



## Introduction

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Welcome to our lesson on multi-digit addition with regrouping, where we will explore the concept of adding multi-digit numbers using regrouping. This lesson is designed to be engaging and interactive, with a range of activities and examples to help you understand this important math concept. By the end of this lesson, you will be able to confidently perform multi-digit addition with regrouping, using a variety of strategies and techniques to solve problems.

## Lesson Objectives

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### Lesson Objectives:

- To understand the concept of multi-digit addition with regrouping
- To apply the concept of multi-digit addition with regrouping to solve real-world problems
- To use a range of strategies and techniques to solve multi-digit addition problems with regrouping



## Foundation Level

### Activity 1: Multi-Digit Addition with Regrouping Using Base-Ten Blocks

- Objective: To understand the concept of regrouping in multi-digit addition using base-ten blocks
- Instructions: Use base-ten blocks to represent the numbers 45 and 27. Add the numbers together, regrouping as necessary.
- Success Criteria: Accurately add multi-digit numbers with regrouping using base-ten blocks

### Activity 2: Multi-Digit Addition with Regrouping Using Number Lines

- Objective: To apply the concept of regrouping in multi-digit addition using number lines
- Instructions: Use number lines to represent the numbers 456 and 279. Add the numbers together, regrouping as necessary.
- Success Criteria: Accurately add multi-digit numbers with regrouping using number lines



## Core Level

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### Activity 3: Multi-Digit Addition with Regrouping Using Real-World Scenarios

- Objective: To apply the concept of regrouping in multi-digit addition to real-world scenarios
- Instructions: Use real-world scenarios such as calculating the total cost of a shipment of goods or the total number of students in a school. Add the numbers together, regrouping as necessary.
- Success Criteria: Accurately add multi-digit numbers with regrouping using real-world scenarios

### Activity 4: Multi-Digit Addition with Regrouping Using Mental Math

- Objective: To apply the concept of regrouping in multi-digit addition using mental math
- Instructions: Use mental math to add multi-digit numbers with regrouping, such as  $456 + 279$ .
- Success Criteria: Accurately add multi-digit numbers with regrouping using mental math



## Extension Level

### Activity 5: Multi-Digit Addition with Regrouping Using Complex Problems

- Objective: To apply the concept of regrouping in multi-digit addition to complex problems
- Instructions: Use complex problems such as calculating the total cost of a shipment of goods or the total number of students in a school. Add the numbers together, regrouping as necessary.
- Success Criteria: Accurately add multi-digit numbers with regrouping using complex problems

### Activity 6: Multi-Digit Addition with Regrouping Using Real-World Applications

- Objective: To apply the concept of regrouping in multi-digit addition to real-world applications
- Instructions: Use real-world applications such as calculating the total cost of a project or the total number of students in a school. Add the numbers together, regrouping as necessary.
- Success Criteria: Accurately add multi-digit numbers with regrouping using real-world applications



## Teaching Script

### Minutes 1-5: Introduction and Hook

- Introduce the topic of multi-digit addition with regrouping and ask students if they have ever encountered a situation where they needed to add multi-digit numbers.
- Write a simple example on the board, such as  $45 + 27$ , and ask students to share their thoughts on how to solve it.

### Minutes 6-10: Direct Instruction

- Provide direct instruction on the concept of multi-digit addition with regrouping, using visual aids and examples to illustrate the process.
- Explain the importance of regrouping and how it is used to solve multi-digit addition problems.

### Minutes 11-15: Guided Practice

- Provide students with a worksheet containing multi-digit addition problems with regrouping, and have them work in pairs to complete the problems.
- Circulate around the room to provide guidance and support as needed.

### Minutes 16-20: Independent Practice

- Provide students with a set of real-world scenarios that require multi-digit addition with regrouping, such as calculating the total cost of a shipment of goods or the total number of students in a school.
- Have students work independently to solve the problems, using a range of strategies and techniques to find the correct answers.

### Minutes 21-25: Transition and Engagement

- Use a transition activity to review the key concepts learned during the lesson, such as a quiz or a game.
- Encourage students to share their thoughts and ideas, and provide feedback and guidance as needed.

### Minutes 26-30: Conclusion and Assessment

- Conclude the lesson by reviewing the key concepts learned and assessing student understanding.
- Use a range of assessment strategies, such as a quiz or a worksheet, to evaluate student knowledge and understanding.



## Assessment

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### Formative Assessment:

- Use formative assessments, such as quizzes, class discussions, and observations, to monitor students' progress and identify areas where they need intervention.

### Summative Assessment:

- Use summative assessments, such as a written test or a project, to evaluate student understanding and progress at the end of the lesson.

## Extension Activities

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### Activity 1: Multi-Digit Addition with Regrouping Challenge

- Objective: To apply the concept of regrouping in multi-digit addition to complex problems
- Instructions: Create a set of 10 multi-digit addition problems with regrouping, using a range of numbers and scenarios. Swap with a partner and solve each other's problems.
- Success Criteria: Accurately add multi-digit numbers with regrouping using complex problems



## Conclusion

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In conclusion, understanding multi-digit addition with regrouping is a crucial concept in mathematics, and there are several key takeaways that students should grasp by the end of this lesson. By incorporating engaging and interactive content, such as games, quizzes, and real-world scenarios, students can develop a deep understanding of this concept and build confidence in their mathematical abilities.

## Next Steps

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The next steps in the lesson progression will build upon the concepts learned in this lesson and provide opportunities for students to apply their knowledge of multi-digit addition with regrouping to more complex problems. Lesson 2: Multi-Digit Subtraction with Regrouping will introduce students to the concept of subtracting multi-digit numbers with regrouping, using a range of strategies and techniques, including the standard algorithm, mental math, and estimation.



## Teaching Tips

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### Teaching Tips:

- Use visual aids such as base-ten blocks and number lines to illustrate the concept of regrouping.
- Provide opportunities for students to apply their knowledge of multi-digit addition with regrouping to real-world problems.
- Use a range of strategies and techniques to solve multi-digit addition problems with regrouping, including the standard algorithm, mental math, and estimation.

## Reflection Questions

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### Reflection Questions:

- What strategies were most effective in supporting students' understanding of multi-digit addition with regrouping, and how can these be built upon in future lessons?
- How can I differentiate instruction to meet the needs of students with varying abilities, including foundation, core, and extension students?
- What opportunities can I provide for students to apply their knowledge of multi-digit addition with regrouping to real-world problems, and how can I assess their understanding and progress?





## Parent Engagement

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### Parent Engagement:

- Regularly check your child's homework and provide feedback on their understanding of multi-digit addition with regrouping.
- Use this information to identify areas where your child may need additional support or challenge.

## Safety Considerations

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### Safety Considerations:

- Provide a clear and concise explanation of the lesson objectives and expectations to avoid confusion and anxiety.
- Ensure that all students have access to the necessary resources and materials, such as pencils, paper, and calculators, to prevent frustration and disappointment.
- Encourage students to ask questions and seek help when needed, fostering a growth mindset and promoting a sense of safety and security.



## Conclusion

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## Final Thoughts

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The UK Primary School Curriculum emphasizes the importance of mixed ability differentiation, and this lesson plan incorporates foundation, core, and extension activities to cater to the diverse needs of students. By providing a safe and supportive learning environment, teachers can help students to develop a growth mindset, build resilience, and achieve their full potential.