Overall Structure

1. **Explore, Play, and Discuss**: These activities provide opportunities for students to explore the initial ideas of the section. This section can be completed asynchronously using digital manipulatives and response tools, or using physical manipulatives and the student workbook pages with guiding questions for caregivers. If planning for a section per week, these activities would ideally be assigned earlier in the week.

2. **Deep Dive**: These activities are key learning opportunities for students around the section goals. **If there are chances for in-person or virtual synchronous time, these would be the activities to do collaboratively to share ideas and build community.** If done asynchronously, opportunities to view and respond to peer work or sample student work as well as receive feedback from teachers (and perhaps peers), is essential for these activities. Formative assessment is also a part of this section to check in on student understanding. If planning for a section per week, these activities would ideally be done mid-week.

3. **Synthesize and Apply**: These activities are ways for students to synthesize the learning of the section and for teachers to assess student understanding toward the section learning goals. These activities can be completed asynchronously, with either written, in-person, or automated feedback. If planning for a section per week, these activities would ideally be done toward the end of the section.

4. **Ongoing Practice**: These provide opportunities for students to practice unit topic ideas and build toward computational fluency. In K–5, the activities in this section are typically practice problems and center games that can be played independently, with a family member, or with classmates. In IM 6–12, each lesson includes a distributed practice set. Many existing digital platforms already have IM 6–12 practice problems loaded in so that students can complete and submit them online. Some can be autoscored.

5. **Anytime Resources:** The activities in this section have the flexibility to be used anytime during a section. In K–5, these are center activities that provide opportunities for students to build computational fluency across the year. In 6–12, these activities are modeling prompts that offer students the opportunities to engage in mathematical modeling.

Grade 1, Unit 3: Adding and Subtracting Within 20

Abbreviated Unit Narrative

In this unit, students develop an understanding of 10 ones as a unit called “a ten”. This work allows students to use the structure of numbers as 10 + *n* to add and subtract within 20. Students decompose an addend and compose a part with another addend as they add problems with 2 and 3 addends. For example, they reason that 9 + 5 = 9 + 1 + 4 = 10 + 4 in order to find the sum. There is a heavy emphasis on addition and subtraction methods that involve making a ten, because these methods connect with the place value concepts students learn later in the year.

Subtraction is addressed throughout the unit and becomes the focus in the last section. Students draw on work from previous units to consider taking away and counting on strategies for finding the difference. They understand subtraction as an unknown addend problem and use their knowledge of addition to find the difference.

Students solve story problems throughout the unit and are introduced to 2 new story problem types - Add To, Start Unknown and Take From, Change Unknown. Students compare the structure of different types of story problems while also developing their ability to add and subtract within 20.

This work supports students in the next two units as they develop an understanding of place value and add numbers within 100.

Section A Goals

- Build toward fluency with adding and subtracting within 10

This section focuses on developing students’ fluency with addition and subtraction within 10. Students are not expected to demonstrate fluency with facts to 10 until the end of the school year. In this section,

students are given a chance to self-assess which sums they know from memory and those they are still working on. Since an addition expression represents the sum of two quantities, the term "sum" is often used to refer to an addition expression.

Explore, Play, and Discuss	**Activity Suggestions**
	• Lesson 1, Warm-up, Notice and Wonder
	• Lesson 1, Activity 2
	  ○ This could be designed as a digital card sort.
	• Lesson 3, Warm-up
	  ○ Can be combined with Lesson 2, Activity 1 (below) into one activity.
	• Lesson 2, Activity 1
	  ○ Consider reading the problems to students.
	  ○ If students do not have physical chips to use, this digital tool might be helpful.
	• Scavenger Hunt (optional)
	  ○ Example items:
	  ■ Find a group of objects or picture that shows 5 + 5
	  ■ Find a group of objects or picture that shows 6 + 4
		Assessment Suggestions
		• Lesson 2, Cool-down

Deep Dive	**Activity Suggestions**
	• Lesson 4, Warm-up
	• Lesson 3, Activity 2
	  ○ Consider launching this activity with a few cards to match from Activity 1.
	• Lesson 4, Activity 2, All the Ways to Make 10
	• Lesson 5, Activity 1, Mai Finds the Difference
	• Revisit the Math Community poster from Unit 1
	  ○ "What should we revise? What should we add?"
		Assessment Suggestions
		• Lesson 6, Activity 1

Synthesize and Apply	**Activity Suggestions** • Lesson 3, Activity 1, Sort Addition Expressions • Lesson 5, Activity 3, Some Subtraction Problems	**Assessment Suggestions** • Lesson 6, Activity 2, Shake and Spill Story Problems

Ongoing Practice	• Lesson 2, Activity 3
	• Lesson 4, Activity 1 Shake and Spill: 10 Counters
	• Practice Problems
	  ○ Pre-unit
	  ○ Lesson

Anytime Resources	• Exploration problems
	• Centers:
	  ○ Board Game, Stage 1
	  ○ What's Behind My Back, Stage 2
	  ○ Shake and Spill, Stage 4
	• IM Talking Math

Section B Goals

- Understand 10 ones as a ten and the numbers 11 to 19 as a ten and some ones.
- Find the value of an addition expression where one addend is 10 or a subtraction expression where the difference is 10.
- Add and subtract one-digit numbers from teen numbers.

In this section students begin exploring the structure of the base-ten system and place value as they work with teen numbers. They see that ten ones are put together to compose a new unit, a ten. Students see

that teen numbers are a unit of ten plus some number of ones. Double 10-frames are the main representation in this section because they encourage students to see the unit of ten in teen numbers. The double 10-frame allows students to easily see when the ten is complete, whereas with connecting cube towers, the individual cubes need to be counted to confirm that a tower is a unit of 10.

Explore, Play, and Discuss	**Activity Suggestions**
	• Lesson 8, Warm-up
	• Lesson 8, Activity 2, Building Teen Numbers
	  ○ If students do not have access to physical connecting cubes, this digital tool will be helpful.
	• Lesson 9, Warm-up and Activity 1
	  ○ Use the synthesis of the warm-up (either written or video) to introduce the equation of 10 + __ = ___ for the two images.
		Assessment Suggestions
		• Lesson 9, Cool-down

Deep Dive	**Activity Suggestions**
	• Lesson 11, Warm-up
	• Lesson 11, Activity 1, Mancala
	  ○ Add in a few problems from Activity 2 from this lesson.
	• Lesson 12, Activity 1, Noah's Collection
		Assessment Suggestions
		• Lesson 10, Cool-down
		• Lesson 12, Activity 2
		  ○ Problems 1-3

Synthesize and Apply	**Activity Suggestions** • Lesson 10, Activity 2 • Lesson 11, Activity 2	**Assessment Suggestions** • Lesson 12, Activity 2 ○ Problems 4-6

Ongoing Practice	

	• Practice Problems
	• Lesson 8, Activity 1, Counting Collections
	• Lesson 10, Warm-up
	• Centers:
	  ○ Find the Pair, Stage 2
	  ○ Capturing Squares, Add Within 10, Stage 1
	  ○ Compare, Addition Expressions

Anytime Resources	

	• Exploration Problems
	• Centers:
	  ○ Board Game, Stage 1
	  ○ What's Behind My Back, Stage 2
	  ○ Shake and Spill, Stage 4
	• IM Talking Math

Section C Goals

- Add within 20, including 3 addends

Students make use of the base-ten structure and related facts to add two or three addends within 20. Students are encouraged to use sums of 10 and their understanding of the commutative and associative properties (referred to collectively as the 'add in any order' property to students) to discover the usefulness of grouping numbers to find a sum of 10 when adding. Initially the addends that make a ten appear next to each other (4 + 6 + 7) and eventually they do not (6 + 7 + 4), which encourages students to see that they can group addends in different ways to make the problem easier by making a ten first.

Explore, Play, and Discuss	**Activity Suggestions**	**Assessment Suggestions**

	• Lesson 15, Warm-up
	• Lesson 17, Warm-up
	  ○ Collect these responses to share in the Deep Dive activity section.
	• Lesson 15, Activity 1
	  ○ You might want to add another problem from Activity 2 to this activity.
		• Lesson 15, Cool-down

	○ Consider reading the problem to the students before they solve.	

Deep Dive	**Activity Suggestions** ● Lesson 16, Warm-up ● Lesson 16, Activity 1 ○ This could be created to be a digital card-matching activity. ● Revisit Lesson 17, Warm-up responses from the Explore section. ● Lesson 17, Activity 2, Clare's Cars ● Lesson 19, Activity 2	**Assessment Suggestions** ● Lesson 20, Activity 1

Synthesize and Apply	**Activity Suggestions** ● Lesson 16, Activity 3 ● Lesson 20, Activity 2 ● Read Student Lesson Summary	**Assessment Suggestions** ● Lesson 20, Cool down

Ongoing Practice	● Lesson 18, Activity 1 ● Practice Problems ● Centers: ○ Bingo, Add 7, 8 or 9 ○ How Close?

Anytime Resources	• Exploration Problems
	• Centers:
	  ○ Find the Pair, Stage 2
	  ○ Capturing Squares, Add Within 10, Stage 1
	  ○ Compare, Addition Expressions
	• IM Talking Math

Section D Goals

- Subtract within 20

In this section students subtract within 20, using both take away and counting on methods. Students use the relationship between addition and subtraction and their understanding of the usefulness of making a ten. Students work with both subtraction expressions and missing addend equations. Presented with 15 - 8 they may take away 5 to get to 10 and then take away another 3 to find the difference of 7.

Explore, Play, and Discuss	**Activity Suggestions** • Lesson 22, Warm-up • Lesson 22, Activity 1	**Assessment Suggestions** • Lesson 22, Cool-down

Deep Dive	**Activity Suggestions** • Lesson 23, Warm-up • Lesson 23, Activity 1 ○ If students do not have physical 10-frames and counters, this digital tool might be helpful. (You can add another 10 frame with the '+')	**Assessment Suggestions** • Lesson 23, Cool-down

	• Lesson 23, Activity 2	

Synthesize and Apply	**Activity Suggestions** • Lesson 24, Activity 1 • Lesson 25, Activity 1	**Assessment Suggestions** • Lesson 26, Activity 2

Ongoing Practice	• Practice Problems
	• Centers:
	  ○ Bingo, Add 7, 8 or 9
	  ○ How Close?

Anytime Resources	• Exploration Problems
	• Centers:
	  ○ Find the Pair, Stage 2
	  ○ Capturing Squares, Add Within 10, Stage 1
	  ○ Compare, Addition Expressions
	• IM Talking Math