1 Math Unit 03: Place Value

Content Area: **Mathematics**
Course(s):
Time Period: **Marking Period 1**
Length: **14 days**
Status: **Published**

Unit Overview

Place Value

Understanding Place Value - Students are introduced to the idea of place value in this unit. This marks students' first time analyzing and representing numbers as tens and ones. Students learn how to make numbers 11 to 19 and that ten can be thought of as a group of ten 1s. Students also explore different ways to represent the same number using different but equivalent groupings of tens and ones.

Number Representations - Students explore different tools and methods to represent 2-digit numbers in this unit. First, connecting cubes are used to organize a large number of ones. Grouping ones makes counting more efficient. Next, groups of ten 1s are grouped together into tens. This helps students visualize the value of a 2-digit number. Finally, connecting cube representations and base-ten shorthand are connected to a place-value chart.

Comparing Numbers - In Grade 1, students are formally introduced to comparting numbers using the symbols >, <, and =. Before using these symbols, different comparison tools are used. Students represent numbers using base-ten blocks and compare the number of tens one in each number. If the number of tens is different, the larger number of tens will always be the greater number. After that, numbers are found on a number line. The location of the number on the number line shows which number is greater. then number on the left is always less than the number on the right. Once students are comfortable with comparing two 2-digit numbers, the symbols are introduced as a way to represent the comparison.

What Students Are Learning

- Students represent teen numbers with a ten and ones.
- Students group ones into tens and ones to make it easier to count and name the number.
- Students decompose 2-digit numbers in different ways.
- Students compare 2-digit numbers and then represent comparisons using the symbols >, <, and =.
- Students analyze the characteristics of a number line. Then compare two numbers on a number line.

Number Routines

- Find the Pattern, Make a Pattern
- What Did You See?
- Let's Count

- Notice & Wonder

Standards

1.NBT.B.2	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
1.NBT.B.2.a	10 can be thought of as a bundle of ten ones — called a “ten.”
1.NBT.B.2.b	The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
1.NBT.B.2.c	The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
1.NBT.B.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
1.M.C.4	Know the comparative values of coins and all dollar bills (e.g., a dime is of greater value than a nickel). Use appropriate notation (e.g., 69¢, $10).
1.M.C.5	Use dollars in the solutions of problems up to $20. Find equivalent monetary values (e.g., a nickel is equivalent in value to five pennies). Show monetary values in multiple ways.

Materials

Core Materials:

Reveal Math

3.1 Numbers 11 to 19

3.2 Understand Tens

3.3 Represent Tens and Ones

3.4 Represent 2-Digit Numbers

3.5 Represent 2-Digit Numbers in a Different Way

3.6 Compare Numbers

3.7 Compare Numbers on a Number Line

3.8 Use Symbols Compare Numbers

Supplemental Materials:

- ST Math
- Happy Numbers
- 3 Act Lessons
- Building Fact Fluency Kit

- Brainingcamp Manipulatives
- Nearpod Lessons
- Brainpop Resources
- Online Resources

Technology

8.1.2.DA.1	Collect and present data, including climate change data, in various visual formats.
8.1.2.DA.4	Make predictions based on data using charts or graphs.
8.1.2.AP.1	Model daily processes by creating and following algorithms to complete tasks.
8.1.2.AP.2	Model the way programs store and manipulate data by using numbers or other symbols to represent information.
8.1.2.AP.4	Break down a task into a sequence of steps.
8.2.2.ED.2	Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.

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 • 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 notes/outline	**Processing** • Extra response time • Have students verbalize steps • Repeat, clarify, or reword directions • Mini-breaks between tasks • Provide a warning for transitions • Reading partners	**Comprehension** • Precise step-by-step directions • Short manageable tasks • Brief and concrete directions • Provide immediate feedback • Small group instruction • Emphasize multi-sensory learning	**Recall** • Teacher-made checklist • Use visual graphic organizers • Reference resources to promote independence • Visual and verbal reminders • Graphic organizers
Assistive Technology • Computer/whiteboard • Tape recorder • Spell-checker • Audio-taped books	**Tests/Quizzes/Grading** • Extended time • Study guides • Focused/chunked tests • Read directions aloud	**Behavior/Attention** • Consistent daily structured routine • Simple and clear classroom rules • Frequent feedback	**Organization** • 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

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.
ETS1.B	Developing Possible Solutions
	Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions, such as climate change, to other people.
2.2.2.PF	Physical Fitness
RI.MF.1.6	With prompting and support, use text features (e.g., diagrams, tables, animations) to describe key ideas.
W.IW.1.2.B	Develop the topic with facts or other information and examples related to the topic.

Career Readiness, Life Literacies & Key Skills

Creativity and Innovation: Brainstorming can create new, innovative ideas.

- **9.4.2.CI.1:** Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).

Example: Students will share ideas of multiple strategies and draw models to illustrate their perspective to the solution path they utilize to solve word problems.

Critical Thinking and Problem-Solving: Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.

- **9.4.2.CT.2:** Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).

Example: Students will work in small groups and collaborate to identify possible solutions paths to word problems, utilizing the strategies they have learned to solve addition and subtraction operations, such as place value charts, number lines, hundred chart, ten frames, etc., that could best illustrate the solution to the problem.

Digital Citizenship: Individuals should practice safe behaviors when using the Internet.

- **9.4.2.DC.3:** Explain how to be safe online and follow safe practices when using the Internet (e.g., 8.1.2.NI.3, 8.1.2.NI.4).

Example: Students will model appropriate use of all digital platforms and share examples of their work that exhibit proper use of various platforms.

Interaction of Technology and Humans: Technology has changed the way people live and work. Various tools can improve daily tasks and quality of life.

- **8.2.2.ITH.3:** Identify how technology impacts or improves life.

Example: Students will track their progress using Reveal Math or other math programs often utilized in class. Students will discuss the pros and cons of using the program with the teacher. Students will use analog and digital clocks.

Career Ready Practices

STEM Career: Paleontologist- Students talk about the work of a paleontologist.

Students use place value to determine the number of dinosaur teeth.

- 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.