

Grade 3/4: Module 1: Lesson Demonstration

Concept: Addition/Subtraction Algorithm with the Place Value Chart and Number Disks

3 Part Lesson

- Part 1: Fluency Work (6 minutes)
 Part 2: Problem Solving (8 minutes)
 Part 3: Content Lesson with Debrief (36 minutes)

Teacher**Student Accommodations/Comments/Pictures****Part 1: Fluency Focus: Number sense**

Materials: Sprint – Adding Common Units

Students work at their tables.

Fluency Activity #1: Happy Fingers (3 minutes)

T: We're going to play a game called Happy Fingers!

T: Watch my fingers to know whether to count up or down. A closed hand means stop. (Show them the signals as you explain.)

Teacher directs students to count by 7s, 4s, and 3s.

Fluency Activity #2: Adding & Subtracting common units and compound units (3 minutes)Teacher projects: $3 + 2 =$

T: Say the addition sentence.

S: $3 + 2 = 5$.

T: (pointing at the 3) How many ones?

S: 3 ones.

T: (pointing at the 2) How many ones?

S: 2 ones.

T: Say the addition sentence with the correct units.

S: 3 ones + 2 ones equals 5 ones.

Repeat process and sequence for $30 + 20$, $3000 + 2000$ Teacher projects: $5 - 3 =$

T: Say the subtraction sentence.

S: $5 - 3 = 2$.

T: (pointing at the 5) How many ones?

S: 5 ones.

T: (pointing at the 3) How many ones?

S: 3 ones.

T: Say the subtraction sentence with the correct units.

S: 5 ones - 3 ones equals 2 ones.

Repeat process and sequence for $50 - 30$, $5000 - 3000$

Teacher projects: $3003 + 2002 =$

T: Raise your hand if you think you know the answer. (signal)

S: 5005.

Teacher projects: $4004 + 3003 =$

T: Raise your hand if you think you know the answer. (signal)

S: 7007.

Repeat process and sequence for $5005 + 4004$ and $3003 + 4004$.

Teacher projects: $5005 - 3003 =$

T: Raise your hand if you think you know the answer. (signal)

S: 2002.

Teacher projects: $7007 - 3003 =$

T: Raise your hand if you think you know the answer. (signal)

S: 4004.

Repeat process and sequence for $9009 - 5005$ and $8008 - 5005$.

Teacher projects: $9 + 3 =$

T: Raise your hand if you think you know the answer. (signal)

S: 12.

Teacher projects: $9000 + 3000 =$

T: Raise your hand if you know the answer. (signal)

S: 12,000.

Teacher projects: $9009 + 3003 =$

T: Raise your hand if you think you know the answer. (signal)

S: 12,012.

Repeat process and sequence for $7 + 4$ and $9 + 8$.

Teacher projects: $11 - 5 =$

T: Raise your hand if you think you know the answer. (signal)

S: 6.

Teacher projects: $11,000 - 5000 =$

T: Raise your hand if you know the answer. (signal)

S: 6000.

Teacher projects: $11,011 - 5005 =$

T: Raise your hand if you think you know the answer. (signal)

S: 6006.

Repeat process and sequence for $12 - 4$ and $17 - 9$.

Part 2: Problem Solving (8 minutes)

Teacher projects:

435 concert tickets were sold on Saturday. 24 more tickets were sold on Saturday than Friday.

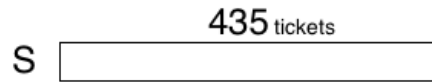
T: Read.

S: 435 concert tickets were sold on Saturday. 24 more tickets were sold on Saturday than Friday.

T: Draw a bar diagram of what you see. (pause). Reread the first sentence.

S: 435 concert tickets were sold on Saturday.

Teacher draws:



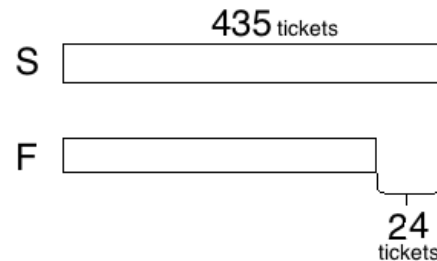
T: Reread the second sentence.

S: 24 more tickets were sold on Saturday than Friday.

T: Should the bar for Friday be longer or shorter than Saturday's bar?

S: Shorter.

Teacher draws:



Teacher projects:

- a. On which day were most of the tickets sold?
- b. How many tickets were sold on Friday?
- c. How many tickets were sold altogether?
- d. Sunday's total ticket sales were the sum of one-third of Friday's and two-thirds of Saturday's. How many tickets were sold on Sunday?
(Draw a new diagram)

Teacher reviews answers.

Part 3: Content Lesson and Debrief (## minutes)

Materials: Number disks, personal white board, place-value mat, Dot Array Worksheet, cubes, Activity Sheet, Exit Ticket, Homework

“I do” (## minutes)

Teacher projects: $9 + 5 =$

T: Say the addition sentence with answer.

S: $9 + 5 = 14$.

Teacher projects: $9000 + 5000 =$

T: Say the addition sentence with an answer.

S: $9000 + 5000 = 14,000$.

Teacher projects $9009 + 5000 =$

T: Say the addition sentence with answer.

S: $9009 + 5000 = 14,009$.

Teacher projects: $9009 + 5005 =$

T: Say the addition sentence with answer.

S: $9009 + 5005 = 14,014$.

Teacher projects: $8000 + 4000 =$

T: Say the addition sentence with answer.

S: $8000 + 4000 = 12,000$.

Teacher projects: $8009 + 4005 =$

T: Say the addition sentence with answer.

S: $8009 + 4005 = 12,014$.

Teacher projects: $68 + 47 =$

T: Say the addition sentence with answer. (pause) Why is this more difficult? Turn and talk to your partner.

S: They're not as easy to compute mentally.

T: How can we find the answer?

S: The addition algorithm.

Teacher projects:

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

T: Show 68 using number disks. My board is your model. Follow along with me if you get confused.

Teacher projects:

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
				●● ●● ●● ●●	●●● ●●● ●●●

T: Add 47 using number disks:

Teacher guides through bundling number disks while writing the algorithm on the side.

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
			●	●●●● ●●●●	●●●● ●●●●
			1	1	5

T: Say the addition sentence.

S: $68 + 47 = 115$.

Teacher projects: $68,000 + 47,000 =$

T: If $68 + 47 = 115$, $68,000 + 47,000$ equals how many thousands?

S: 115 thousands.

Teacher projects: $68,068 + 47,047 =$

T: If $68,000 + 47,000 = 115,000$, then what does $68,068 + 47,047$ equal?

S: 115,115.

Teacher projects: $568,000 + 547,000 =$

T: On your place value charts, write in number disks to show this problem. (pause) Show.

Students show:

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	● ● ● ● ●	●● ● ● ● ●	●● ●● ●● ●● ●●			
	● ● ● ● ●	●● ● ● ● ●	●● ●● ●● ●● ●●			

Teacher guides students through bundling while writing the algorithm in numerals on the side.

Teacher projects:

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
●	●● ●● ●● ●● ●●	●● ●● ●● ●● ●●	●● ●● ●● ●● ●●			
	●● ●● ●● ●● ●●	●● ●● ●● ●● ●●	●● ●● ●● ●● ●●			
1	1	1	5	0	0	0

“We do” (## minutes)

Repeat above process and sequence for $79 + 58$, $79,079 + 58,058$, and $579,579 + 558,558$.

“I do” (## minutes)

Pass out the **Dot Array Worksheet**.

T: **Use the cubes to show** each set of partners to 10.

While students work, the teacher can reteach a small group or circulate.

Teacher projects: $12 - 5 =$

T: Say the subtraction sentence with answer.

S: $12 - 5 = 7$.

Teacher projects: $12,000 - 5000 =$

T: Say the subtraction sentence with an answer.

S: $12,000 - 5000 = 7,000$.

Teacher projects $12,012 - 5000 =$

T: Say the subtraction sentence with answer.

S: $12,012 - 5000 = 70,012$.

Teacher projects: $12,012 - 5005 =$

T: Say the subtraction sentence with answer.

S: $12,012 - 5005 = 7007$.

Teacher projects: $13,000 - 4000 =$

T: Say the subtraction sentence with answer.

S: $13,000 - 4000 = 9000$.

Teacher projects: $13,013 - 4004 =$

T: Say the subtraction sentence with answer.

S: $13,013 - 4004 = 9009$.

Teacher projects: $145 - 59 =$

T: Say the subtraction sentence with answer. (pause) Why is this more difficult? Turn and talk to your partner.

S: They're not as easy to compute mentally.

T: How can we find the answer?

S: The subtraction algorithm.

Teacher projects:

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

T: Show 145 using number disks. My board is your model. Follow along with me if you get confused.

Teacher projects:

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
●	● ● ● ● ●	● ● ● ● ●				
	● ● ● ● ● ● ● ● ● ●	● ● ● ● ● ● ● ● ● ●				
	8	6	0	0	0	0

“We do” (## minutes)Repeat process and sequence for $234 - 68$, $234,234 - 68,068$, and $1,234,234 - 680,680$.**“You do” (## minutes)**

Distribute Activity sheet.

While students work, the teacher can reteach a small group or circulate.

Debrief (## minutes)

T: What did we learn today?

S: We can use mental addition and subtract to solve numbers with 6 or 7 digits.

S: Subtracting 2-digit numbers is just like subtracting 6 digit numbers.

T: You have 4 minutes to finish your Exit Ticket.