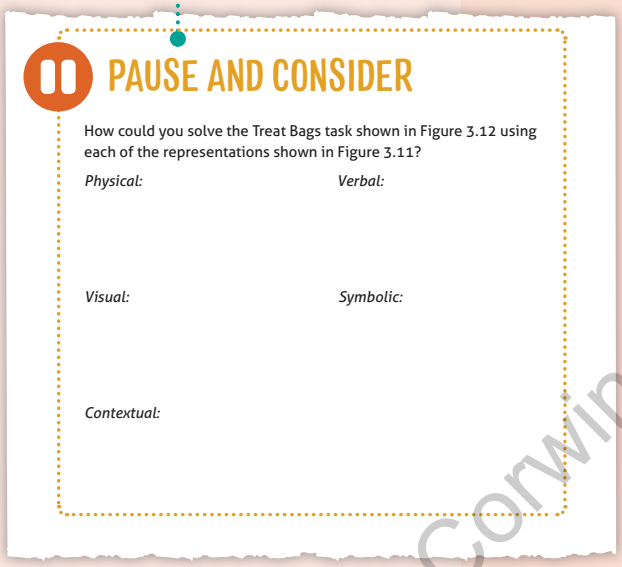
The Five Practices in Practice
at a Glance

Candid quotes from been-there teachers illuminate the topic of each chapter.

> "While students are working and I'm checking in with them, I'm going to be thinking about how to sequence the math and the kids. I might have ideas, but I have to wait and see what they do. I'll be trying to see who's got something that can help us make sense of the math goals for today."
>
> —ANDREW STRONG, FIFTH-GRADE TEACHER

Pause and Consider moments invite teachers to reflect on and make connections to their own practice.



PAUSE AND CONSIDER

How could you solve the Treat Bags task shown in Figure 3.12 using each of the representations shown in Figure 3.11?

Physical:

Verbal:

Visual:

Symbolic:

Contextual:

hat they have written or drawn. Using students' own n often be helpful. Be aware that what you anticipated do is not always what they end up doing. Asking students ns about their work is an important way to uncover how g about the task and their solution. As Ms. Tyus explained, ıtegies outlined and I have my assessing questions. But ıappen in the task. They might do different things." ɔed this point, saying, "You never know what you're going es" and that for him, the next step is "just to assess their lid you do this? Explain it to me." Assessing questions are use they can help you uncover what students are doing, that aligns with what you anticipated.

ıg questions are most useful when they make students' : in ways that can then help you move their thinking the lesson goals. You want to understand not only *what* ıt *why* they did it. Understanding the reasons behind a gy often provides the clues you need to help the student ɔosition or move deeper into the task.

TEACHING TAKEAWAY

Look and listen *carefully.* Modify your planned assessing questions in real time based specifically on what students are doing and saying, rather than what you thought they would do or say.

Teaching Takeaways provide on-your-feet support for teachers, so they can jump into implementing the strategies discussed.

Video showcase panels highlight the rich film footage available for each topic and include related questions for consideration.

Analyzing the Work of Teaching 2.1

Launching a Task

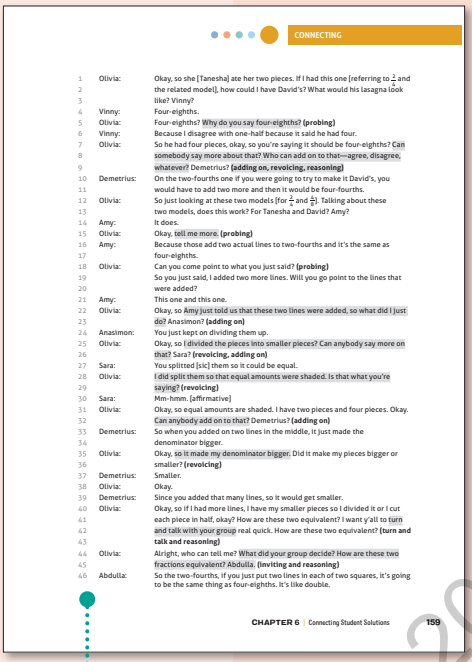
Video Clip 2.1
In this activity, you will watch Video Clip 2.1 from Tara Tyus's first-grade class.

As you watch the clip, consider the following questions:

- What did the teacher do to help her students *get ready* to work on the Ms. Tyus's Markers task?
- What did the teacher learn about her students that indicated they were ready to engage in the task?
- Do you think the time spent in launching the task was time well spent?

online resources

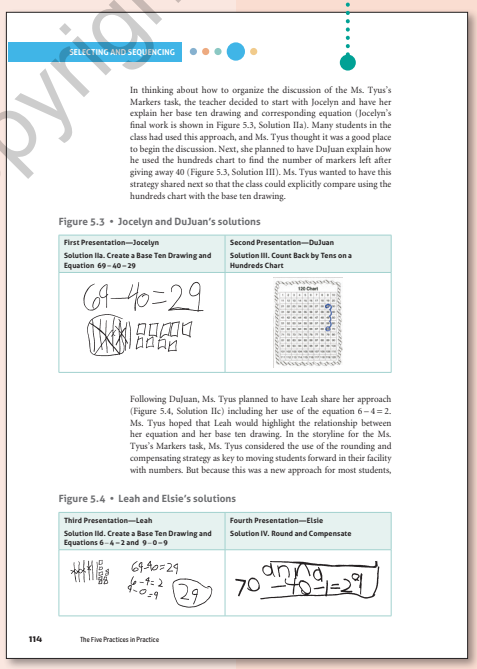
Videos may also be accessed at
resources.corwin.com/5practices-elementary



CONNECTING

1	Olivia:	Okay, so she [Tanesha] ate her two pieces. If I had this one [referring to $\frac{2}{4}$ and
2		the related model], how could I have David's? What would his lasagna look
3		like? Vinny?
4	Vinny:	Four-eighths.
5	Olivia:	Four-eighths? Why do you say four-eighths? **(probing)**
6	Vinny:	Because I disagree with one-half because it said he had four.
7	Olivia:	So he had four pieces, okay, so you're saying it should be four-eighths? Can
8		somebody say more about that? Who can add on to that—agree, disagree,
9		whatever? Demetrius? **(adding on, revoicing, reasoning)**
10	Demetrius:	On the two-fourths one if you were going to try to make it David's, you
11		would have to add two more and then it would be four-fourths.
12	Olivia:	So just looking at these two models [for $\frac{2}{4}$ and $\frac{4}{8}$]. Talking about these
13		two models, does this work? For Tanesha and David? Amy?
14	Amy:	It does.
15	Olivia:	Okay, tell me more. **(probing)**
16	Amy:	Because those add two actual lines to two-fourths and it's the same as
17		four-eighths.
18	Olivia:	Can you come point to what you just said? **(probing)**
19		So you just said, I added two more lines. Will you go point to the lines that
20		were added?
21	Amy:	This one and this one.
22	Olivia:	Okay, so Amy just told us that these two lines were added, so what did I just
23		do? Anasimon? **(adding on)**
24	Anasimon:	You just kept on dividing them up.
25	Olivia:	Okay, so I divided the pieces into smaller pieces? Can anybody say more on
26		that? Sara? **(revoicing, adding on)**
27	Sara:	You splitted [sic] them so it could be equal.
28	Olivia:	I did split them so that equal amounts were shaded. Is that what you're
29		saying? **(revoicing)**
30	Sara:	Mm-hmm. [affirmative]
31	Olivia:	Okay, so equal amounts are shaded. I have two pieces and four pieces. Okay.
32		Can anybody add on to that? Demetrius? **(adding on)**
33	Demetrius:	So when you added on two lines in the middle, it just made the
34		denominator bigger.
35	Olivia:	Okay, so it made my denominator bigger. Did it make my pieces bigger or
36		smaller? **(revoicing)**
37	Demetrius:	Smaller.
38	Olivia:	Okay.
39	Demetrius:	Since you added that many lines, so it would get smaller.
40	Olivia:	Okay, so if I had more lines, I have my smaller pieces so I divided it or I cut
41		each piece in half, okay? How are these two equivalent? I want y'all to turn
42		and talk with your group real quick. How are these two equivalent? **(turn and talk and reasoning)**
43		
44	Olivia:	Alright, who can tell me? What did your group decide? How are these two
45		fractions equivalent? Abdulla. **(inviting and reasoning)**
46	Abdulla:	So the two-fourths, if you just put two lines in each of two squares, it's going
		to be the same thing as four-eighths. It's like double.

Illustrative vignettes and examples demonstrate real-world applications of the concepts discussed in each chapter.



SELECTING AND SEQUENCING

In thinking about how to organize the discussion of the Ms. Tyus's Markers task, the teacher decided to start with Jocelyn and have her explain her base ten drawing and corresponding equation (Jocelyn's final work is shown in Figure 5.3, Solution IIa). Many students in the class had used this approach, and Ms. Tyus thought it was a good place to begin the discussion. Next, she planned to have DuJuan explain how he used the hundreds chart to find the number of markers left after giving away 40 (Figure 5.3, Solution III). Ms. Tyus wanted to have this strategy shared next so that the class could explicitly compare using the hundreds chart with the base ten drawing.

Figure 5.3 • Jocelyn and DuJuan's solutions

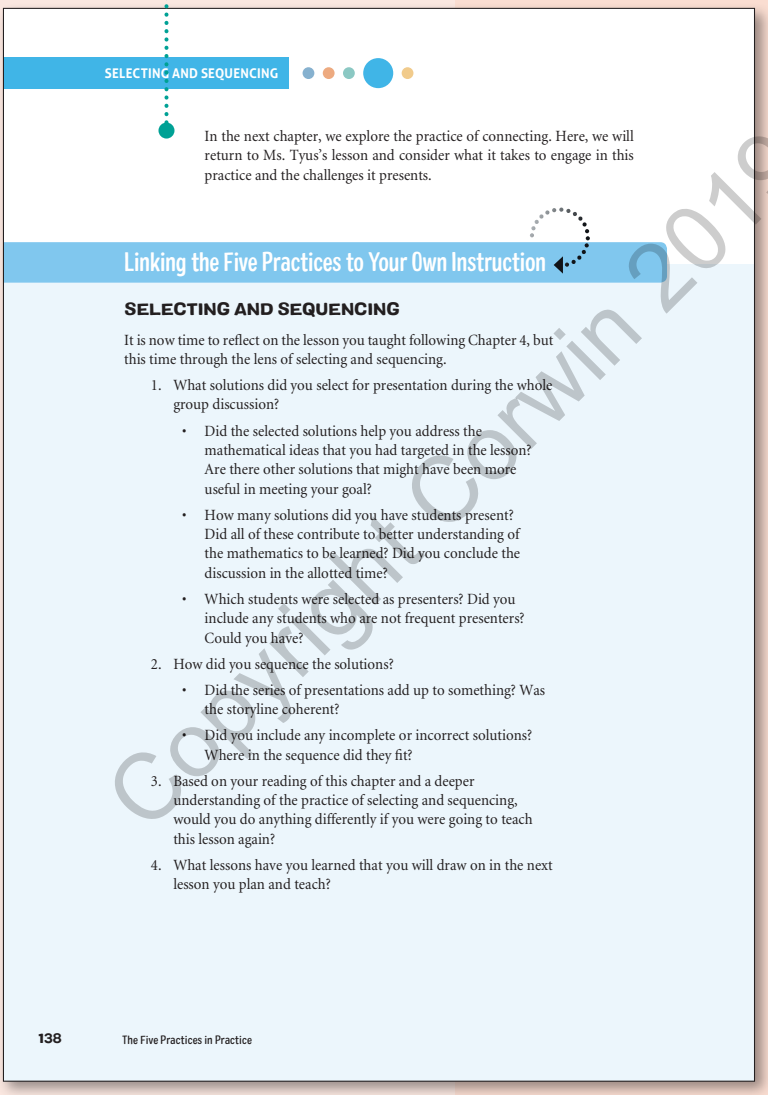
First Presentation—Jocelyn Solution IIa. Create a Base Ten Drawing and Equation 69 – 40 = 29	Second Presentation—DuJuan Solution III. Count Back by Tens on a Hundreds Chart
69 – 40 = 29	100 Chart

Following DuJuan, Ms. Tyus planned to have Leah share her approach (Figure 5.4, Solution IIc) including her use of the equation 6 – 4 = 2. Ms. Tyus hoped that Leah would highlight the relationship between her equation and her base ten drawing. In the storyline for the Ms. Tyus's Markers task, Ms. Tyus considered the use of the rounding and compensating strategy as key to moving students forward in their facility with numbers. But because this was a new approach for most students,

Figure 5.4 • Leah and Elsie's solutions

Third Presentation—Leah Solution IId. Create a Base Ten Drawing and Equations 6 – 4 = 2 and 9 – 0 = 9	Fourth Presentation—Elsie Solution IV. Round and Compensate
69 – 40 = 29 6 – 4 = 2 9 – 0 = 9 29	70 – 40 – 1 = 29

An in-depth **Linking the Five Practices to Your Own Instruction** feature helps teachers move even deeper into implementation, providing detailed support and additional reflective opportunities.



SELECTING AND SEQUENCING

In the next chapter, we explore the practice of connecting. Here, we will return to Ms. Tyus's lesson and consider what it takes to engage in this practice and the challenges it presents.

Linking the Five Practices to Your Own Instruction

SELECTING AND SEQUENCING

It is now time to reflect on the lesson you taught following Chapter 4, but this time through the lens of selecting and sequencing.

1. What solutions did you select for presentation during the whole group discussion?
   - Did the selected solutions help you address the mathematical ideas that you had targeted in the lesson? Are there other solutions that might have been more useful in meeting your goal?
   - How many solutions did you have students present? Did all of these contribute to better understanding of the mathematics to be learned? Did you conclude the discussion in the allotted time?
   - Which students were selected as presenters? Did you include any students who are not frequent presenters? Could you have?
2. How did you sequence the solutions?
   - Did the series of presentations add up to something? Was the storyline coherent?
   - Did you include any incomplete or incorrect solutions? Where in the sequence did they fit?
3. Based on your reading of this chapter and a deeper understanding of the practice of selecting and sequencing, would you do anything differently if you were going to teach this lesson again?
4. What lessons have you learned that you will draw on in the next lesson you plan and teach?

Figure 3.6 • The Lasagna task

Lasagna

There were two pans of lasagna at the school picnic. The parents cut each pan of lasagna into equal portions.

Tanesha has 2 portions from one pan, while David has 4 portions from the other pan. They both received the same amount of lasagna. How is this possible?

1. Show how the lasagna was divided into portions so Tanesha's 2 portions are equal to David's 4 portions.
2. Shade in the portion of lasagna eaten by each child.
3. Write fractions that describe each student's portion of the pan of lasagna.
4. Explain how you know that Tanesha and David each received the same amount of lasagna. Explain your thinking by referring to the pictures, symbols, and words.

Source: Adapted from Hamilton County Department of Education Grade 4 Task 11.

Clearly designed tasks promote mathematical reasoning and problem solving.

Figure 4.3 • Challenges associated with the practice of monitoring

CHALLENGE	DESCRIPTION
Trying to understand what students are thinking	Students do not always articulate their thinking clearly. It can be quite demanding for teachers, in the moment, to figure out what a student means or is trying to say. This requires teachers to listen carefully to what students are saying and to ask questions that help them better explain what they are thinking.
Keeping track of group progress—which groups you visited and what you left them to work on	As teachers are running from group to group, providing support, they need to be able to keep track of what each group is doing and what they left students to work on. Also, it is important for a teacher to return to a group in order to determine whether the advancing question given to them helped them make progress.
Involving all members of a group	All individuals in the group need to be challenged to answer assessing and advancing questions. For individuals to benefit from the thinking of their peers, they need to be held accountable for listening to and adding on, repeating and summarizing what others are saying.

Challenge and Description charts distill and demystify some of the common issues teachers encounter when teaching the concepts at hand.

What It Takes/Key Questions charts break down the critical components of the practice and explain what it takes to succeed and the questions you need to ask yourself to stay on track.

the components of this practice along with key questions to guide the process of monitoring.

Figure 4.1 • Key questions that support the practice of monitoring

WHAT IT TAKES	KEY QUESTIONS
Tracking student thinking	How will you keep track of students' responses during the lesson?
	How will you ensure that you check in with all students during the lesson?
Assessing student thinking	Are your assessing questions meeting students where they are?
	Are your assessing questions making student thinking visible?
Advancing student thinking	Are your advancing questions driven by your lesson goals?
	Are students able to pursue advancing questions on their own?
	Are your advancing questions helping students to progress?