

## First Grade Pacing Guide

**Green:** Major Clusters

**Blue:** Supporting Clusters

**Yellow:** Additional Clusters

[Instructional Content Nav - Mathematics: Focus by Grade Level](#)

### Trimester 1

(Ends December 15th)

## Chapter 1

### Addition Concepts

**\*Addition: The process in which quantities are put together or more is added to a quantity.**

- **Lesson 1.1: As Is**
  - Act out the process of addition and “adding to”.
  - IXL Skills:
    - **B.2: Add with pictures - sums up to 10**
- **Lesson 1.2: As Is**
  - Use counters/cubes to model “adding to” a number.
  - Introduce addition equation (i.e.  $2+3=5$ , where 2 and 3 are addends and 5 is the sum)
  - Emphasize the meaning of the equal sign (makes one side of the equation the same as the other side of the equation).
  - Show equations in which the statement is false and have students identify the error.
  - Categorize true vs. false addition equations.
  - IXL Skills:
    - **B.3: Addition sentences up to 10: which model matches?**
- **Lesson 1.3: As Is**
  - Use counters/cubes to model “putting together”.
  - IXL Skills:
    - **D.7: Addition sentences for word problems - sums up to 10**
- **Lesson 1.4: As Is**
  - Add examples where they are given the bar model and the students have to write an addition equation from the bar model themselves.
  - IXL Skills:
    - **D.3: Complete the addition sentence - sums up to 10**
    - **D.6: Addition word problems - sums up to 10**
- **Lesson 1.5: As Is**
  - IXL Skills:

## ■ C.10: Adding 0

### ● Lesson 1.6: As Is

- Introduce the Commutative Property and emphasize that the sum of these related addition problems does not change.
- IXL Skills:
  - D.14: Related addition facts

### ● Lesson 1.7: As Is

- IXL Skills:
  - D.2: Make a number using addition - sums up to 10
  - D.4: Ways to make a number - addition sentences up to 10

### ● Lesson 1.8: As Is

- Add questions in which the student must determine if the addition equation is true or false.
- Ensure students understand that an addition equation can be rewritten vertically. They must include the + and \_\_\_\_\_ .
- IXL Skills:
  - D.1: Addition facts - sums up to 10

### ● Add a lesson on Number Lines and adding within 10

## Chapter 1 Rules of Thumb

- Use bar models and number bonds as a way to illustrate the concept of part-part-whole.
- Ensure that students understand the underlying concept of addition (combining groups together to find the total or adding to a number).
- Use math vocabulary: equation, addends, sum, commutative property, associative property, etc.
- Students need to be able to describe the strategy they used to add and justify their reasoning for using that strategy.
- Add more true/false questions using the equal sign (i.e.  $8+1 = 7+2$  (true),  $3+4 = 5+1$  (false))
- Add error analysis and multi-select questions to each lesson.

## Chapter 2

### **Subtraction Concepts**

**Subtraction: The process in which a quantity is taken from another quantity, a quantity is taken apart, or one quantity is compared to another quantity.**

- Lesson 2.1: As Is
  - IXL Skills:
    - **F.2: Subtract with pictures - up to 10**
- Lesson 2.2: As Is
  - Use counters/cubes to model “taking from”.
  - Introduce subtraction equation (i.e.  $5-3=2$ , where 2 is the difference)
  - Emphasize the meaning of the equal sign (makes one side of the equation the same as the other side of the equation).
  - Show equations in which the statement is false and have students identify the error.
  - Categorize true vs. false subtraction equations.
  - IXL Skills:
    - **F.3: Subtraction sentences up to 10: which model matches?**
- Lesson 2.3: As Is
  - Use counters/cubes to model “taking apart”.
  - IXL Skills:
    - **H.8: Subtraction sentences for word problems - up to 10**
- Lesson 2.4: As Is
  - Add examples where they are given the bar model and the students have to write a subtraction equation from the bar model themselves.
  - IXL Skills:
    - **H.5: Complete the**
    - **subtraction sentence - up to 10**
    - **H.7: Subtraction word problems - up to 10**
- Lesson 2.5: As Is
  - Use counters/cubes to “compare” quantities to show how many more or fewer.
  - IXL Skills:
    - **K.1: Comparing - review**
  - This is a very important lesson. You may have to add more examples or spend a couple days on this lesson.
- Lesson 2.6: As Is
  - IXL Skills:
    - **H.7: Subtraction word problems - up to 10**
- Lesson 2.7: Split into two lessons

- **1) Subtracting All**
- **2) Subtracting Zero**
- **IXL Skills:**
  - **F.7: Subtract zero and all**
  - **G.10: Subtracting 0**
- **Lesson 2.8: As Is**
  - **IXL Skills:**
    - **H.2: Make a number using subtraction - up to 10**
    - **H.3: Ways to make a number - subtraction sentences up to 10**
    - **H.4: Ways to subtract from a number - subtraction sentences up to 10**
- **Lesson 2.9: As Is**
  - **Ensure students understand that a subtraction equation can be rewritten vertically. They must include the - and \_\_\_\_\_ .**
  - **Emphasize that you CANNOT reorder a subtraction problem using the Commutative Property.**
  - **IXL Skills:**
    - **H.1: Subtraction facts - up to 10**
- **Add a lesson on Number Lines for subtracting within 10.**

## **Chapter 2 Rules of Thumb**

- Use bar models and number bonds as a way to illustrate the concept of part-part-whole.
- Ensure that students understand the underlying concept of subtracting (taking away, taking apart, or comparing two sets).
- Use math vocabulary: equation, difference, etc.
- Students need to be able to describe the strategy they used to subtract and justify their reasoning for using that strategy.
- Add more true/false questions using the equal sign (i.e.  $8-1 = 9-2$  (true),  $10-4 = 5-3$ (false))
- Add more error analysis and multi-select questions to each lesson.

## **Chapter 3**

### **Addition Strategies**

**\*Addition: The process in which quantities are put together or more is added to a quantity.**

- **Lesson 3.1: As Is**
  - **Reintroduce the Commutative Property.** Ensure that students understand  $8 + 3 = 3 + 8$  because the sum of both equations is 11.
  - You can use a balance scale or counters to help add sums greater than ten.
  - **IXL Skills:**
    - **D.14: Related addition fact**
- **Lesson 3.2: As Is**
  - **IXL Skills:**
    - **B.5: Addition sentences using number lines - sums up to 10**
    - **D.8: Addition sentences using number lines - sums up to 20**
- **Lesson 3.3: As Is**
  - **IXL Skills:**
    - **E.1: Add doubles - with models**
    - **E.2: Add doubles**
    - **E.3: Add doubles - complete the sentence**
- **Lesson 3.4: As Is**
- **Lesson 3.5: Split into two lessons**
  - **1. Doubles +1**
  - **2. Doubles -1**
  - **IXL Skills:**
    - **E.4: Add using doubles plus one**
    - **E.5: Add using doubles minus one**
- **Lesson 3.6: As Is**
  - **IXL Skills:**
    - **C.1: Adding 1**
    - **C.2: Adding 2**
    - **C.3: Adding 3**
    - **C.4: Adding 4**
    - **C.5: Adding 5**
    - **C.6: Adding 6**
    - **C.7: Adding 7**
    - **C.8: Adding 8**
    - **C.9: Adding 9**
- **Add a lesson on addition problems with unknowns at each position (i.e.  $8 + \underline{\quad} = 11$ ,  $\underline{\quad} + 3 = 11$ , and  $8 + 3 = \underline{\quad}$ )**

- Lesson 3.7: As Is
  - Emphasize that numbers greater than ten are a bundle of 10 ones and more ones. Use ten frames to help (i.e. 17 is a bundle of 10 ones and 7 more ones).
- Lesson 3.8: As Is
  - IXL Skills:
    - A.2: Count to fill a ten frame
- Lesson 3.9: As Is
  - Add the following lesson from EngageNY in addition to Go Math:
    - Addends Of 7, 8, 9
  - IXL Skills:
    - D.9: Addition facts - sums up to 20
- Add a lesson on addition word problems within 20.
  - Putting quantities together (i.e. Jack has 5 red marbles and 8 blue marbles. He puts all of the marbles in a bag. How many marbles does he have altogether?)
  - Adding more to a quantity (i.e. Jack has 5 marbles in a bag. His friend gave him 8 more marbles to put in his bag. How many marbles are in his bag now?)
- Lesson 3.10: As Is
  - Introduce the Associative Property (i.e.  $2 + 3 + 7 = 2 + 10 = 12$  OR  $2 + 3 + 7 = 5 + 7 = 12$ )
  - IXL Skills:
    - E.14: Add three numbers
- Lesson 3.11: As Is
  - IXL Skills:
    - E.6: Add three numbers - use doubles
    - E.8: Add three numbers - make ten
    - E.14: Add three numbers
- Lesson 3.12: As Is
  - IXL Skills:
    - E.15: Add three numbers - word problems
- Add a lesson on Number Bonds and Number Lines for adding within 20
- Add a lesson on determining an unknown number in relation to the three numbers in the problem:  $8 + \underline{\quad} = 11$ ,  $11 = \underline{\quad} + 3$ , etc.

- Use the ten frame as a way to illustrate the strategy of making 10 conceptually.
- Addition strategies include counting on, making a 10, decomposing to 10, creating equal sums, using number lines, number bonds, bar models, etc.
- Students need to be able to add within 20 by using addition strategies, **but they must add FLUENTLY within 10. (Use websites such as Reflex or XtraMath or flash cards to help develop fluency.)**
- Add more error analysis and multi-select questions to each lesson.

## Chapter 4

### Subtraction Strategies

**Subtraction: The process in which a quantity is taken from another quantity, a quantity is taken apart, or one quantity is compared to another quantity.**

- Lesson 4.1: As Is
  - Add the following lesson from EngageNY in addition to Go Math:
    - Count On to Find Unknown Part
  - IXL Skills:
    - F.5: Subtraction sentences using number lines - up to 10
    - H.9: Subtraction sentences using number lines - up to 20
- Lesson 4.2: As Is
  - Emphasize that subtraction can be thought of as an addition problem with an unknown addend.
  - IXL Skills:
    - D.3: Complete the addition sentence - sums up to 10
    - E.7: Complete the addition sentence - make ten
- Lesson 4.3: As Is
  - IXL Skills:
    - I.1: Relate addition and subtraction sentences
- Lesson 4.4: As Is
  - IXL Skills:
    - H.10: Subtraction facts - up to 20
- Lesson 4.5: As Is
  - IXL Skills:
    - H.10: Subtraction facts - up to 20
- Lesson 4.6: As Is

- Add more subtraction word problems that compare quantities.

- IXL Skills:

- **H.13: Subtraction word problems - up to 20**

- Add a lesson on Number Lines for subtracting within 20
- Add a lesson on determining an unknown number in relation to the three numbers in the problem:  $11 - \underline{\quad} = 3$ ,  $8 = \underline{\quad} - 3$ ,  $11 - 3 = \underline{\quad}$ , etc.

## **Chapter 4 Rules of Thumb**

- Use the ten frame as a way to illustrate the strategy of making 10 conceptually.

- Subtraction Strategies include counting back, determining the missing value by counting on, use addition to subtract, make a 10, break apart, etc.

- Students need to be able to add within 20 by using addition strategies, **but they must add FLUENTLY within 10. (Use websites such as Reflex or XtraMath or flash cards to help develop fluency.)**

- Add more error analysis and multi-select questions to each lesson.

## **Trimester 2**

(Ends March 14th)

## **Chapter 5**

### **Addition and Subtraction Relationships**

- **Lesson 5.1: As Is**

- IXL Skills:

- **J.6: Addition and subtraction word problems - up to 20**

- **Lesson 5.2: As Is**

- Use the vocabulary “related facts” instead of fact families.

- IXL Skills:

- **D.14: Related addition facts**

- **H.15: Related subtraction facts**

- **Lesson 5.3: As Is**

- Ensure that students are provided with examples written horizontally that should then be rewritten vertically.

- Add examples where the answer is written first in the equation (i.e.  $\underline{\quad} = 9 + 5$ ).

- IXL Skills:

- **I.1: Relate addition and subtraction sentences**



- **J.3: Fact families**
- **Lesson 5.4: As Is**
  - **IXL Skills:**
    - **J.4: Addition and subtraction facts - up to 10**
    - **J.5: Addition and subtraction facts - up to 20**
- **Lesson 5.5: As Is**
  - **IXL Skills:**
    - **D.3: Complete the addition sentence - sums up to 10**
    - **E.3: Add doubles - complete the sentence**
    - **E.7: Complete the addition sentence - make ten**
    - **H.5: Complete the subtraction sentence - up to 10**
- **Lesson 5.6: As Is**
  - **IXL Skills:**
    - **I.1: Relate addition and subtraction sentences**
  - **Numbers bonds for addition and subtraction within 20. Add examples where for both addition and subtraction number bonds.**
- **Lesson 5.7: As Is**
  - **Add the following activities from Illustrative Math in addition to Go Math:**
    - **Illustrative Mathematics: Maria's Marbles**
    - **Illustrative Mathematics: Sharing Markers**
    - **Illustrative Mathematics: Boys and Girls**
    - **Illustrative Mathematics: Field Day Scarcity**
  - **NIX THE TRICK: Looking for keywords in word problems. Instead, ensure that students can identify the operation using the conceptual understanding of addition and subtraction.**
    - **Addition: adding to OR putting together**
    - **Subtraction: taking from OR taking apart OR comparing**
  - **IXL Skills:**
    - **J.6: Addition and subtraction word problems - up to 20**
- **Lesson 5.8: As Is (spend more time on this lesson)**
  - **IXL Skills:**
    - **J.1: Addition and subtraction - ways to make a number**
- **Lesson 5.9: As Is (spend more time on this lesson)**
  - **IXL Skills:**
    - **D.15: Addition sentences: true or false?**

- H.16: Subtraction sentences: true or false?
- J.2: Which sign makes the number sentence true?
- J.7: Addition and subtraction sentences: which is true?

- Lesson 5.10: As Is

- Add the following activities from Illustrative Math in addition to Go Math:

- Illustrative Mathematics: At the Park
- Illustrative Mathematics: The Pet Snake
- Illustrative Mathematics: Link Cube Addition
- Illustrative Mathematics: School Supplies

- IXL Skills:

- J.4: Addition and subtraction facts - up to 10
- J.5: Addition and subtraction facts - up to 20

## Chapter 5 Rules of Thumb

- Use bar models and/or number bonds first as a way to illustrate the concept of part-part-whole.

- Students need to be able to add within 20 by using addition strategies, **but they must add FLUENTLY within 10. (Use websites such as Reflex or XtraMath or flash cards to help develop fluency.)**

- Add more error analysis and multi-select questions to each lesson.

## Chapter 6

### Count and Model Numbers

- Prior to starting the chapter, add a lesson on writing numbers 0-120 on a 120 chart.

- Lesson 6.1: As Is

- IXL Skills:

- A.3: Counting review - up to 20
- A.5: Count on ten frames - up to 40
- A.10: Counting - up to 100
- A.17: Counting on the hundred chart

- Lesson 6.2: As Is

- Start counting by ten from any number using a hundreds chart and then transition to mentally adding ten. Ask students to find the pattern.

- IXL Skills:

- A.8: Skip-counting by tens

- **Lesson 6.3: As Is**
  - Ensure students understand that a 10 is a bundle/group of 10 ones.
  - Ensure students understand that numbers 11-19 are made up of ten ones and more ones.
  - IXL Skills:
    - **A.4: Counting tens and ones - up to 20**
    - **M.2: Write numbers as tens and ones up to 20**
- **Lesson 6.4: As Is**
  - Ensure students understand that multiples of ten are groups of ten and zero ones.
  - IXL Skills:
    - **M.1: Place value models up to 20**
- **Lesson 6.5: As Is**
  - Ensure that students understand how many tens are in 10, 20, 30, 40...120. Example: 70 is made up of 7 tens AND 7 tens could be rewritten as 70.
  - IXL Skills:
    - **M.4: Convert between tens and ones - multiples of 10**
- **Lesson 6.6: As Is**
  - Transition from using ten frames and unifix cubes to using base ten blocks to explore place value.
  - Show students how ten cubes can be combined and composed into a ten rod.
  - IXL Skills:
    - **A.5: Count on ten frames - up to 40**
    - **M.1: Place value models up to 20**
    - **M.2: Write numbers as tens and ones up to 20**
- **Lesson 6.7: As Is**
  - IXL Skills:
    - **A.11: Counting tens and ones - up to 99**
    - **M.3: Place value models up to 100**
    - **M.5: Write numbers as tens and ones**
- **Lesson 6.8: As Is**
  - This lesson is the foundation of regrouping that is a key skill in second grade. Students should be able to show how a number is written two different ways but still has the same value (i.e.  $36 = 3 \text{ tens } 6 \text{ ones}$  OR  $36 = 2 \text{ tens and } 16 \text{ ones}$ ).
  - Add the following lessons from EngageNY in addition to Go Math:
    - **Two-Digit Numbers As Tens and Some Ones or All Ones**

- Two-Digit Numbers That Combine Tens and Ones
- More and Less Than A Two-Digit Number
- Use Dimes and Pennies As Representations of Tens and Ones

- **Lesson 6.9: As Is**

- Ensure students understand that 10 tens equals 100.

- IXL Skills:

- A.17: Counting on the hundred chart

- **Lesson 6.10: As Is**

- Ensure students understand that 10 tens equals 100.

## Chapter 6 Rules of Thumb

- Emphasize the correct meaning and use of vocabulary: digits, value, place, and place value.

- Example: The concept of place value provides us with a way to write numbers in a succinct manner. Instead of writing 3 hundreds, 4 tens, and 2 ones, I can write 342. The "3" is a digit; it is in the hundreds place, and it has a value of 300.

- Add more error analysis and multi-select questions to each lesson.

## Chapter 7

### **Compare Numbers**

- **Lesson 7.1: As Is**

- Compare two-digit numbers using base ten blocks, models, and place value.

- Ensure students can read a greater than inequality/comparison (i.e.  $45 > 23$  as 45 is greater than 23).

- **Lesson 7.2: As Is**

- Compare two-digit numbers using base ten blocks, models, and place value.

- Ensure students can read a less than inequality/comparison (i.e.  $23 < 45$  as 23 is less than 45).

- **Lesson 7.3: As Is**

- Ensure students can read both greater than and less than inequalities with ease.

- IXL Skills:

- K.2: Compare numbers up to 10 using words

- K.5: Compare numbers up to 100 using symbols

- **Lesson 7.4: As Is**
  - **Add the following activities from Illustrative Math in addition to Go Math:**
    - **Illustrative Mathematics: Roll and Build**
    - **Illustrative Mathematics: Very Hungry Caterpillar**
  - **IXL Skills:**
    - **K.6: Comparison word problems**
- **Lesson 7.5: Split into two lessons (1. 10 more/1 more and 2. 10 less/1 less)**
  - **The lesson does not include 1 more/1 less. You will need to add these types of questions to your lesson.**
  - **At the end, you should complete examples that include all four concepts (10 more, 10 less, 1 more, 1 less)**
  - **Use 100 charts and base ten blocks at first to help students, but then switch to just using place value.**
  - **IXL Skills:**
    - **J.8: Ten more or less**

### **Chapter 7 Rules of Thumb**

- Where not explicitly called for in the lesson (e.g., Lesson 7.4), use classroom discussion and student work to explicitly connect comparisons to the meanings of the tens and ones.
- Make explicit connections across representations (e.g., in lessons 7.1-7.3), such as making sure that students connect the tens sticks (flat sticks) and units representation to the written comparison statement.
- Students should first be using models and base ten blocks to compare two-digit numbers and then they should use place value.
- Ensure students can verbally read comparisons (inequalities). Example:  $3 < 7$  should be read at "three is less than seven"
- Add more error analysis and multi-select questions to each lesson.

### **Chapter 8**

#### **Two-Digit Addition and Subtraction**

- **Lesson 8.1: Review of adding and subtracting within 20. (Assign for homework)**
  - **IXL Skills:**
    - **D.9: Addition facts - sums up to 20**

- H.10: Subtraction facts - up to 20
  - J.5: Addition and subtraction facts - up to 20
- Lesson 8.2: As Is
  - Use models and base ten blocks to add a multiple of 10 + a multiple of 10.
  - IXL Skills:
    - E.11: Add two multiples of ten
- Lesson 8.3: As Is
  - Use models and base ten blocks to subtract a multiple of 10 - a multiple of 10.
  - IXL Skills:
    - I.3: Subtract multiples of 10
- Lesson 8.4: As Is (Don't spend too much time on this lesson.)
  - IXL Skills:
    - A.18: Hundred chart
- Lesson 8.5: As Is
  - Ensure students understand that we add tens with tens and ones with ones.
- Lesson 8.6: As Is
  - Add the following activities from Illustrative Math in addition to Go Math:
    - Illustrative Mathematics: Ford and Logan Add 45+36
  - IXL Skills:
    - D.22: Add a one-digit number to a two-digit number - with regrouping
- Lesson 8.7: As Is
  - Ensure students understand that we add tens to tens and ones to ones.
  - Ensure that students understand how many tens are in 10, 20, 30, 40...120. Example: 70 is made up of 7 tens AND 7 tens could be rewritten as 70.
  - IXL Skills:
    - D.19: Regroup tens and ones - ways to make a number
    - D.20: Regroup tens and ones
- Lesson 8.8: As Is
- Lesson 8.9: As Is
- Lesson 8.10: As Is
  - IXL Skills:
    - D.18: Add a one-digit number to a two-digit number - without regrouping
    - D.22: Add a one-digit number to a two-digit number - with regrouping
    - H.18: Subtract one-digit numbers from two-digit numbers
    - J.9: Add and subtract tens

## **Chapter 8 Rules of Thumb**

- Adding two-digit numbers: two-digit + one digit AND two-digit + multiple of 10
- Subtract two-digit numbers: multiple of 10 - multiple of 10
- Emphasize the correct meaning and use of vocabulary: digits, value, place, and place value.
- Use multiple strategies for adding 2-digit numbers: base ten blocks, drawings, models, properties of operations, relationship between addition and subtraction, hundreds chart, place value, etc.
- Students must be able to relate their strategy to the method that they used and explain their reasoning.
- Add more error analysis and multi-select questions to each lesson.

## **Trimester 3**

(Ends June 24th)

## **Chapter 9**

### **Measurement**

- **Lesson 9.1: As Is**
  - **Ensure students can measure three objects by length at the same time.**
  - **IXL Skills:**
    - **P.2: Compare objects: length and height**
- **Lesson 9.2: As Is**
  - **Ensure students can compare the length of 2 objects by using a third object.**
- **Lesson 9.3: As Is**
  - **Ensure students are measuring objects with a nonstandard measuring tool with no gaps or overlaps.**
  - **Length is measured from one endpoint to another endpoint using multiple copies of the same measuring tool (i.e. paper clips, color tiles, pencils, etc.).**
  - **IXL Skills:**
    - **P.7: Measure length with objects**
- **Lesson 9.4: As Is**
  - **Provide students with more examples of objects being measured correctly vs. objects being measured incorrectly (i.e. Not starting the measurement at the edge of the object, overlapping the measuring tools, gaps in between the measuring tools, etc.). Identify the errors when measuring incorrectly.**

- **Lesson 9.5: As Is**
- **Before starting lessons using analog clocks, do a quick review on telling time using digital clocks. Go over the hour and minute hand.**
- **Lesson 9.6: As Is**
- **Lesson 9.7: As Is**
  - **When measuring to the half hour, the hour hand must be between the two numbers on the clock (i.e. 2:30 = Hour hand is between 2 & 3 and the minute hand in on the 6).**
- **Lesson 9.8: As Is**
  - **IXL Skills:**
    - **U.1: Match digital clocks and times**
    - **U.2: Match analog clocks and times**
    - **U.3: Match analog and digital clocks**
    - **U.4: Read clocks and write times**
- **Lesson 9.9: As Is**
  - **IXL Skills:**
    - **U.3: Match analog and digital clocks**

### **Chapter 9 Rules of Thumb**

- Ensure students understand that :00 is o'clock and :30 is half past.

- Telling time is an additional cluster in first grade; therefore, you do not need to spend too much time on Lessons 9.6-9.9.

### **Chapter 10**

#### **Represent Data**

**In each graphing lesson, students should answer questions about the total number of data points, how many in each category, how many more/less in one category than another, etc.**

- **Lesson 10.1: As Is**
- **Lesson 10.2: As Is**
- **Lesson 10.3: As Is**
  - **Show students how picture graphs and bar graphs relate to each other.**
  - **IXL Skills:**
    - **O.7: Interpret bar graphs I**
    - **O.8: Interpret bar graphs II**



- **Lesson 10.4: As Is**
  - Create a bar graph from a picture graph.
- **Lesson 10.5: As Is**
  - Encourage students to count by 5's and then by 1's to get the total number of tally marks.
  - **IXL Skills:**
    - **O.4: Interpret tally charts**
- **Lesson 10.6: As Is**
  - **IXL Skills:**
    - **O.3: Which tally chart is correct?**
- **Lesson 10.7: As Is**
  - Create a tally chart, picture graph, and bar graph from the same set of data points to show how the graphs relate to each other.
  - **IXL Skills:**
    - **O.9: Which bar graph is correct?**

## **Chapter 10 Rules of Thumb**

- Organize, represent, and analyze graphs for up to three categories.

- Analyze graphs using the following questions: How many in total? How many in each category? How many more/less in one category compared to another category? Which category has the greatest/fewest?

## **Chapter 12**

### **Fractions and Geometry**

- **Lesson 12.1: As Is**
  - Sort shapes based on defining attributes (i.e. sides, vertices, curves, etc.).
  - **IXL Skills:**
    - **V.1: Name the two-dimensional shape**
    - **V.2: Select two-dimensional shapes**
- **Lesson 12.2: As Is**
  - **IXL Skills:**
    - **V.4: Count sides and corners**
    - **V.8: Open and closed shapes**
- **Lesson 12.3: As Is**

- Ensure students understand that composite shapes are created by combining two or more smaller shapes.
- Use rectangles, squares, trapezoids, triangles, half circles, and quarter circles to create/compose composite 2D shapes.
- Lesson 12.4: As Is
- Lesson 12.5: As Is
- Lesson 12.6: As Is
  - Use rectangles, squares, trapezoids, triangles, half circles, and quarter circles to decompose or take apart 2D composite shapes into smaller shapes.
- Lesson 12.7: As Is

**\*The next three lessons are important prerequisites for fractions as the students move throughout the grade levels.**

- Lesson 12.8: As Is
  - Use the vocabulary words partition, equal parts, equal shares, etc.
  - Equal parts/shares must have the same exact size and shape. Partition means to split a shape into smaller parts.
  - Only partition circles, squares, and rectangles into equal parts in first grade.
  - Categorize partitioned shapes into equal parts/shares and unequal parts/shares.
  - IXL Skills:
    - X.1: Equal parts - halves and fourths
- Lesson 12.9: As Is
  - Show multiple ways to partition the same size whole into halves (i.e. splitting a circle horizontally in half and splitting the same size circle vertically in half). Explain that even though the shapes are partitioned differently, the parts are the same size.
  - Be sure to use the vocabulary words halves, half or, two shares, two equal parts, etc.
  - IXL Skills:
    - X.3: Identify halves
- Lesson 12.10: As Is
  - Show multiple ways to partition the same size whole into fourths (i.e. splitting a square vertically and horizontally AND splitting the same size square vertically only). Explain that even though the shapes are partitioned differently, the parts are the same size.
  - Be sure to use the vocabulary words fourths, fourth of, quarter of, four shares, four equal parts, etc.

- **Ensure that students understand that decomposing shapes into MORE equal shares creates SMALLER shares (i.e. fourths are smaller than halves because we partitioned or split the shapes into more equal parts).**
- **IXL Skills:**
  - **X.5: Identify fourths**
  - **X.6: Identify halves and fourths**

## **Chapter 12 Rules of Thumb**

- Categorize shapes by attributes (sides, vertices, etc.) and non-defining attributes (color, size, orientation, etc.)

- When composing or decomposing composite figures, use the following shapes: rectangles, squares, trapezoids, triangles,  $\frac{1}{2}$  circles,  $\frac{1}{4}$  circles

- Use manipulatives to show how to partition shapes into halves, thirds, and fourths. Make sure students understand that equal parts are partitioned so that the parts are the same size and same shape.

- Use appropriate terminology (partition, whole, decompose, equal parts, equal shares, half of, third of, fourth of, quarter of, etc.)

## **Chapter 11**

### **Three-Dimensional Geometry**

- **Lesson 11.1: As Is**

- **Be sure to discuss the difference between 2D shapes (flat shapes) and 3D shapes (solid shapes). Sort and classify 2D and 3D shapes.**

- **Skills:**

- **W.2: Name the three-dimensional shape**
- **W.3: Cubes and rectangular prisms**
- **W.4: Select three-dimensional shapes**
- **W.5: Count vertices, edges, and faces**
- **W.9: Shapes of everyday objects I**
- **W.10: Shapes of everyday objects II**

- **Lesson 11.2: As Is**

- **Use cubes, right rectangular prisms, right circular cones, and right circular cylinders to create/compose composite 3D shapes.**

- **Lesson 11.3: As Is**

- Lesson 11.4: As Is
  - Use cubes, right rectangular prisms, right circular cones, and right circular cylinders to decompose or take apart composite 3D shapes into smaller shapes.
- Lesson 11.5: As Is
  - IXL Skills:
    - W.7: Identify shapes traced from solids
    - W.8: Identify faces of three-dimensional shapes

### Chapter 11 Rules of Thumb

- Ensure students understand the difference between flat surfaces and curved surfaces.
- Students should be able to trace around flat surfaces and name the shapes that are drawn.

## FIRST GRADE PRIORITY STANDARDS FOR 2020-2021

Considerations for Addressing <u>PRIORITY</u> Grade-Level Content	
The clusters and standards listed in this table name the priority instructional content for grade 1. The right-hand column contains approaches to shifting how time is dedicated to the clusters and standards in the left-hand column.	
Clusters/Standards	Considerations
1.OA.A.1	<i>Emphasize</i> problems that involve sums less than or equal to 10 and/or the related differences to keep the focus on making sense of different problem types; do not limit the range of addition and subtraction situations, but assign fewer problems with sums greater than 10 or related differences.
1.OA.B	No special considerations for curricula well aligned to understanding and applying properties of operations to addition and subtraction, as detailed in this cluster. Time spent on instruction and practice should NOT be reduced.
1.OA.C.6	No special considerations for curricula well aligned to adding and subtracting within 20, as detailed in this standard. Time spent on instruction and practice should NOT be reduced.
1.OA.D	No special considerations for curricula well aligned to work with addition and subtraction equations, as detailed in this cluster. Time spent on instruction and practice should NOT be reduced.
1.NBT.B	<i>Incorporate</i> foundational work on understanding that numbers 11–19 are built from ten ones and some further ones (K.NBT.A) to support grade 1 understanding of place value.
1.NBT.C	<i>Emphasize</i> the understanding that in adding two two-digit numbers, one adds tens and tens, ones and ones, and sometimes it is necessary to compose a ten, in order to strengthen the progression toward fluency with multi-digit addition and subtraction.
1.MD.A	No special considerations for curricula well aligned to measuring lengths indirectly by iterating length units, as detailed in this cluster. Time spent on instruction and practice should NOT be reduced.

## FIRST GRADE NON-PRIORITY STANDARDS FOR 2020-2021

## Considerations for Addressing REMAINING Grade-Level Content

The clusters and standards listed in this table represent the remainder of grade 1 grade-level content. The right-hand column contains approaches to shifting how time is dedicated to the clusters and standards in the left-hand column.

Clusters/Standards	Considerations
1.OA.A.2*	<i>Reduce</i> the amount of time spent on lessons and problems that call for addition of three whole numbers. <i>Limit</i> the amount of required student practice.
1.OA.C.5*	<i>Integrate</i> counting into the work of the domain (OA), instead of separate lessons, in order to reduce the amount of time spent on this standard.
1.NBT.A*	<i>Eliminate</i> lessons that are solely about extending the count sequence in order to reduce the amount of time spent on this cluster. <i>Incorporate</i> extending the count sequence into other lessons in the grade.
1.MD.B	<i>Eliminate</i> lessons devoted to telling and writing time to the hour and half-hour (1.MD.B.3).
1.MD.C	<i>Eliminate</i> lessons devoted to representing and interpreting data. (Do not eliminate problems about using addition and subtraction to solve problems about the data.)
1.G.A	<i>Combine</i> lessons to address key concepts of defining attributes of shapes and composing shapes in order to reduce the amount of time spent on this cluster.

*\*While these standards or clusters are Major Work of the Grade, during the 2020–21 school year, it is recommended that they receive lighter treatment in favor of other priority instructional content.*

## FIRST GRADE STANDARD CLUSTERS

**Green:** Major Clusters

**Blue:** Supporting Clusters

**Yellow:** Additional Clusters

### MAJOR, SUPPORTING, AND ADDITIONAL CLUSTERS FOR GRADE 1

Emphases are given at the cluster level. Refer to the Common Core State Standards for Mathematics for the specific standards that fall within each cluster.

Key: ■ Major Clusters      □ Supporting Clusters      ○ Additional Clusters

- 1.OA.A | ■ Represent and solve problems involving addition and subtraction.
- 1.OA.B | ■ Understand and apply properties of operations and the relationship between addition and subtraction.
- 1.OA.C | ■ Add and subtract within 20.
- 1.OA.D | ■ Work with addition and subtraction equations.
- 1.NBT.A | ■ Extending the counting sequence.
- 1.NBT.B | ■ Understand place value.
- 1.NBT.C | ■ Use place value understanding and properties of operations to add and subtract.
- 1.MD.A | ■ Measure lengths indirectly and by iterating length units.
- 1.MD.B | ○ Tell and write time.
- 1.MD.C | □ Represent and interpret data.
- 1.G.A | ○ Reason with shapes and their attributes.

## **FIRST GRADE NJ LEARNING STANDARDS**

**First Grade Major Clusters:** 1.OA.A, 1.OA.B, 1.OA.C, 1.OA.D, 1.NBT.A, 1.NBT.B, 1.NBT.C, 1.MD.A, 1.MD.C

### **Operations and Algebraic Thinking**

**1.OA**

#### **A. Represent and solve problems involving addition and subtraction.**

1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.<sup>2</sup>
2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

#### **B. Understand and apply properties of operations and the relationship between addition and subtraction.**

3. Apply properties of operations as strategies to add and subtract.<sup>3</sup> *Examples: If  $8 + 3 = 11$  is known, then  $3 + 8 = 11$  is also known. (Commutative property of addition.) To add  $2 + 6 + 4$ , the second two numbers can be added to make a ten, so  $2 + 6 + 4 = 2 + 10 = 12$ . (Associative property of addition.) {Students need not use formal terms for these properties}*

4. Understand subtraction as an unknown-addend problem. *For example, subtract  $10 - 8$  by finding the number that makes 10 when added to 8.*

### C. Add and subtract within 20.

5. Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g.,  $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g.,  $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that  $8 + 4 = 12$ , one knows  $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding  $6 + 7$  by creating the known equivalent  $6 + 6 + 1 = 12 + 1 = 13$ ).

### D. Work with addition and subtraction equations.

7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false?  $6 = 6$ ,  $7 = 8 - 1$ ,  $5 + 2 = 2 + 5$ ,  $4 + 1 = 5 + 2$ .*

8. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations  $8 + ? = 11$ ,  $5 = \quad - 3$ ,  $6 + 6 = \quad$ .*

## Number and Operations in Base Ten

1.NBT

### A. Extend the counting sequence.

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.

### B. Understand place value.

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

a. 10 can be thought of as a bundle of ten ones — called a “ten.”

b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.

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).

3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$ .

### C. Use place value understanding and properties of operations to add and subtract.

4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g., base ten blocks) or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

## Measurement and Data

1.MD

### A. Measure lengths indirectly and by iterating length units.

1. Order three objects by length; compare the lengths of two objects indirectly by using a third object.
2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.*

### B. Tell and write time.

3. Tell and write time in hours and half-hours using analog and digital clocks.

### C. Represent and interpret data.

4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

## Geometry

1.G

### A. Reason with shapes and their attributes.

1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.



2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.<sup>4</sup>
  
3. Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.