all 5 bags at the target. Let's see how many land inside!"
- **The Math:** After the toss, look at the results together.
 - "How many bags did we start with? (5). That's our Denominator!"
 - "How many landed inside the target? (e.g., 2). That's our Numerator!"
 - "Let's write it down: $\frac{2}{5}$ of the bags made it in!"
- Repeat this twice more with different total numbers of bags (e.g., 3 bags or 6 bags) to practice changing the denominator.

Step 3: You Do (Independent Practice - The Fraction Toss Game)

Albie now acts as the "Carnival Boss." He must complete the following "Fraction Missions" on his scorecard:

1. **Mission 1:** Toss 4 bags. Can you make $\frac{2}{4}$ land in the bucket?
2. **Mission 2:** Toss 6 bags. Can you make $\frac{1}{6}$ land in the bucket?
3. **Mission 3:** Toss 10 bags. Write down the fraction of how many landed inside vs. how many missed.

3. Conclusion: Wrap-Up & Recap (5 Minutes)

Summary: Gather the bean bags. Ask Albie to explain the two parts of the fraction "math sandwich":

- **The Bottom (Denominator):** The whole group we started with.
- **The Top (Numerator):** The special ones we are counting (the ones that landed in!).

Reflection: "If you tossed 5 bags and all 5 went in, what would that fraction look like? ($\frac{5}{5}$). That's called 'One Whole'—a perfect score!"

Success Criteria

Albie has mastered this lesson if he can:

- Correctly identify the total number of bags as the denominator.
- Correctly identify the "target" bags as the numerator.
- Write or say the fraction correctly (e.g., "three-fifths" instead of "three-five").

Differentiation & Adaptability

- **For Extra Support:** Use only 2 or 4 bags at a time. Use different colored bags to represent the numerator and denominator visually on the floor before tossing.
- **For a Challenge:** Introduce "Fraction Comparison." Toss two rounds of 8 bags. In round one, he gets $\frac{2}{8}$. In round two, he gets $\frac{5}{8}$. Which fraction is bigger? Why?

- **Workplace/Training Context:** This can be adapted for adults/teams using "Project Success Rates" (e.g., "If we have 10 tasks and 3 are complete, we are at 3/10 of our goal").

Assessment

- **Formative (During):** Observe Albie as he sets the denominator for each toss. Is he counting the total bags correctly?
- **Summative (End):** Give Albie a final "Mystery Tray" with 7 bean bags (4 green, 3 yellow). Ask him to write the fraction for the green bags and the fraction for the yellow bags without help.