

## Unit 1 Number Sense and Place Value Math 1

Last Update: August 1, 2025

Archdiocesan Curriculum > Grade > Math 1 > Length of unit 32 to 33 days

# Stage 1: Desired Results Essential Question(s)

# This unit builds foundational number sense by focusing on counting, place value, and number comparison within 120. Students count forward and backward, skip count by different intervals, compose and decompose numbers using tens and ones, and compare and order numbers using models, symbols, and number lines.

### Mathematical Practices

General Information

- MP2 Reason abstractly and quantitatively.
- MP4 Model with mathematics.
- MP6 Attend to precision.
- MP7 Look for and make use of structure.

- How can patterns help you count forward, backward, and by groups?
- What do the digits in a number tell us about its value?
- How can we use models to represent numbers in different ways?
- What strategies help us compare and order numbers?
- How does understanding place value help you read, write, and compare numbers?

### Enduring Understanding/Knowledge

### Students will:

- Use a counting pattern to help count to 120.
- Use a counting pattern to help count backward from 120.
- Skip count by twos to 20.
- Skip count by fives to 100.
- Count by tens.
- Identify the numbers that are 10 more and 10 less than a two-digit number.

### Review/Assess

- Use tens and ones to write a number in different ways.
- Show a number as tens and ones.
- Model and name groups of ten.
- Use cubes to represent a number as tens and ones
- Use tens and ones to represent numbers to 100.
- Make models to show a number in different ways.
- Model, read, and write numbers from 100 to 110.
- Model, read, and write numbers from 110 to 120.
- Write numbers in expanded form.

### Review/Assess

- Compare two numbers to find which is greater.
- Compare two numbers to find which is less.
- Use symbols to compare numbers.
- Make a model to compare numbers
- Order numbers using an open number line.

### Review/Assess

### Vocabulary

### New

- skip count
- digit
- ten
- ones
- hundred
- is greater than (>)
- is less than (<)</li>
- is equal to (=)
- greatest
- least

Review

- count
- patternbackward
- forward
- number line
- compare
- order
- expanded form
- model
- group

### Connections to Catholic Identity / Other Subjects Differentiation

### Religion/Catholic Identity:

- Using themes from the Bible to create word problems to solve basic math facts. (ie- If there are 12 apostles and 4 leave to evangelize, how many are still with Jesus)
- The Psalms talk about the Blessings we receive from God- ask students to count their blessings and write about them
- Discuss the value of each person created by God just as each number is ordered and has a value.
- Read the parable of the Lost Sheep-this 'one' sheep has value. If the sheep is lost then the shepherd becomes upset- if the value of a number is lost the number change

### Other Subject Here:

- **ELA:** Use trade books like Eric Carle's The Hungry Caterpillar- add up the fruits and other items from stories to find the sum.
- **Social Studies:** Demonstrate the concept of part/part/whole as it relates to communities. We are part of the whole school community. Citizens are part of towns and communities.
- Science: Track daily temperatures- highs and lows. Say the temperatures in expanded form and then add or subtract them to find the difference.

### Enrichment

- **Explore 3-Digit Numbers** Challenge students to extend place value understanding to 3-digit numbers and model them using base-ten blocks.
- Skip Count Beyond 120 Encourage students to skip count by 2s, 5s, and 10s beyond 120 and identify patterns.
- Create Real-World Number Stories Ask students to write and solve their own number comparison or skip-counting stories.
- **Expanded Form Challenges** Have students decompose numbers in multiple ways using expanded form and visual models.

### Support

- **Use Number Paths and Charts** Provide visual supports like number charts and number paths for counting practice.
- Hands-On Base-Ten Models Reinforce place value with physical manipulatives like cubes, rods, and mats.
- Picture Clues for Symbols Use visuals to reinforce understanding of greater than, less than, and equal to symbols.
- **Guided Counting Practice** Practice counting forward and backward in small groups using songs and games.
- Color-Coded Place Value Cards Use color-coded tools to differentiate tens and ones in number building activities.

### Standards & Benchmarks

### Counting and Number Sense:

Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

### 1.NBT.5

Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

### 1.NBT.1

Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

### 1.NBT.C.5

Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.

### 1.NBT.A.1

Count to 120 by 1's, 2's, and 10's starting at any number less than 100. In this range, read and write numerals and represent a number of objects with a written numeral.

### **Count by Tens and Ones:**

### 1.NBT.2.a

10 can be thought of as a bundle of ten ones, called a "ten."

### 1.NBT.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.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.1

Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

### 1.NBT.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.A.1

Count to 120 by 1's, 2's, and 10's starting at any number less than 100. In this range, read and write numerals and represent a number of objects with a written numeral.

### Compare Numbers:

### 1.NBT.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.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 <.

### Teaching Ideas/Resources

### Websites/Resources:

- <u>Virtual Manipulatives</u> Virtual manipulative resources that can be used for multiple units but has part/part/whole, number lines and ten frames which would be most helpful in this unit.
- <u>Polypad Virtual Manipulatives</u> Another virtual manipulative resource that offers digital number lines (including arrows for 'jumping') as well as cubes and number frames for representing problems.
- <u>Virtual Number Frame Manipulative</u> Number Frames help students structure numbers to five, ten, twenty, and one hundred. Students use the frames to count, represent, compare, and compute with numbers in a particular range.
- Ten Frame Worksheets Printable resources to practice addition facts using 10 frames.
- <u>Haunted House Fact Families</u> This is a hands-on activity that uses fact families. Teacher and student directions are provided.
- <u>Jack Hartmann Greater Than and less Than Numbers</u> A fun song that engages the students to identify the
  greater number using number 10 or less.
- Introduction to Place Value Video Watch at the beginning of the unit to introduce place value
- <u>Comparing Numbers Greater Than Less Than</u> Watch this video to show how to use greater than and less than symbols to compare numbers.
- Expanded Form Video This video teaches examples of expanded form but goes into the hundred place
- Number of the Day Activity
  - This activity is used daily in my classroom but can also be used as a check/assessment piece.
  - o If using this daily, I would suggest laminating it and having the students see the number on the board. For the first half of the year, it is more guided instruction and then later the students begin doing this on their own.
  - It is also differentiated depending on if you have students who need to work on two digit or one digit numbers.
- <u>Fill in the Missing Number Skills Check</u> There are 4 to a page and they all have the same numbers. Good for a morning work, an exit ticket, or a quick skills check
- Jack Hartmann 10 More, 10 Less Song 10 more, 10 less gives strategies for mentally finding 10 more or less than a two digit number without having to count or explain the reasoning used. Adding and subtracting by tens by adding or subtracting a one from the tens place. This video can be used as a teaching tool but can also be used as an assessment tool. Simply pause the video at different times and have the kids right the number on a dry erase board. I have them "flash" up their signs and then I can either see what students understand or I take data and use that data for a grade.
- 10 More, 10 Less Activity
  - This tool can be used in a variety of ways.
  - I can project it onto the Ben Q board and have students make the number on their own dry erase boards.
  - For students who need more practice I have them make tens sticks and ones dots. Then they can add or take away a bundle of ten to understand the concept of making the number.
  - Can also be used as an assessment piece where the students have to write their number on a dry
    erase board and I use my data sheet to determine how many they got correct.
  - This could also be a center/small group where the students are putting the numbers in themselves to see if they are correct.
- Counting by 10's A quick skills check to understand increasing by 10s.
- 10 More, 10 Less, 1 More, 1 Less Mat You can either laminate these or use them in reusable sleeves.