Teacher Preparation Lesson Plan

Subject Area: Mathematics
Unit Title: Introduction to Place Value in Multi-Digit Whole Numbers
Grade Level: 5-6
Lesson Number: 1 of 10

Duration: 60 minutes
Date: March 10, 2023
Teacher: Ms. Johnson
Room: Room 101

Curriculum Standards Alignment

Content Standards:

- Understand the concept of place value in multi-digit whole numbers
- Identify the place value of each digit in a multi-digit number

Skills Standards:

- Analyze and interpret mathematical information
- Apply mathematical concepts to real-world problems

Cross-Curricular Links:

- Language Arts: reading and writing multi-digit numbers
- Science: measuring and calculating quantities

Essential Questions & Big Ideas

Essential Questions:

- What is the concept of place value in multi-digit whole numbers?
- How do we identify the place value of each digit in a multi-digit number?

Enduring Understandings:

- Place value is the value of a digit depending on its position within a number
- Each digit's value is ten times greater than the digit to its right

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%

Teacher Preparation Lesson Plan

Pre-Lesson Preparation

Room Setup:

- Arrange desks in pairs
- Prepare whiteboard and markers

Technology Needs:

- None

Materials Preparation:

- Multi-digit number worksheets
- Place value charts

Safety Considerations:

- None

Detailed Lesson Flow

Introduction to Place Value (10 minutes)

- Introduce the concept of place value
- Use visual aids to illustrate the concept

Direct Instruction (20 minutes)

- Explain the concept of place value in multi-digit numbers
- Use examples to illustrate the concept

> **Engagement Strategies:**
>
> - Think-pair-share
> - Group discussion

Guided Practice (20 minutes)

- Have students work in pairs to match digits with their corresponding place values
- Circulate around the room to provide guidance and support

> **Scaffolding Strategies:**
>
> - Provide place value charts for reference
> - Offer one-on-one support as needed

Independent Practice (20 minutes)

- Have students complete a worksheet with multi-digit numbers
- Allow students to work independently and circulate around the room to provide support

Closure (10 minutes)

- Review the concept of place value
- Ask students to share their understanding of the concept

Differentiation & Support Strategies

For Struggling Learners:

- Provide extra support and guidance during guided practice
- Offer one-on-one support during independent practice

For Advanced Learners:

- Provide additional challenges and extensions during independent practice
- Encourage students to create their own place value charts and worksheets

ELL Support Strategies:

- Provide visual aids and graphic organizers to support language development
- Offer one-on-one support and guidance during guided practice

Social-Emotional Learning Integration:

- Encourage students to work collaboratively and support one another
- Model and promote positive classroom behaviors and attitudes

Assessment & Feedback Plan

Formative Assessment Strategies:

- Observe students during guided and independent practice
- Review student worksheets and place value charts

Success Criteria:

- Students can identify and explain the concept of place value
- Students can apply the concept of place value to real-world examples and problems

Feedback Methods:

- Verbal feedback during guided and independent practice
- Written feedback on student worksheets and place value charts

Homework & Extension Activities

Homework Assignment:

Have students complete a worksheet with multi-digit numbers and identify the place value of each digit.

Extension Activities:

- Have students create their own place value charts and worksheets
- Encourage students to research and present on real-world applications of place value

Parent/Guardian Connection:

Send a letter to parents/guardians explaining the concept of place value and providing suggestions for supporting their child's learning at home.

Teacher Reflection Space

Pre-Lesson Reflection:

- What challenges do I anticipate?
- Which students might need extra support?
- What backup plans should I have ready?

Post-Lesson Reflection:

- What went well?
- What would I change?
- Next steps for instruction?

Introduction to Place Value

Introduction:

The concept of place value is a fundamental idea in mathematics that enables students to understand the relationship between digits in a multi-digit number.

Learning Objectives:

- Students will be able to identify and explain the concept of place value in multi-digit whole numbers.
- Students will demonstrate an understanding that each digit's value is ten times greater than the digit to its right.

Background Information

Place Value:

Place value is the value of a digit depending on its position within a number.

Multi-Digit Numbers:

In a multi-digit number, each digit has a place value that is ten times greater than the digit to its right.

Understanding Place Value

Understanding Place Value:

Each digit's value is ten times greater than the digit to its right.

Examples:

- The digit 5 in the number 50 has a place value of tens, which is ten times greater than the digit 5 in the number 5.
- The digit 3 in the number 300 has a place value of hundreds, which is ten times greater than the digit 3 in the number 30.

Matching Digits with Place Values

Matching Digits with Place Values:

Have students work in pairs to match digits with their corresponding place values.

Examples:

- Match the digit 4 with the place value of hundreds.
- Match the digit 5 with the place value of tens.

Applying Place Value

Applying Place Value:

Provide real-world examples and problems that require the application of place value.

Examples:

- A book costs $456. What is the place value of the digit 4?
- A car travels 234 miles. What is the place value of the digit 2?

Practice Exercises

Practice Exercises:

Provide a set of practice exercises that require students to apply the concept of place value.

Examples:

- Identify the place value of each digit in the number 945.
- Write the number 753 in words.

Conclusion

Conclusion:

In conclusion, the concept of place value is a fundamental idea in mathematics that enables students to understand the relationship between digits in a multi-digit number.

Assessment:

Observe students during the practice exercises to assess their understanding of the concept of place value.

Extension

Extension:

Have students create their own real-world examples and problems that require the application of place value.

References:

- National Council of Teachers of Mathematics. (2014). Principles to Actions: Ensuring Mathematical Success for All.
- Common Core State Standards Initiative. (2010). Common Core State Standards for Mathematics.