Mastering Two-Digit Addition with Base Ten Blocks: A Hands-On Approach for 7-Year-Olds

Introduction

This lesson plan is designed to introduce 7-year-old students to the concept of two-digit addition using base ten blocks, focusing on partitioning to develop a deep understanding of place value and addition principles. The topic is crucial for developing learners as it lays the foundation for more complex mathematical operations and problem-solving skills.

Lesson Objectives

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- Students will be able to represent two-digit numbers using base ten blocks.
- Students will be able to partition two-digit numbers into tens and ones.
- Students will be able to solve two-digit addition problems using base ten blocks and partitioning.

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Prior Knowledge

Prior Knowledge:

- Basic addition facts within 20
- Familiarity with the base ten number system
- Ability to recognize and write two-digit numbers
- Understanding of basic place value concepts

Lesson Plan

Lesson Plan:

- Introduction (10 minutes)
- Direct Instruction (15 minutes)
- Guided Practice (20 minutes)
- Independent Practice (20 minutes)

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Introduction (10 minutes)

Review the concept of place value and ask students to share examples of when they have seen or used tens and ones in their daily lives. Introduce the importance of understanding two-digit addition and its application in real-life scenarios. Demonstrate a simple addition problem using base ten blocks and ask the class to predict the outcome and explain their reasoning.

Direct Instruction (15 minutes)

Introduce the concept of base ten blocks and demonstrate how to represent two-digit numbers. Explain the concept of partitioning and demonstrate how to break down two-digit numbers into tens and ones. Use visual aids to illustrate the process of adding two-digit numbers using base ten blocks and partitioning.

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Guided Practice (20 minutes)

Provide students with a set of base ten blocks and a worksheet with two-digit addition problems. Have students work in pairs to represent the numbers using base ten blocks and solve the addition problems. Circulate around the room to provide guidance and feedback.

Independent Practice (20 minutes)

Provide students with a set of two-digit addition problems to solve using base ten blocks and partitioning. Allow students to work independently and circulate around the room to provide support as needed.

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Assessment

Formative Assessment:

- Observe students during guided and independent practice.
- Review student worksheets for accuracy.

Summative Assessment:

- Administer a quiz at the end of the lesson to assess student understanding.
- Review student worksheets for accuracy.

Differentiation Strategies

For Struggling Students:

- Provide additional support and scaffolding.
- Use visual aids to illustrate the concept of partitioning.

For Advanced Learners:

- Provide extension activities, such as solving three-digit addition problems.
- Encourage students to create their own word problems.

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Conclusion

In conclusion, this lesson plan is designed to introduce 7-year-old students to the concept of two-digit addition using base ten blocks, focusing on partitioning to develop a deep understanding of place value and addition principles. The lesson includes differentiated activities for mixed-ability groups and provides opportunities for students to practice and apply their knowledge. By the end of the lesson, students will be able to represent two-digit numbers using base ten blocks, partition two-digit numbers into tens and ones, and solve two-digit addition problems using base ten blocks and partitioning.

Reflection

Reflection:

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

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Additional Resources

Additional Resources:

- Base ten blocks
- Worksheet with two-digit addition problems
- Visual aids to illustrate the concept of partitioning

References

References:

- National Council of Teachers of Mathematics. (2014). Principles to Actions: Ensuring Mathematical Success for All.
- Van de Walle, J. A., & Lovin, L. H. (2018). Teaching Student-Centered Mathematics: Grades K-3.