Objective

By the end of this lesson, the student will be able to understand and explain the concept of place value in decimals, including identifying the value of digits in decimal numbers and comparing decimal values.

Materials and Prep

- Paper and pencil for writing notes and solving problems
- Whiteboard or large sheet of paper for visual demonstrations
- Calculator (optional, for checking work)

Before starting the lesson, ensure the student has a basic understanding of whole numbers and their place values, as this will help in understanding decimal place values.

Activities

- **Decimal Place Value Chart:**

  Create a place value chart on paper. Label the columns for tenths, hundredths, thousandths, etc. Have the student fill in the chart with example decimal numbers and identify the value of each digit.

- **Decimal Comparison Game:**

  Write down several decimal numbers on pieces of paper. Have the student draw two numbers at a time and compare them to see which is greater or if they are equal. Discuss why one number is greater based on place value.

- **Decimal Story Problems:**

  Create simple story problems that involve decimals, such as shopping scenarios or measuring items. Ask the student to solve the problems and explain how they determined the values of the decimals involved.

- **Decimal Art:**

  Have the student create a piece of art using decimal values. For example, they could draw a rectangle and label its dimensions in decimals, then calculate the area using place value concepts.

Talking Points

- "The place value of a digit tells us how much that digit is worth based on its position in the number."
- "In a decimal number, the first digit to the right of the decimal point is in the tenths place, which means it represents parts of one whole divided into ten equal parts."
- "As we move to the right in a decimal number, each place value represents ten times smaller than the one before it."

- "When comparing decimal numbers, we start from the leftmost digit and move right until we find a difference."
- "Understanding place value helps us add, subtract, and even multiply decimal numbers accurately."