Unit 9: Subtraction

Content Area: **Mathematics**
Course(s): **Math K**
Time Period: **March**
Length: **4 weeks**
Status: **Published**

Unit Summary

In this unit, the students will understand subtracting whole numbers. Students will begin subtracting concrete objects and will progress to making symbolic representations with paper and pencil. Students will apply and adapt a variety of appropriate strategies to solve problems. Throughout, students will engage in methodologies to construct meaning that include: acting it out, use of manipulatives, pictures and symbols, paper and pencil, and using a model.

Standards

MA.K-12.3	Construct viable arguments and critique the reasoning of others. Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.
MA.K.OA.A	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
MA.K.OA.A.1	Represent addition and subtraction up to 10 with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
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.OA.A.3	Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).
MA.K.OA.A.4	For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
MA.K.OA.A.5	Demonstrate fluency for addition and subtraction within 5.
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.
TECH.8.1.2.A.CS1	Understand and use technology systems.
TECH.8.1.2.A.CS2	Select and use applications effectively and productively.

Student Learning Objectives

Students will learn to...

- use expressions to represent subtraction within 5.
- use objects and drawing to solve subtraction word problems within 5.
- solve subtraction word problems within 5 and record the equation.
- solve subtraction word problems within 10 and record the equation.
- solve problems by using the strategy act it out.

Essential Questions

- How can you show subtraction?

Enduring Understandings

Students will understand that...

- subtraction is taking apart or taking from a set.

Application

Students will be able to independently use their learning to...

- solve simple subtraction problems.
- model, draw and write a subtraction number sentence to represent the taking apart or taking from a set.

Skills

Students will be skilled at...

- modeling subtraction sentences, circling the objects that are taken away from the set, and then cross out the subtracted set.
- acting out stories about taking from a group.
- utilizing the equal sign (=) when finding differences.

- utilizing the symbol of subtraction (-) to represent taking apart or taking from the set.
- beginning to distinguish among the different situations and recognize all modeling and solving in a variety of contexts that support subtraction situations. There are three different structures of subtraction situations that involve action: the result is unknown, the change is unknown, or the start is unknown.
    - Result Unknown: Five puppies were playing in a basket. Three of the puppies jumped out. How many puppies are in the basket now? 5 − 3 = •
    - Change Unknown: Five puppies were playing in a basket. Some puppies jumped out. Then there were two puppies playing in the basket. How many puppies jumped out? 5 − = 2
    - Start Unknown: Some puppies were playing in a basket. Three puppies jumped out. Then there were two puppies playing in the basket. How many puppies were playing in the basket at the start? − 3 = 2