

Course: Math 1 & 2 SC
Unit 1: Number Sense

Year of Implementation: 2023-2024

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Stage One - Desired Results

Link(s) to New Jersey Student Learning Standards for this course:

{provide all applicable links to standards here}

<https://www.state.nj.us/education/cccs/2020/>

- **Unit Standards:** *(keep each of the following headings in place)*
 - **Content Standards**
 - 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.
 - 1.NBT.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 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 $<$.
 - 2.OA A. Represent and solve problems involving addition and subtraction.

- 1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
 - 3.0A.A Represent and solve problems involving multiplication and division.
 - 3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- **21st Century Life & Career Standards**
 - 9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive)
 - 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process.
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<https://www.state.nj.us/education/cccs/2020/2020%20NJSLs-CLKS.pdf>
- **English Companion Standards**
 - List grade-level appropriate companion standards for History, Social Studies, Science and Technical Subjects (CTE/Arts) 9-12. English Companion Standards are required only in these subject/content areas. This section can be deleted for all other content areas.
 - Grade 9-10 Companion Standards:
<https://www.state.nj.us/education/cccs/2016/ela/CompanionG0910.pdf>
 - Grade 11-12 Companion Standards:
<https://www.state.nj.us/education/cccs/2016/ela/CompanionG1112.pdf>
- **Interdisciplinary Content Standards**
 - List any standards from other content areas that apply to this unit.
- **NJ Statutes:** NJ State law mandates the inclusion of the following topics in lesson design and instruction as aligned to elementary and secondary curriculum.

Amistad Law: N.J.S.A. 18A 52:16A-88 Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35 A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New Jersey Student Learning Standards (N.J.S.A. 18A:35-4.36) A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.

Diversity and Inclusion (N.J.S.A. 18A:35-4.36a) A board of education shall incorporate instruction on diversity and inclusion in an appropriate place in the curriculum of students in grades kindergarten through 12 as part of the district's implementation of the New Jersey Student Learning Standards.

Asian American and Pacific Islanders (AAPI) P.L.2021, c.410 Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSLS) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416)

For additional information, see

NJ Amistad Curriculum: <http://www.njamistadcurriculum.net/>

Diversity and Inclusion: <https://www.nj.gov/education/standards/dei/index.shtml>

- (Sample Activities/ Lessons): <https://www.nj.gov/education/standards/dei/samples/index.shtml>

Asian American and Pacific Islanders:

- [Asian American and Pacific Islander Heritage and History in the U.S.](#)

A Teacher's Guide from EDSITEment offering a collection of lessons and resources for K-12 social studies, literature and arts classrooms that center around the experiences, achievements and perspectives of Asian Americans and Pacific Islanders across U.S. history.

Transfer Goal: *Students will be able to independently use their learning to utilize different types of basic math skills in their personal life.*

As aligned with LRHSD Long Term Learning Goal(s):

Problem-Solving: apply and transfer autonomously and collaboratively mathematical concepts and problem-solving techniques to unfamiliar, varied and real-world situations

Reasoning: reason abstractly and quantitatively by applying mathematical representations, symbols and estimation techniques when engaging in problem-solving

Modeling: demonstrate mastery of concepts by evaluating models that others have constructed or by creating appropriate models of their own

Tools: identify the correct tools to solve problems, if applicable

Structure: use multiple representations, critical thinking skills, and prior knowledge to solve problems in new situations

Enduring Understandings

Students will understand that. . .

EU 1

- *real-life situations use different forms of real numbers.*

EU 2

- *There is a specific method to simplifying numerical expressions.*

Essential Questions

EU 1

- How are whole numbers used in real-life situations?

EU 2

- Why is it important to follow an appropriate order when simplifying numerical expressions?

Knowledge

Students will know . . .

EU 1

- whole numbers are used in real-life situations.

Skills

Students will be able to. . .

EU 1

- identify and compare whole numbers.

EU 2

- the appropriate use of the rules of order of operations when calculating a numerical expression.

- identify the place value of a digit in a number (whole numbers).

EU 2

- apply the order of operations (PEMDAS) to numerical expressions involving multiple operations with whole numbers.

Stage Two - Assessment

Stage Three - Instruction

Learning Plan: Suggested Learning Activities to Include Differentiated Instruction and Interdisciplinary Connections: Each learning activity listed must be accompanied by a learning goal of A= Acquiring basic knowledge and skills, M= Making meaning and/or a T= Transfer. {place A, M and/or T along with the applicable EU number in parentheses after each statement} All knowledge and skills must be addressed in this section with a corresponding lesson/activity which teaches each concept. The following color codes are used to notate activities that correspond with interdisciplinary connections and 21st Century Life & Career Connections (which involves Technology Literacy): Red = Interdisciplinary Connection; Purple = 21st Century Life & Career Connection

For example:

- Adding manipulatives (A,M,EU1)
- Subtract Manipulatives (A,M,EU1)
- Multiplying Manipulatives (A,M,EU1)
- Dividing Manipulatives (A,M,EU1)
- Charting Manipulatives (T, EU1)
- Putting Manipulatives in sequential order (T, EU1)
- Count by 2s (A,M, EU1)

- Count by 5s (A,M, EU1)
- Count by 10s (A,M, EU1)
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- Adding numerical expressions (T, EU2)
- Subtracting numerical expressions (T,EU2)
- Multiply numerical expressions (T,EU2)
- Divide numerical expressions (T,EU2)

Pacing Guide

Unit 1 will be taught intermittently throughout the year.

Instructional Materials

*Calculator
Manipulatives*

Accommodations

Special Education: The curriculum will be modified as per the Individualized Education Plan (IEP). Students will be accommodated based on specific accommodations listed in the IEP.

Students with 504 Plans: Students will be accommodated based on specific accommodations listed in the 504 Plan.

English Language Learners: Students will be accommodated based on individual need and in consultation with the ELL teacher.

Students at Risk of School Failure: Students will be accommodated based on individual need and provided various structural supports through their school.

Gifted and Talented Students: Students will be challenged to enhance their knowledge and skills through acceleration and additional independent research on the subject matter.