

2 Math Unit 10: Strategies to Subtract 3-Digit Numbers

Content Area: **Mathematics**
Course(s):
Time Period: **Marking Period 4**
Length: **15 days**
Status: **Published**

Unit Overview

Subtraction Strategies

This unit allows students to make connections to what they already know. By representing the greater number in base-ten blocks then taking away the lesser number, students visually see how 3-digit subtraction results in the difference.

- **Subtraction Strategies:** Students examine many strategies that can help when subtracting 3-digit numbers. These strategies are familiar to them at this point, as they have used them for subtracting 2-digit numbers but are slightly more complex now that they involve 3-digit numbers. Decomposing numbers to count back is explored using both 2-digit and 3-digit subtrahends. Different decompositions are used to show that some are more efficient than others when counting back. Counting up from the subtrahend to the minuend on a number line is another strategy used. By adding the jump[s] made on the number line, the difference can be found. Finally, adjusting numbers to friendlier numbers is shown as an efficient way to subtract 3-digit numbers. By adding or subtracting the same amount to both numbers in the problem, the difference remains the same, but the subtraction becomes easier.

What Students Are Learning

- Students use place value patterns to mentally subtract 10 or 100 from a 3-digit number.
- Students use place value to subtract 3-digit numbers with and without regrouping.
- Students use different strategies for subtracting 3-digit numbers and explain why they chose the strategy they used.

Number Routines

- Build Fluency
- Let's Count
- Would You Rather?
- Mystery Number
- Decompose It
- Notice & Wonder
- Numberless Word Problem

Standards

place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

MATH.2.NBT.B.8

Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

MATH.2.NBT.B.9

Explain why addition and subtraction strategies work, using place value and the properties of operations.

Materials

Core Materials:

Reveal Math

10.1 Use Mental Math to Subtract 10 or 100

10.2 Represent Subtraction with 3-Digit Numbers

10.3 Decompose One 3-Digit Number to Count Back

10.4 Count On to Subtract 3-Digit Numbers

10.5 Regroup Tens

10.6 Regroup Tens and Hundreds

10.7 Adjust Numbers to Subtract 3-Digit Numbers

10.8 Explain Subtraction Strategies

10.9 Solve Problems Involving Addition and Subtraction

Supplemental Materials:

- [ST Math](#)
- [Happy Numbers](#)
- [3 Act Lessons](#)
- [Building Fact Fluency Kit](#)
- [Brainingcamp Manipulatives](#)
- [Nearpod Lessons](#)
- [Brainpop Resources](#)
- [Online Resources](#)

Technology

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|-------------------|--|
| CS.K-2.8.1.2.DA.1 | Collect and present data, including climate change data, in various visual formats. |
| CS.K-2.8.1.2.DA.3 | Identify and describe patterns in data visualizations. |
| CS.K-2.8.1.2.DA.4 | Make predictions based on data using charts or graphs. |
| CS.K-2.8.2.2.ED.2 | Collaborate to solve a simple problem, or to illustrate how to build a product using the design process. |
| CS.K-2.8.2.2.ED.3 | Select and use appropriate tools and materials to build a product using the design process. |
| CS.K-2.DA | Data & Analysis |

Assessment

Formative Assessment

- Unit Readiness Diagnostics
- Lesson Checks
- Exit Tickets
- Teacher Observation

Summative Assessment

- Unit Assessment Performance Task
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

Accommodations & Modifications

Special Education

| Differentiated Instruction | | | |
|---|---|---|--|
| Accommodate Based on Students' Individual Needs: Strategies | | | |
| Time/General | Processing | Comprehension | Recall |
| <ul style="list-style-type: none"> • Extra time for assigned tasks • Adjust length of assignment • Timeline with due dates for reports and projects • Communication system between home and school • Provide lecture | <ul style="list-style-type: none"> • Extra response time • Have students verbalize steps • Repeat, clarify, or reword directions • Mini-breaks between tasks • Provide a warning for transitions | <ul style="list-style-type: none"> • Precise step-by-step directions • Short manageable tasks • Brief and concrete directions • Provide | <ul style="list-style-type: none"> • Teacher-made checklist • Use visual graphic organizers • Reference resources to promote independence |

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|---|---|---|---|
| notes/outline | <ul style="list-style-type: none"> • Reading partners | <p>immediate feedback</p> <ul style="list-style-type: none"> • Small group instruction • Emphasize multi-sensory learning | <ul style="list-style-type: none"> • Visual and verbal reminders • Graphic organizers |
| <p>Assistive Technology</p> <ul style="list-style-type: none"> • Computer/whiteboard • Tape recorder • Spell-checker • Audio-taped books | <p>Tests/Quizzes/Grading</p> <ul style="list-style-type: none"> • Extended time • Study guides • Focused/chunked tests • Read directions aloud | <p>Behavior/Attention</p> <ul style="list-style-type: none"> • Consistent daily structured routine • Simple and clear classroom rules • Frequent feedback | <p>Organization</p> <ul style="list-style-type: none"> • Individual daily planner • Display a written agenda • Note-taking assistance • Color code materials |

504

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

ELL

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts

- Manipulatives
- Math Diagnosis & Intervention System

At-risk of Failure

- Additional time during intervention time
- Questions read aloud
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

Gifted & Talented

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

Interdisciplinary Connections

ELA:

RI.2.10. Read and comprehend informational texts, including history/social studies, science, and technical texts, at grade level text complexity proficiently with scaffolding as needed.

Science:

K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Career Readiness, Life Literacies & Key Skills

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|-----------------|--|
| PFL.9.1.2.CR.1 | Recognize ways to volunteer in the classroom, school and community. |
| PFL.9.1.2. FI.1 | Differentiate the various forms of money and how they are used (e.g., coins, bills, checks, debit and credit cards). |
| WRK.9.1.2.CAP.1 | Make a list of different types of jobs and describe the skills associated with each job. |
| WRK.9.1.2.CAP.2 | Explain why employers are willing to pay individuals to work. |
| TECH.9.4.2.CT | Critical Thinking and Problem-solving |

Career Ready Practices

- - **Stem in Action :**
 - **Stem Career: Landscape Architect: Kayla talks about her aspirations to be a landscape architect.**
 - **Kayla subtracts 3-digit numbers: Kayla explains how she can subtract to find the difference in sizes of two parks.**
- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.