GRADE 1 MATH CONNECTION

Exploring Addition & Subtraction

Unit 3 Family Guide • Building Fact Automaticity Within 10

Pacing: Unit 3 Focus
Goal: Automaticity to 10
Tools: Ten-Frames & Games

Welcome to Unit 3: Growing Our Math Minds!

Dear First Grade Families,

In Kindergarten, your child learned how numbers up to 5 can be combined and decomposed. In **Unit 3**, we are taking an exciting next step: extending those part-part-whole relationships **all the way up to 10**!

Instead of relying on memorization drills or flashcards, our class focuses on **deep conceptual understanding, visual reasoning, and flexible strategies**. By investigating how numbers relate to one another, students build the automaticity needed for lifelong math success.

3 Big Ideas We Are Exploring

1. Part-Part-Whole Relationships

Numbers aren't just isolated digits—they are composed of parts! For example, 10 can be made of $7+3$, $5+5$, or $8+2$. Recognizing these parts helps children add and subtract with ease.

Figure 1: Part-Part-Whole Model (10 is decomposed into 7 and 3)

2. Rethinking the Equal Symbol (=)

Children often think = means "the answer comes next." In 1st Grade, we teach that = acts like a **balance scale**—it means *"has the same value as"*!

Figure 2: Balance Scale Concept (6 + 1 has the same value as 4 + 3)

3. Why We Avoid Timed Tests & Flashcards

Research shows timed tests often induce math anxiety without building true numerical fluency. Instead, we foster flexibility and confidence through interactive games, visual models, and rich discussion.

Fluency Strategies We Use

We practice these key mental strategies to build automaticity within 10:

✋ Doubles Combinations

Using fingers or visual patterns to double numbers to 10.

$3+3=6$ • $4+4=8$

🌱 Near Doubles

Use a known double, then add 1!

$3+4 \rightarrow (3+3)+1=7$

✋ 5-Plus Facts

Using 5 as an anchor on ten-frames:

Ten-Frame showing 5 + 2 = 7

🎯 Partners of 10

Finding the missing part to reach 10:

$7+?=10 \rightarrow ?=3$

Math Vocabulary

Term	Kid Meaning
Part-Part-Whole	How parts make a whole.
Equation	A statement showing equal values ($5+2=7$).
Equal (=)	Means *"is the same value as"*.
Join / Separate	Combining vs. taking away.

💡 Learning Targets

By the end of Unit 3, students can say:

- "I can solve addition/subtraction stories to 10."
- "I can write equations using $+$, $-$, and $=$."
- "I can show that = means *is the same as*."
- "I can justify my work with ten-frames and drawings."

Solving Story Problems Without "Key Words"

In traditional math, children were often taught to search for "key words" like *in all* (add) or *fewer* (subtract). However, relying on key words can mislead students!

Consider this example:

📚 Math Storytime Read-Alouds

Connect reading and math with these wonderful picture books:

Splash!
by Ann Jonas • Count who jumps in and out of the pond!

Elevator Magic