Unit 3: Numbers and Operations in Base 10

Content Area: **Mathematics**
Course(s): **Mathematics - Grade K**
Time Period: **February**
Length: **4 weeks**
Status: **Published**

Unit Overview

This unit includes composing and decomposing numbers 11-19. Within the unit there will be a focus on visual tools and problem solving as students touch on cross curricular connections in seasonal changes in weather, clothing, and activities.

Transfer

Students will answer questions during the day such as:

How many more or less do you need?

How many all together?

Students will apply concepts while working with a partner.

Meaning

Understandings

Students will understand how numbers come together and break apart to create greater or less amounts.

Essential Questions

Students will keep considering...

How do we show numbers 11-19 in another way?

Application of Knowledge and Skill

Students will know...

- how to compose numbers 11 to 19
- how to decompose numbers 11 to 19

Students will be skilled at...

- use ten frames to determine how to make numbers 11-19
- use ten frames to determine how to take apart numbers 11-19

Academic Vocabulary

Chapter 7

1. eighteen 18
2. eleven 11
3. fifteen 15
4. fourteen 14
5. nineteen 19
6. seventeen 17
7. sixteen 16
8. thirteen 13
9. twelve 12

Learning Goals

Students will be able to compose and decompose numbers 11 to 19.

** Related Documents are both proficiency scales.**

- Student Scale: Unit # Learning Goal #
- Teacher Scale: Unit # Learning Goal # K/Kindergarten Math

Ch 7 (L 1,4) [Level of Difficulty 3]

Daily Target: SWBAT compose numbers __*___ using concrete objects and drawings to show a group of ten and some more.

*Insert appropriate numbers for the lesson.

- Chapter 7 Lesson 1: 11-15
- Chapter 7 Lesson 4: 16-19

MA.K.NBT.A	Work with numbers 11–19 to gain foundations for place value.
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-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.5	Use appropriate tools strategically.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.
MA.K-12.8	Look for and express regularity in repeated reasoning.

Ch 7 (L 2,5) [Level of Difficulty 3]

Daily Targets: SWBAT decompose numbers ___*____ using concrete objects and drawings to show a group of ten and some more.

* Add appropriate numbers for lesson

- Chapter 7 Lesson2: 11-15
- Chapter 7 Lesson 5: 16-19

MA.K.NBT.A	Work with numbers 11–19 to gain foundations for place value.

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-12.1	Make sense of problems and persevere in solving them.
MA.K-12.2	Reason abstractly and quantitatively.
MA.K-12.3	Construct viable arguments and critique the reasoning of others.
MA.K-12.4	Model with mathematics.
MA.K-12.6	Attend to precision.
MA.K-12.7	Look for and make use of structure.

Ch 7 (L 3) [Level of Difficulty 2]

Daily Target: SWBAT make a table to solve a problem.

MA.K.NBT	Number and Operations in Base Ten
MA.K.NBT.A	Work with numbers 11–19 to gain foundations for place value.
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-12.1	Make sense of problems and persevere in solving them.
MA.K-12.4	Model with mathematics.
MA.K-12.6	Attend to precision.

Formative Assessment and Performance Opportunities

- Check my progress assessment
- Homework
- On My Own LEVELED
- Problem Solving Pages
- Reteach
- Enrich
- Center Work
- Math Meeting

Chapter 7 Performance Task: **At the Pumpkin Patch** DOK 2, DOK 3, DOK4 - SW use ten-frames to learn how to compose and decompose numbers 11-19 (Rubric in TM pg. 478PT2)

Chapter Projects Available in Student Book:

Chapter 7 Project: Collections Poster (pg. 434)

Summative Assessment

- Leveled Chapter Assessment
- E-assessment
- Oral Assessment

21st Century Life and Careers and Technology

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP1.1	Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP2.1	Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP4.1	Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.
CRP.K-12.CRP5	Consider the environmental, social and economic impacts of decisions.
CRP.K-12.CRP5.1	Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP6.1	Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP8.1	Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.
CRP.K-12.CRP12.1	Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.
CAEP.9.2.4.A	Career Awareness
CAEP.9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.
TECH.8.1.2.D	Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.
TECH.8.1.2.D.CS1	Advocate and practice safe, legal, and responsible use of information and technology.

Accommodations and Modifications

When appropriate:

- preteach and/or reteach
- small group instruction or one-on-one (parent volunteer)
- manipulatives whenever necessary (hands-on approach)
- extra brain breaks
- use pictures instead of numbers for students having difficulty with number sense
- allow for physical activity to practice skills (ex: jump 5 times; have a large nuuse mber line and have student hop to each number while counting aloud)

For students will difficulty focusing:

- use noise buffers whenever appropriate (headphones or earbuds)
- sensory tools- ex: rubber band around chair to allow for movement
- "act it out" approach
- work with a partner; allow to ask & answer questions

Unit Resources

McGraw-Hill: My Math Teacher Manual

McGraw-Hill: My Math Student Edition and student resources

McGraw-Hill: My Math Center cards and manipulatives

McGraw-Hill Website

ST Math Puzzles: Numbers and Objects to 5, Number and Objects to 10, Subitizing, Numbers and Objects to 20, Greater than, less than, and equal to, Introduction to number line, Comparing Numbers, Numbers and Objects to 100

Interdisciplinary Connections

Real-World Problem Solving Readers

- *Animals on the Farm* (Teacher Edition pages 1,13-14) - Presents understanding of addition and subtraction as students learn about farms and farm animals, and count the number of animals on each spread (K.0A.2)
- *Numbers About Me* (Teacher Edition pages 7, 25-26) - Presents understanding of addition and subtraction as students use their senses and number words to describe parts of their bodies (K.OA. 5)
- *Pets Find a Home* (Teacher Edition pages 9, 29-30) - Presents understanding of addition and subtraction as students learn about animals in an animal shelter (K.OA.1

*Unit 2 & 3 have the same interdisciplinary connections since the both units are based on composing and decomposing numbers and addition and subtraction.

SOC.6.1.4	U.S. History: America in the World: All students will acquire the knowledge and skills to think analytically about how past and present interactions of people, cultures, and the environment shape the American heritage. Such knowledge and skills enable students to make informed decisions that reflect fundamental rights and core democratic values as productive citizens in local, national, and global communities.
K-ESS3-2.ETS1.A.1	Asking questions, making observations, and gathering information are helpful in thinking about problems.