



Subject Area: Mathematics
Unit Title: Whole Numbers
Grade Level: 7-8
Lesson Number: 1 of 10

Duration: 60 minutes
Date: [Insert Date]
Teacher: [Insert Teacher Name]
Room: [Insert Room Number]

Curriculum Standards Alignment

Content Standards:

- Understand the concept of whole numbers and their properties
- Apply whole numbers to real-world problems

Skills Standards:

- Critical thinking and problem-solving
- Communication and collaboration

Cross-Curricular Links:

- Science: measurement and data analysis
- Technology: programming and coding

Essential Questions & Big Ideas

Essential Questions:

- What are whole numbers and how are they used in real-world applications?
- How do whole numbers relate to other mathematical concepts, such as fractions and decimals?

Enduring Understandings:

- Whole numbers are a fundamental concept in mathematics that are used to count, measure, and compare quantities
- Whole numbers have properties, such as commutativity, associativity, and distributivity, that make them useful for solving problems

Student Context Analysis

Class Profile:

- Total Students: 25
- ELL Students: 5
- IEP/504 Plans: 3
- Gifted: 2

Learning Styles Distribution:

- Visual: 40%
- Auditory: 30%
- Kinesthetic: 30%

Welcome to Whole Numbers!

Whole numbers are a fundamental concept in mathematics that are used to count, measure, and compare quantities. In this lesson, we will explore the definition, properties, and applications of whole numbers. By the end of this lesson, you will have a solid understanding of whole numbers and be able to apply them to real-world problems.

Definition and Properties of Whole Numbers

Whole numbers are positive integers that start from 0 and go to infinity. They have several properties, including:

- **Commutativity:** The order of the numbers does not change the result of an operation. For example, $2 + 3 = 3 + 2$.
- **Associativity:** The order in which we perform operations does not change the result. For example, $(2 + 3) + 4 = 2 + (3 + 4)$.
- **Distributivity:** We can distribute a single operation over multiple numbers. For example, $2 \times (3 + 4) = 2 \times 3 + 2 \times 4$.

Whole Numbers in Science

Whole numbers are used in various aspects of science, including:

- Counting and measuring quantities, such as the number of cells in a sample or the number of planets in our solar system
- Recording and analyzing data, such as the number of observations or the number of trials in an experiment

Whole Numbers in Technology

Whole numbers are used in various aspects of technology, including:

- Programming languages, such as Python or Java, to create algorithms and code
- Computer graphics and game development, to create 3D models and animations



Minutes 1-5: Introduction and Icebreaker

Introduce the concept of whole numbers and ask students to share examples of whole numbers they use in their daily lives. Write the examples on the board and ask students to identify which ones are whole numbers.

Minutes 6-10: Direct Instruction

Provide a direct instruction on the definition, properties, and applications of whole numbers. Use visual aids, such as number lines or hundreds charts, to illustrate the concept.

Whole Number Scavenger Hunt

Create a scavenger hunt that requires students to find examples of whole numbers in the classroom or school.

Whole Number Bingo

Create bingo cards with whole numbers and have students play a game of bingo.

Quizzes

Administer quizzes to assess students' understanding of whole numbers.

Class Discussions

Hold class discussions to assess students' understanding of whole numbers and their applications.

Conclusion

In conclusion, whole numbers are a fundamental concept in mathematics that are used to count, measure, and compare quantities. By understanding whole numbers, students can develop a strong foundation in mathematics and improve their problem-solving skills.

Next Steps

The next steps in this lesson plan include introducing fractions, decimals, and percentages, and providing students with opportunities to apply whole numbers to real-world problems.

Whole Number Worksheets

Provide students with additional worksheets to practice working with whole numbers.

Online Resources

Provide students with online resources, such as math games or interactive worksheets, to practice working with whole numbers.

