

## Objective

By the end of this lesson, Brooklynne will understand the concept of exponents, how to evaluate them, and apply them in real-world scenarios. She will be able to explain what an exponent represents and solve basic problems involving exponents.

## Materials and Prep

- Paper and pencil for calculations
- Whiteboard (optional) for visual demonstrations
- Timer (for timed activities)
- Fun facts or examples of exponents in real life (e.g., population growth, computer storage)

Before starting the lesson, ensure that Brooklynne has a basic understanding of multiplication and can perform simple calculations.

## Activities

- **Exponent Exploration:**

Begin with a brief introduction to exponents. Have Brooklynne write down a few examples of multiplication (e.g.,  $2 \times 2 \times 2$ ) and then show how that can be expressed as an exponent (e.g.,  $2^3$ ). Discuss the base and the exponent.

- **Exponent Bingo:**

Create a bingo card with different exponents (e.g.,  $2^2$ ,  $3^3$ ,  $4^2$ , etc.). Call out the exponent, and Brooklynne must solve it to find the corresponding number on her card. This will reinforce her understanding in a fun way!

- **Real-World Exponent Hunt:**

Have Brooklynne look around the house or outside for examples of exponents in real life (like in technology, science, or nature). She can write down her findings and present them to you, explaining how exponents relate to each example.

- **Exponent Challenge:**

Set a timer for 5 minutes and challenge Brooklynne to solve as many exponent problems as she can from a list you provide (e.g.,  $3^2$ ,  $5^3$ , etc.). This will help her practice evaluating exponents under time constraints.

## Talking Points

- "An exponent tells us how many times to multiply the base by itself. For example, in  $2^3$ , we multiply 2 by itself three times:  $2 \times 2 \times 2$ ."
- "When we see an exponent of 2, it's also called 'squared.' For instance,  $4^2$  means 4 squared, which equals 16."
- "An exponent of 3 is called 'cubed.' So,  $3^3$  means 3 cubed, which equals 27. It's like stacking cubes!"

- "Exponents can also represent very large numbers. For example,  $10^6$  means 1,000,000, which is very useful in science and technology!"
- "Understanding exponents can help us in everyday situations, like calculating areas and volumes, or even understanding how data storage works in computers!"