Unit 4: Numbers and Operations in Base Ten

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **Full Year**
Status: **Published**

UNIT RATIONALE

The purpose of this unit is to represent numbers to 19 by decomposing them into ten ones and some more ones. By decomposing and representing numbers in this way, children gain foundational understandings of place value.

ESSENTIAL QUESTIONS

Module 17:

1. How do we decompose numbers to 19 into ten ones and some more ones?

2. How can we represent the number 20?

Module 18:

1. How do we count and write numbers 11 to 14?

2. How can we compose and decompose numbers 11 to 14 into ten ones and some further ones?

STANDARDS

NEW JERSEY STUDENT LEARNING STANDARDS: CONTENT AREA

SAVED

New Jersey Common Core - Kindergarten - Mathematics

CCSS.Math.Content.K.CC.A.1

Count to 100 by ones and by tens.

CCSS.Math.Content.K.CC.A.2

Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

CCSS.Math.Content.K.CC.A.3

Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

CCSS.Math.Content.K.CC.B.5

Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1—20, count out that many objects.

CCSS.Math.Content.K.CC.B.4a

When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

CCSS.Math.Content.K.CC.B.4b

Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

CCSS.Math.Content.K.CC.C.7

Compare two numbers between 1 and 10 presented as written numerals.

CCSS.Math.Content.K.OA.A.2

Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

CCSS.Math.Content.K.NBT.A.1

Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

CCSS.Math.Content.K.G.A.3

Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

CCSS.Math.Content.K.G.B.4

Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).

CCSS.Math.Content.K.G.B.6

Compose simple shapes to form larger shapes.

MA.K.CC.A.1	Count to 100 by ones and by tens.
MA.K.CC.A.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
MA.K.CC.A.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
MA.K.CC.B.4a	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
MA.K.CC.B.4b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MA.K.CC.B.5	Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MA.K.CC.C.7	Compare two numbers between 1 and 10 presented as written numerals.
MA.K.OA.A.2	Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
MA.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

MA.K.G.A.3	Identify shapes as two-dimensional (lying in a plane, “flat”) or three-dimensional (“solid”).
MA.K.G.B.4	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).
MA.K.G.B.6	Compose simple shapes to form larger shapes.

NEW JERSEY STUDENT LEARNING STANDARDS: CAREER READINESS, LIFE LITERACIES AND KEY SKILLS

CS.K-2.8.2.2.ITH.3	Identify how technology impacts or improves life.
TECH.9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

NEW JERSEY STUDENT LEARNING STANDARDS: COMPUTER SCIENCE AND DESIGN THINKING

CS.K-2.8.2.2.ITH.3	Identify how technology impacts or improves life.

PRE-ASSESSMENTS

Module 17- Represent Numbers to 10, Are You Ready?, pg. 438
Module 18- Write Numbers 6 to 10, Are You Ready?, pg. 458

INSTRUCTIONAL PLAN

MODULE 17

Module 17- Place Value Foundations: Represent Numbers to 20

LESSON 7.1

Student Learning Intentions (SLI) WALT: (We are learning to…)	17.1- We are learning to understand the numbers 11 to 1⁴ by decomposing the numbers into ten ones and some more ones using objects
Student Learning Strategies	Students will:

	• compose ten ones and some more ones to 14.
Success Criteria	I can compose 10 ones and some more ones to represent numbers 11 to 14.
Formative Assessment (drives instructional decisions)	• Turn and Talk questions, pgs.439, 440, & 441 • Check for understanding, pg. 441 • On your own, pg.442
Activities and Resources	**Warm Up**: Activate Prior Knowledge pg. 439B and Spark your learning Teacher pg. 439D, Student pg. 439 **Mini Lesson:** Build Your Understanding, pgs. 440-441 **Guided Practice**: Check Understanding, pg. 441 **Independent Practice:** On Your Own & Exit Ticket pg. 442 **Resources:** Into Math Teacher Edition Module 17
Suggested Modifications	**Small Group Options-** Page 439c • On Track • Almost There • Ready for More **Math Center Option-** Page 439c • On Track- More practice for 17.1 • Almost there-Reteach 17.1 • Ready for more- Challenge 17.1 **Differentiation Options-** • Reteach & Challenge pg. 441

MA.K.CC.A.1	Count to 100 by ones and by tens.
MA.K.CC.B.4a	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
MA.K.CC.B.4b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MA.K.CC.B.5	Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a

	number from 1–20, count out that many objects.
MA.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

LESSON 7.2

Student Learning Intentions (SLI) WALT: (We are learning to…)	7.2- We are learning to understand the number 15 by decomposing the number into ten ones and some more ones using objects.
Student Learning Strategies	Students will: • compose ten ones and some more ones to 15.
Success Criteria	I can compose 10 ones and some more ones to represent the number 15.
Formative Assessment (drives instructional decisions)	• Turn and Talk questions, pgs.443, 445 • Check for understanding, pg. 445 • On your own, pg.446
Activities and Resources	**Warm Up**: Activate Prior Knowledge pg. 443B and Spark your learning Teacher pg. 443D, Student pg. 443 **Mini Lesson:** Build Your Understanding, pgs. 444-445 **Guided Practice**: Check Understanding, pg. 445 **Independent Practice:** On Your Own & Exit Ticket pg. 446 **Resources:** Into Math Teacher Edition Module 17
Suggested Modifications	**Small Group Options-** Page 443c • On Track • Almost There • Ready for More **Math Center Option-** Page 443c • On Track- More practice for 17.2 • Almost there-Reteach 17.2 • Ready for more- Challenge 17.2

	Differentiation Options- • Reteach & Challenge pg. 445

MA.K.CC.B.4a	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
MA.K.CC.B.4b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MA.K.CC.B.5	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MA.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
MA.K.G.A.3	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

LESSON 7.3

Student Learning Intentions (SLI) WALT: (We are learning to…)	7.3- We are learning understand the numbers 16 to 19 by decomposing the numbers into ten ones and some more ones using objects.
Student Learning Strategies	Students will: • I can compose ten ones and some more ones to number 19.
Success Criteria	I can compose 10 ones and some more ones to represent numbers 16 to 19.
Formative Assessment (drives instructional decisions)	• Turn and Talk questions, pgs.447, 448, & 449 • Check for understanding, pg. 449 • On your own, pg.450
Activities and Resources	**Warm Up**: Activate Prior Knowledge pg. 447B and Spark your learning Teacher pg. 447D, Student pg. 447 **Mini Lesson:** Build Your Understanding, pgs. 448-449 **Guided Practice**: Check Understanding, pg. 449

	Independent Practice: On Your Own & Exit Ticket pg. 450 **Resources:** Into Math Teacher Edition Module 17
Suggested Modifications	**Small Group Options-** Page 447c • On Track • Almost There • Ready for More **Math Center Option-** Page 447c • On Track- More practice for 17.3 • Almost there-Reteach 17.3 • Ready for more- Challenge 17.3 **Differentiation Options-** • Reteach & Challenge pg. 449

MA.K.CC.A.1	Count to 100 by ones and by tens.
MA.K.CC.B.4a	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
MA.K.CC.B.5	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MA.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
MA.K.G.A.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

LESSON 7.4

Student Learning Intentions (SLI) WALT: (We are learning to…)	7.4- We are learning to understand the number 20 by counting and representing objects.
Student Learning Strategies	Students will: • represent numbers to 20
Success Criteria	I can count and represent numbers to 20.

Formative Assessment (drives instructional decisions)	• Turn and Talk questions, pgs.452, 453 • Check for understanding, pg. 452 • On your own, pgs.453-454
Activities and Resources	**Warm Up**: Activate Prior Knowledge pg. 451B **Mini Lesson:** Step It Out Teacher pg. 451D, Student pgs. 451-452 **Guided Practice**: Check Understanding, pg. 452 **Independent Practice:** On Your Own & Exit Ticket pgs. 453-454 **Resources:** Into Math Teacher Edition Module 17
Suggested Modifications	**Small Group Options-** Page 451c • On Track • Almost There • Ready for More **Math Center Option-** Page 451c • On Track- More practice for 17.4 • Almost there-Reteach 17.4 • Ready for more- Challenge 17.4 **Differentiation Options-** • Reteach & Challenge pg. 452

MA.K.CC.B.4a	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
MA.K.CC.B.4b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MA.K.CC.B.5	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MA.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
MA.K.G.A.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.

MODULE 18

Module 18- Place Value Foundations: Represent Numbers to 20

LESSON 18.2

Student Learning Intentions (SLI) WALT: (We are learning to…)	18.2- We are learning to understand the written numerals by counting and writing to 15.
Student Learning Strategies	Students will: • count and write 15. • compose and decompose numbers from 11 t 15 into ten ones and some further ones.
Success Criteria	I can count and write numbers up to 15 and make a group of that many objects.
Formative Assessment (drives instructional decisions)	• Turn and Talk questions, pgs.463, 465 • Check for understanding, pg. 465 • On your own, pg.466
Activities and Resources	**Warm Up**: Activate Prior Knowledge pg. 463B and Spark your learning Teacher pg. 463D, Student pg. 463 **Mini Lesson:** Build Your Understanding, pg. 464 & Step It Out pg. 465 **Guided Practice**: Check Understanding, pg. 465 **Independent Practice:** On Your Own & Exit Ticket pg. 466 **Resources:** Into Math Teacher Edition Module 18
Suggested Modifications	**Small Group Options-** Page 463c • On Track • Almost There • Ready for More **Math Center Option-** Page 463c • On Track- More practice for 18.2 • Almost there-Reteach 18.2

	• Ready for more- Challenge 18.2 **Differentiation Options-** • Reteach & Challenge pg. 465

MA.K.CC.A.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
MA.K.CC.A.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
MA.K.CC.B.4b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MA.K.CC.B.5	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MA.K.OA.A.2	Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
MA.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.
MA.K.G.B.6	Compose simple shapes to form larger shapes.

LESSON 18.1

Student Learning Intentions (SLI) WALT: (We are learning to…)	18.1- We are learning to understand the written numerals by counting and writing 11 to 14.
Student Learning Strategies	Students will: • count and write numbers 11 to 14. • compose and decompose numbers from 11 t 14 into ten ones and some further ones.
Success Criteria	I can count and write numbers up to 14 and make a group of that many objects.
Formative Assessment (drives instructional decisions)	• Turn and Talk questions, pgs.459, 460, & 461 • Check for understanding, pg. 461 • On your own, pg.462

Activities and Resources	**Warm Up**: Activate Prior Knowledge pg. 459B and Spark your learning Teacher pg. 459D, Student pg. 459 **Mini Lesson:** Build Your Understanding, pg. 460 & Step It Out pg. 461 **Guided Practice**: Check Understanding, pg. 461 **Independent Practice:** On Your Own & Exit Ticket pg. 462 **Resources:** Into Math Teacher Edition Module 18
Suggested Modifications	**Small Group Options-** Page 459c • On Track • Almost There • Ready for More **Math Center Option-** Page 459c • On Track- More practice for 18.1 • Almost there-Reteach 18.1 • Ready for more- Challenge 18.1 **Differentiation Options-** • Reteach & Challenge pg. 461

MA.K.CC.A.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
MA.K.CC.B.4b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MA.K.CC.B.5	Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MA.K.CC.C.7	Compare two numbers between 1 and 10 presented as written numerals.
MA.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

LESSON 18.3

Student Learning Intentions (SLI) WALT: (We are learning to…)	18.3- We are learning to understand the written numerals by counting and writing 16 to 19.
Student Learning Strategies	Students will: • count and write numbers 16 to 19.

	• compose and decompose numbers from 11 t 19 into ten ones and some further ones.
Success Criteria	I can count and write numbers up to 19 and make a group of that many objects.
Formative Assessment (drives instructional decisions)	• Turn and Talk questions, pgs.467, 468, & 469 • Check for understanding, pg. 469 • On your own, pg.470
Activities and Resources	**Warm Up**: Activate Prior Knowledge pg. 467B and Step It Out Teacher pg. 467D, Student pg. 467 **Mini Lesson:** Build Your Understanding, pg. 468 & Step It Out pg. 469 **Guided Practice**: Check Understanding, pg. 469 **Independent Practice:** On Your Own & Exit Ticket pg. 470 **Resources:** Into Math Teacher Edition Module 18
Suggested Modifications	**Small Group Options-** Page 467c • On Track • Almost There • Ready for More **Math Center Option-** Page 467c • On Track- More practice for 18.3 • Almost there-Reteach 18.3 • Ready for more- Challenge 18.3 **Differentiation Options-** • Reteach & Challenge pg. 469

MA.K.CC.A.1	Count to 100 by ones and by tens.
MA.K.CC.A.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
MA.K.CC.B.4b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MA.K.NBT.A.1	Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

LESSON 18.4

Student Learning Intentions (SLI) WALT: (We are learning to…)	18.4- We are learning to understand the written numerals by counting and writing to 20.
Student Learning Strategies	Students will: • count and write numerals from 0 to 20.
Success Criteria	I can count and write numbers up to 20 and make a group of that many objects.
Formative Assessment (drives instructional decisions)	• Cultivate Conversations pg.471 • Check for understanding, pg. 472 • On your own, pgs. 473-474
Activities and Resources	**Warm Up**: Activate Prior Knowledge pg. 471B and Step It Out Teacher pg. 471D, Student pg. 471 **Mini Lesson:** Step It Out, pg. 472 **Guided Practice**: Check Understanding, pg. 472 **Independent Practice:** On Your Own & Exit Ticket pgs. 473-473 **Resources:** Into Math Teacher Edition Module 18
Suggested Modifications	**Small Group Options-** Page 471c • On Track • Almost There • Ready for More **Math Center Option-** Page 471c • On Track- More practice for 18.4 • Almost there-Reteach 18.4 • Ready for more- Challenge 18.4 **Differentiation Options-** • Reteach & Challenge pg. 472

MA.K.CC.A.2	Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
MA.K.CC.A.3	Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

MA.K.CC.B.4a	When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.
MA.K.CC.B.4b	Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.
MA.K.CC.B.5	Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.
MA.K.G.B.4	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/“corners”) and other attributes (e.g., having sides of equal length).

REFLECTIONS

INTERDISCIPLINARY CONNECTIONS: NEW JERSEY STUDENT LEARNING STANDARDS FOR ELA, SOCIAL STUDIES, SCIENCE AND/OR MATHEMATICS