Teacher Preparation Lesson Plan

Subject Area: Mathematics
Unit Title: Applying Addition by Partitioning to Solve Multi-Step Word Problems
Grade Level: 2nd Grade
Lesson Number: 1 of 10

Duration: 60 minutes
Date: March 10, 2024
Teacher: Ms. Johnson
Room: Room 101

Curriculum Standards Alignment

Content Standards:

- 2.OA.A.1: Use addition to solve word problems within 20.
- 2.OA.B.2: Fluently add within 20 using mental strategies.

Skills Standards:

- Reasoning and Problem-Solving
- Communication

Cross-Curricular Links:

- Language Arts: Reading Comprehension
- Science: Measurement and Data

Essential Questions & Big Ideas

Essential Questions:

- How can addition by partitioning help us solve multi-step word problems?
- What are some real-world scenarios where addition by partitioning is used?

Enduring Understandings:

- Students will understand the concept of addition by partitioning and how to apply it to solve multi-step word problems.
- Students will develop their problem-solving skills by learning to break down complex problems into smaller parts.

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%

Pre-Lesson Preparation

Room Setup:

- Arrange desks in small groups
- Prepare whiteboard and markers

Technology Needs:

- Computer with internet access
- Math software or apps

Materials Preparation:

- Printed worksheets
- Manipulatives (e.g. base-ten blocks)

Safety Considerations:

- Ensure students understand classroom rules and expectations
- Supervise students during group work

Detailed Lesson Flow

Introduction (10 minutes)

- Introduce the concept of addition by partitioning
- Use visual aids to illustrate the concept

Direct Instruction (15 minutes)

- Provide direct instruction on addition by partitioning
- Use examples to demonstrate the strategy

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

Guided Practice (15 minutes)

- Provide guided practice activities
- Circulate around the room to provide support

> **Checking for Understanding:**
>
> - Observations
> - Quizzes

Independent Practice (15 minutes)

- Provide independent practice activities
- Allow students to work at their own pace

Closure (10 minutes)

- Review key concepts and objectives
- Ask students to reflect on their learning

Differentiation & Support Strategies

For Struggling Learners:

- Provide extra support and scaffolding
- Use visual aids and manipulatives

For Advanced Learners:

- Provide challenging activities and extensions
- Encourage critical thinking and problem-solving

ELL Support Strategies:

- Provide visual aids and graphic organizers
- Use simple language and definitions

Social-Emotional Learning Integration:

- Encourage self-awareness and self-regulation
- Teach empathy and communication skills

Assessment & Feedback Plan

Formative Assessment Strategies:

- Observations
- Quizzes
- Class discussions

Success Criteria:

- Students can apply addition by partitioning to solve multi-step word problems
- Students can explain their reasoning and thinking

Feedback Methods:

- Verbal feedback
- Written feedback
- Peer feedback

Homework & Extension Activities

Homework Assignment:

Complete worksheet on addition by partitioning

Extension Activities:

- Create own word problems using addition by partitioning
- Research real-world applications of addition by partitioning

Parent/Guardian Connection:

Encourage parents to ask their child about their learning and provide feedback

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

This lesson plan is designed to help 7-year-old students develop their problem-solving skills by applying addition by partitioning to solve multi-step word problems. The topic of addition by partitioning is crucial for students at this age level, as it lays the foundation for more complex mathematical operations and real-world applications.

Lesson Objectives

- Students will understand the concept of addition by partitioning and how to apply it to solve multi-step word problems.
- Students will develop their problem-solving skills by learning to break down complex problems into smaller parts.
- Students will learn to work collaboratively in mixed-ability groups, sharing their thinking and ideas, and communicating their solutions effectively.

Direct Instruction

Provide direct instruction on the concept of addition by partitioning, using visual aids and concrete objects to illustrate the strategy. Use examples of multi-step word problems to demonstrate how to apply addition by partitioning to solve them.

Guided Practice

Provide guided practice activities that require students to apply addition by partitioning to solve multi-step word problems. Use worksheets or activities that cater to different learning styles, such as visual, auditory, or kinesthetic.

Independent Practice

Provide independent practice activities that require students to apply addition by partitioning to solve multi-step word problems. Allow students to work at their own pace and provide feedback and support as needed.

Mixed-Ability Group Challenges

Divide students into mixed-ability groups and provide challenges that require them to apply addition by partitioning to solve multi-step word problems. Use activities such as "Word Problem Wizards" or "Math Escape Room" to promote collaboration and communication among students.

Conclusion

In conclusion, applying addition by partitioning to solve multi-step word problems is a valuable skill for 7-year-old students to master. By providing differentiated activities for mixed-ability groups, teachers can cater to the diverse needs of their students and promote a supportive and inclusive learning environment.

Assessment and Evaluation

Use formative and summative assessments to evaluate students' understanding of the concept and their ability to apply it to solve multi-step word problems. Provide feedback and encouragement to students, and offer suggestions for further practice and review.

Differentiated Activities for Mixed-Ability Groups

- Learning Centers: Set up learning centers that cater to different learning styles, such as visual, auditory, or kinesthetic.
- Tiered Assignments: Provide tiered assignments that cater to different ability levels, such as simplified or complex word problems.
- Technology Integration: Utilize technology, such as math apps or online games, to provide additional support or challenges for students.
- Peer Support: Pair students with peers who have different strengths and weaknesses, allowing them to support and learn from each other.

Extension Activities

- Create Your Own Word Problems: Ask students to create their own multi-step word problems that require the use of addition by partitioning.
- Math Scavenger Hunt: Create a math scavenger hunt that requires students to find and solve multi-step word problems in the classroom or school.
- Math Project: Ask students to complete a math project that requires the use of addition by partitioning to solve a real-world problem.

Parent Engagement

- Math Night: Host a math night at the school, where parents can come and learn about the math concepts their child is studying.
- Volunteer in the Classroom: Invite parents to volunteer in the classroom, where they can assist with math lessons, provide one-on-one support, and help with math activities.
- Math Apps and Games: Provide parents with a list of recommended math apps and games that can be used at home to support their child's learning.