Strategies - Understanding Addition and Subtraction

Content Area: **Mathematics**
Course(s): **Math 2**
Time Period: **December**
Length: **15 Days**
Status: **Published**

Unit Summary

It is essential that students build an understanding of the concepts of addition and subtraction prior to asking them to memorize addition and related subtraction facts. Students who understand the concepts of addition and subtraction are able to understand the connections between math facts and real situations. Students who understand the concepts of addition and subtraction are better prepared to begin the task of memorizing math facts because they understand what they are being asked to memorize.

Standards

MA.2.OA.B	Add and subtract within 20.
MA.2.OA.B.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
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...

- our number system is a system of patterns.
- the order of the factors does not change the sum (commutative property).
- there is a connection between the operations of addition and subtraction. They are inverse operations.
- numbers can be composed and decomposed.

Essential Questions

- What does each number represent?
- What patterns do you notice in the sums and differences?
- Does the order of the addends affect the sum?
- Do you notice a connection between this addition equation and this subtraction equation? (e.g. 3+7=10; 7+3=10; 10-7=3; 10-3=7).
- Can you write a missing factor addition equation to match the subtraction equation?
- Can you break apart one of the addends to more easily find the sum?

Enduring Understandings

Students will understand that...

- concepts of addition and subtraction to help them prepare for the task of memorizing math facts because they understand what they are being asked to memorize.

Application

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

- solve addition and subtraction facts with fluency

Skills

Students will be skilled at...

- Add and subtract within 20.
- Fluently add and subtract within 20 using mental strategies.