



 i-Ready Classroom
Mathematics

Pilot Success Guide



SUPPORT • RESOURCES • TIPS • TOOLS • HOW TOS

2024–2025

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Additional Support

Go to CurriculumAssociates.com/RCL2024Pilot or use the QR code to access digital resources that include classroom videos, links to help assign digital practice and assessments, efficacy research, and more!



Accessing Resources on the Teacher Dashboard

Assess & Teach

Go to Assess & Teach to:

- Access the Teacher Toolbox
- Assign Interactive Practice
- Assign Comprehension Checks

[Learn more on page 2](#)

Reports

Go to Reports to access:

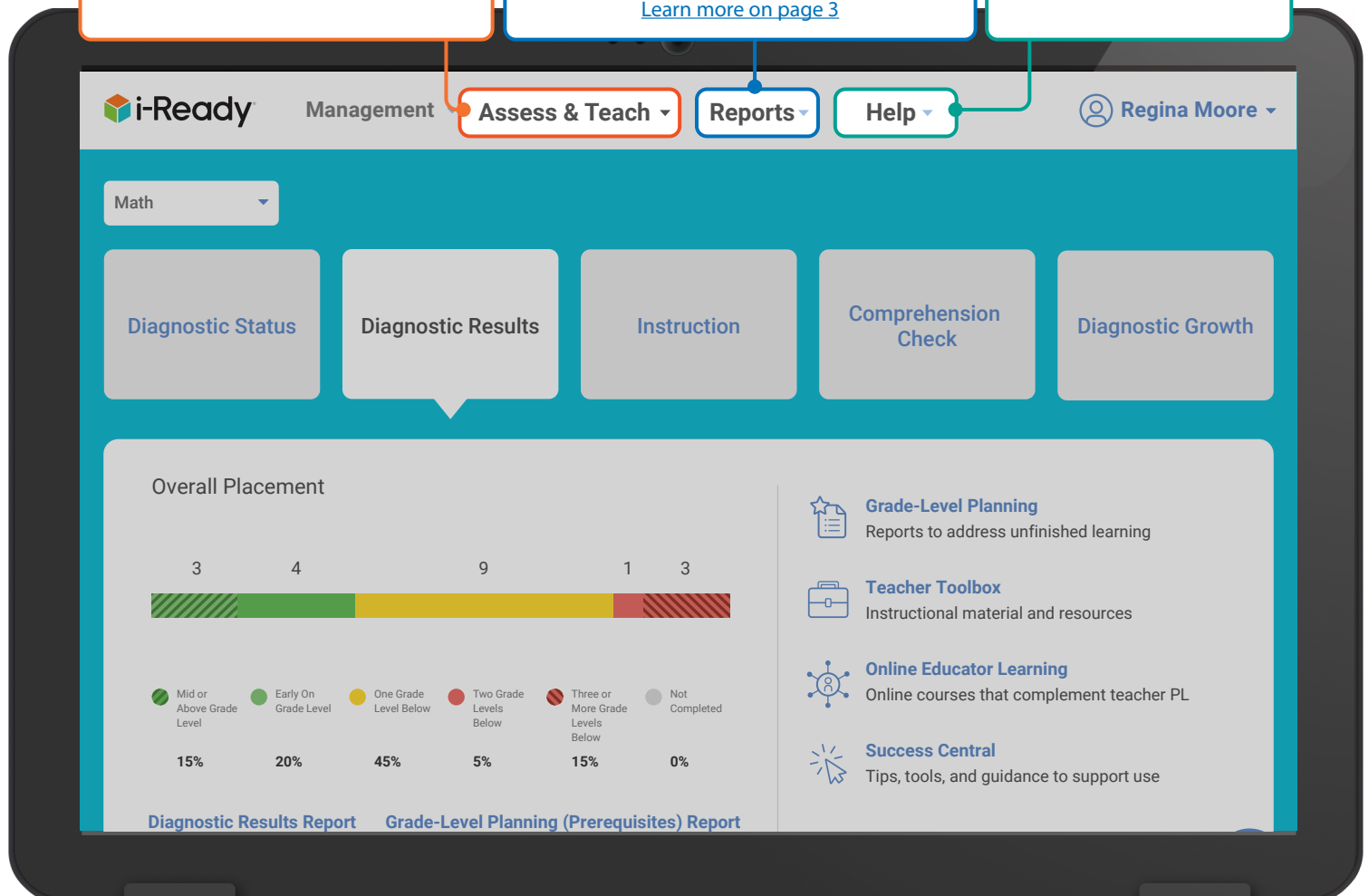
- The Grade-Level Planning (Prerequisites) report
- Student performance on Interactive Practice and Comprehension Checks
- Diagnostic data

[Learn more on page 3](#)

Help

Go to Help to access:

- Online Educator Learning courses
- Success Central to find support resources



Assess & Teach

1. Click on **Assess & Teach** at the top of your home page.

2. **Go to Resources to:**

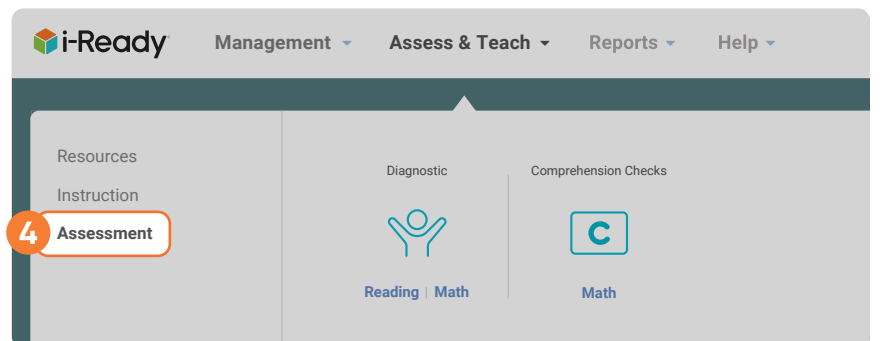
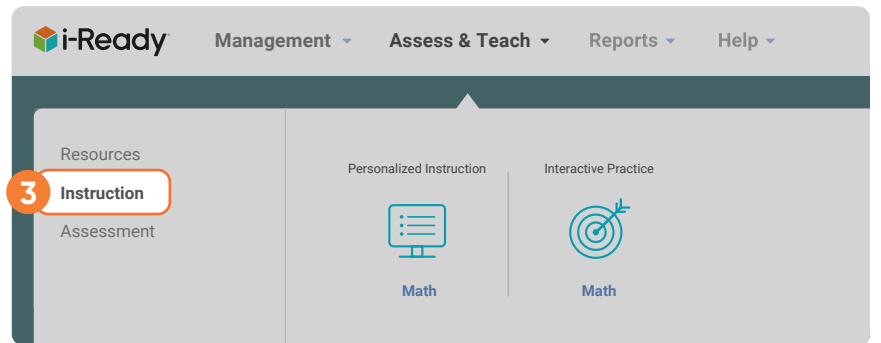
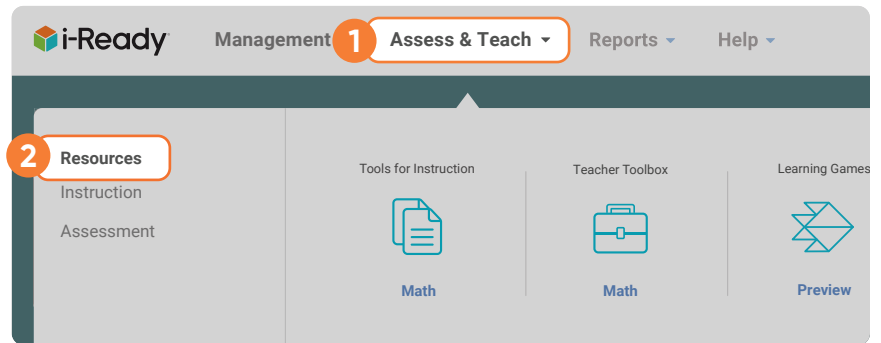
- Access the **Teacher Toolbox** to get the lesson slides, Teacher's Guide, practice and differentiation resources, print assessment resources, and more
- See the digital fluency **Learning Games** that appear on the student dashboard

3. **Go to Instruction to:**

- Assign digital **Interactive Practice**
- View and possibly assign digital **Personalized Instruction** lessons

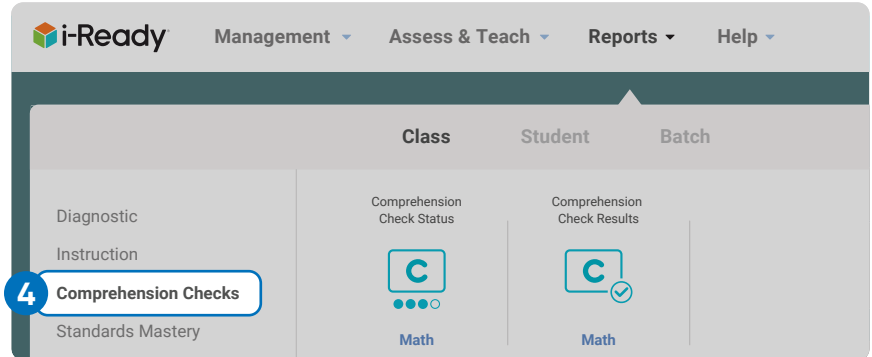
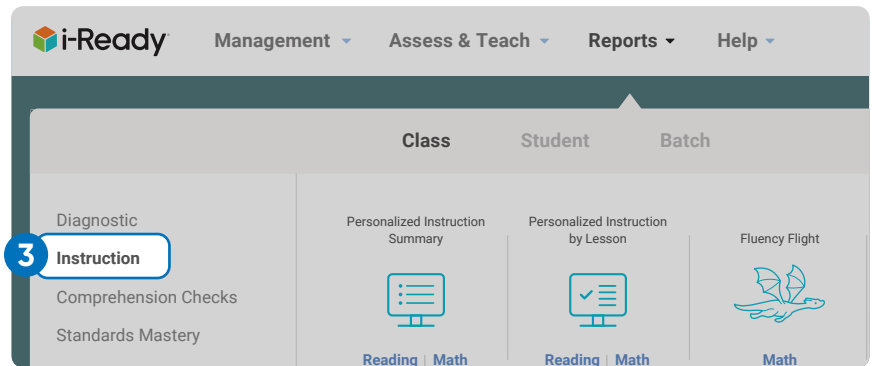
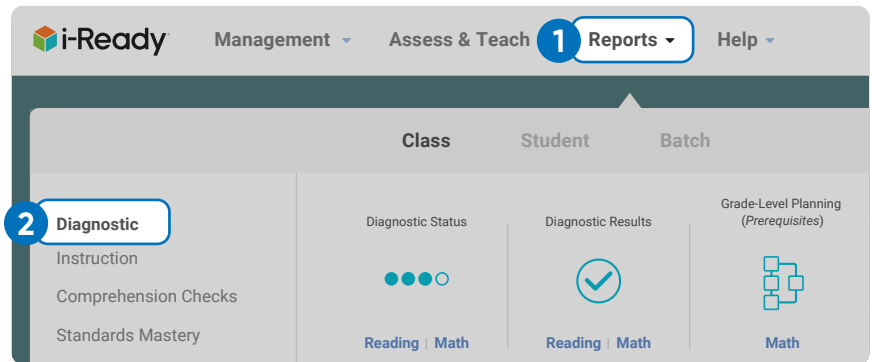
4. **Go to Assessment to:**

- Assign digital **Comprehension Checks** or Unit Assessments
- Screen for prerequisite needs by assigning the **Diagnostic** (if using or piloting this resource)



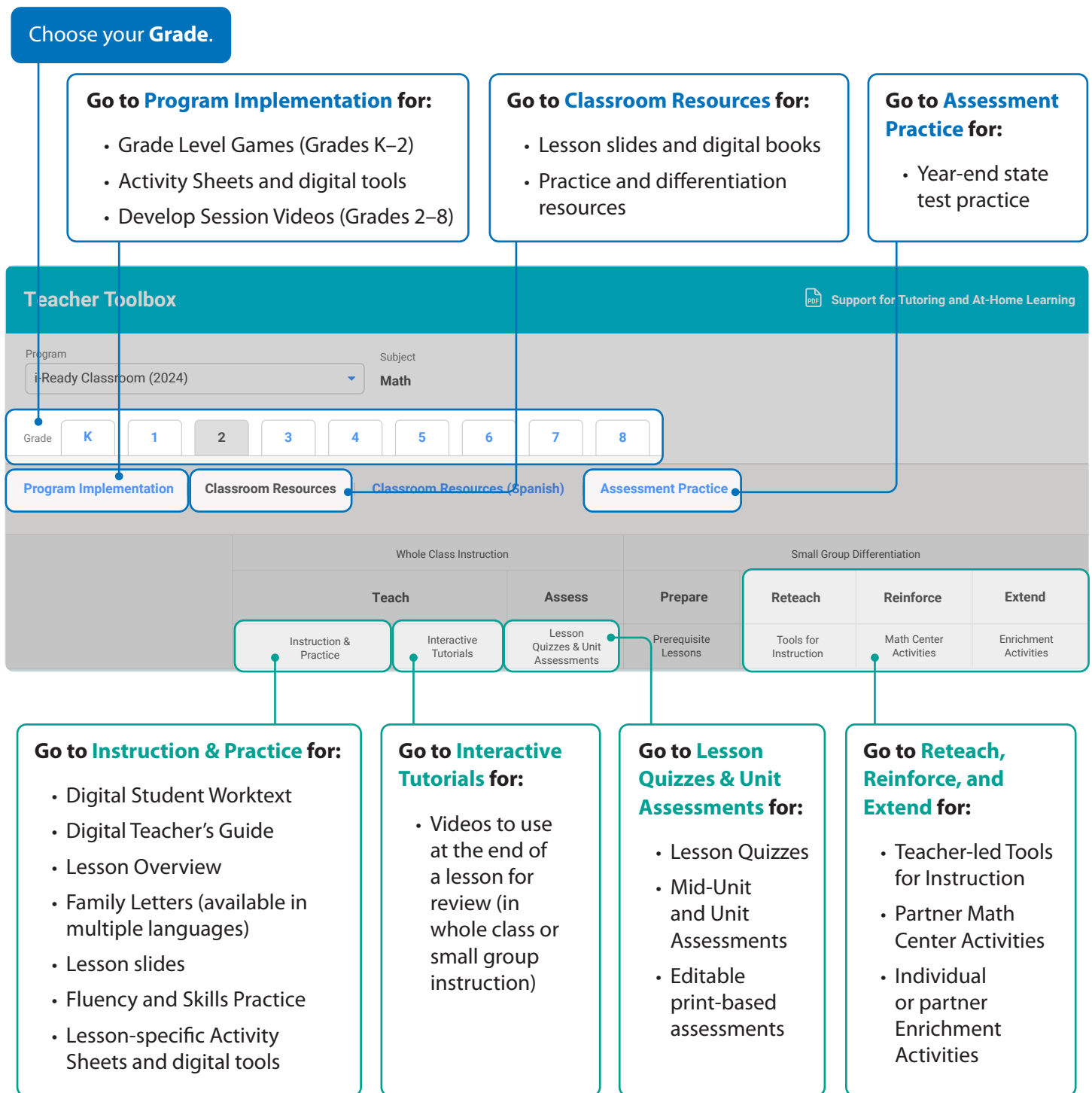
Reports

1. Click on **Reports** at the top of your home page.
2. **Go to Diagnostic*** to:
 - See the **Grade-Level Planning (Prerequisites) report** to access data and resources to address unfinished learning connected to classroom instruction
 - See the **Diagnostic Status** and **Diagnostic Results** reports
3. **Go to Instruction** to see student performance on:
 - **Personalized Instruction** lessons
 - **Interactive Practice**
 - Skills Progress and Factors of Learning reports for the digital **Learning Games**
4. **Go to Comprehension Checks** to:
 - See student performance on digital **Lesson Quizzes**, **Mid-Unit Assessments**, and **Unit Assessments**



*Only available if the Diagnostic is taken

Accessing Resources on the Teacher Toolbox



Learn more about the [Teacher Toolbox](#).

Navigating the Student Digital Experience

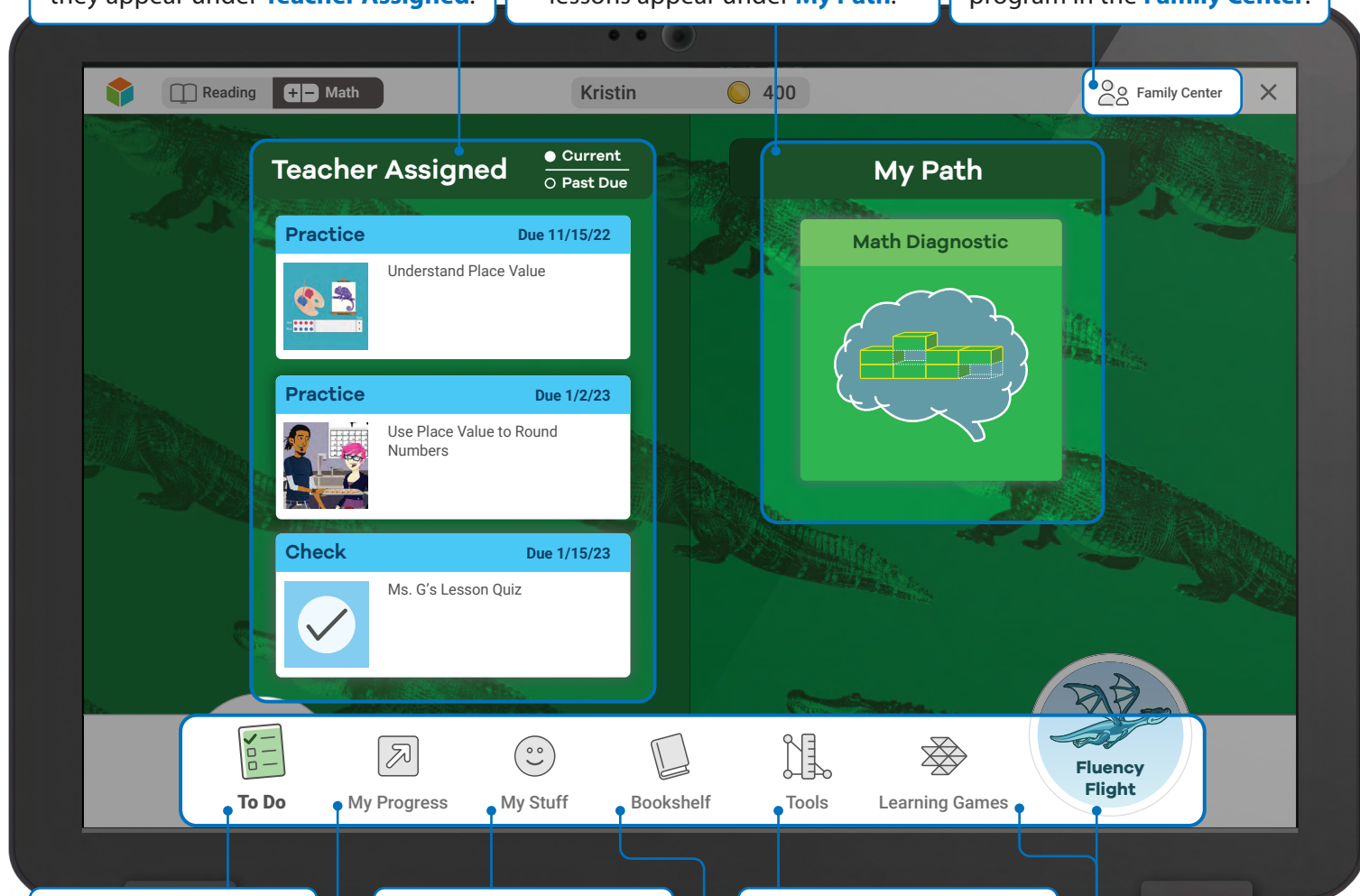
Your students will access all of their *i-Ready Classroom Mathematics* digital resources from the online student dashboard at i-ReadyConnect.com or through your district's login portal, if using an SSO system.

Reach out to your school leader or Curriculum Associates representative if you need additional guidance. Learn more about the Student Bookshelf portion of the student dashboard at CurriculumAssociates.com/RCL2024Pilot.

If a teacher assigns digital lessons, practice, or Comprehension Checks, they appear under **Teacher Assigned**.

If the students take the Diagnostic, their Personalized Instruction lessons appear under **My Path**.

Families can access information about the program in the **Family Center**.



The dashboard opens to the **To Do** list, shown above.

Students can personalize their dashboard in **My Stuff**.

In **Tools**, students have access to common digital manipulatives.

Students can see how they've done on assignments in **My Progress**.

By clicking on **Bookshelf**, students have access to their digital **Student Worktext** and worktext lessons in **My Videos**. Parents have access to math-specific **Family Resources**.

Students work on digital fluency and number sense with **Learning Games** and **Fluency Flight**.
See more about Learning Games on [page 59](#).

Program Organization

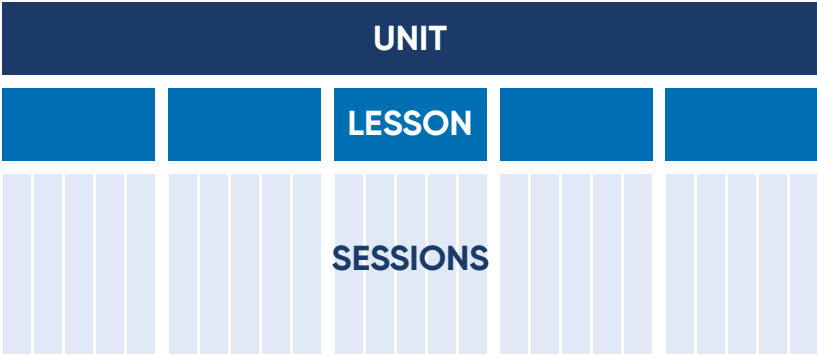
Make the best use of instructional time. The lessons in *i-Ready Classroom Mathematics* span multiple days and integrate several standards to help students make connections and develop a deep understanding.

Unit Structure

Unit The unit structure embraces what students already know and uses their prior knowledge as a springboard to learn and apply new concepts.

Lesson The multiple-day lesson structure allows time for students to develop a deeper understanding of concepts and skills.

Session The lessons are divided into daily sessions called Explore, Develop, and Refine.



Three Types of Lessons

i-Ready Classroom Mathematics has **three different types of lessons** to address the unique approaches of the standards and to support a balance of conceptual understanding, application, and procedural fluency.

Understand Lessons

Occur at Key Points in the Instructional Sequence

Lessons that begin with the word *Understand* focus primarily on conceptual understanding and occur at key points in the instructional sequence. (Grades 2–8)

Strategy Lessons

Majority of Lessons in the Program

These lessons help students make important connections and deepen their understanding while acquiring and developing mathematical skills and strategies.

Math in Action Lessons

End of Each Unit

These lessons review and apply unit content and teach students how to develop complete responses to a performance task.

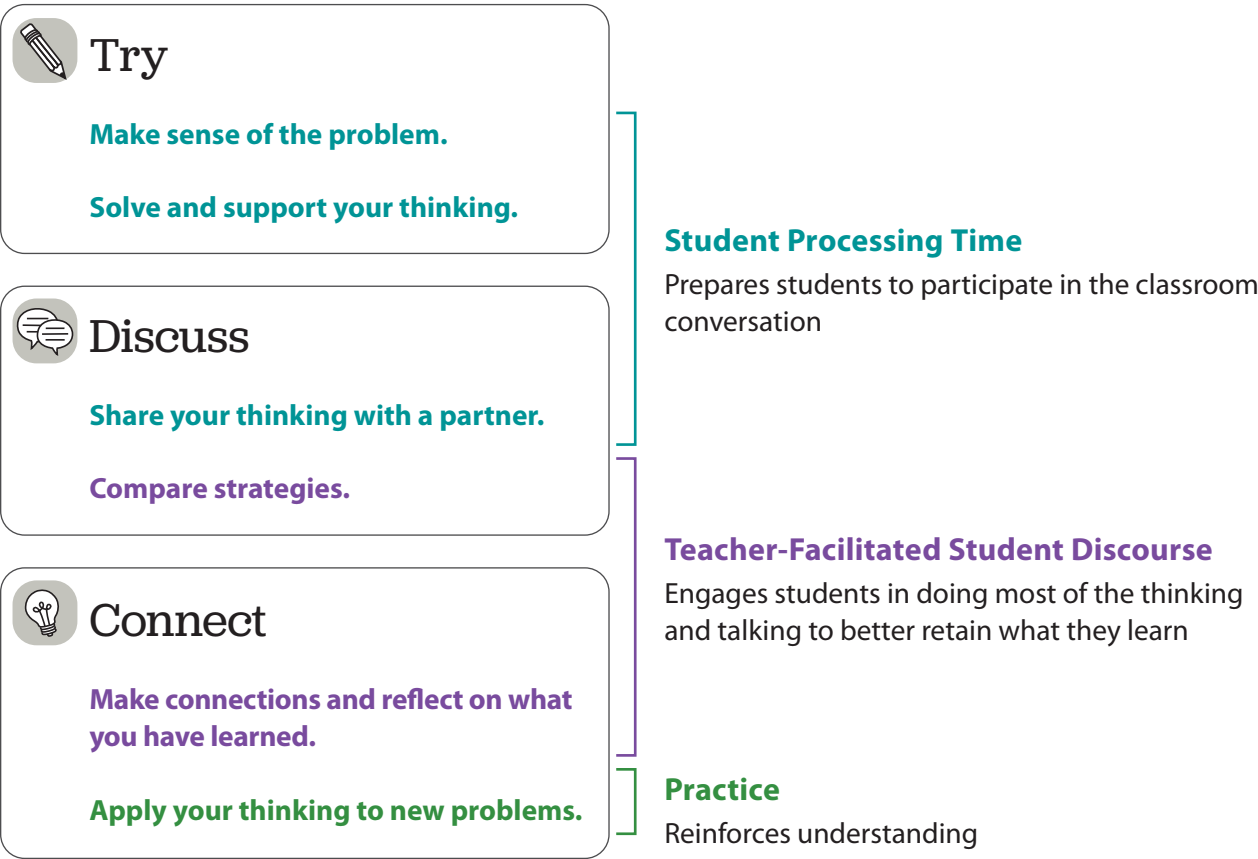
Structure of a Lesson

Within a lesson, each session (or day) plays a different role in supporting student understanding. This provides students with a variety of experiences and gives them the time they need to develop conceptual understanding, build procedural fluency, and apply concepts they’ve learned to new situations. Each session allows time for instruction, practice, and differentiation.

1 SESSION	1–3 SESSIONS	1–2 SESSIONS
Explore Session	Develop Session	Refine Session
FOCUS OF EACH SESSION		
<ul style="list-style-type: none">• Connect prior knowledge.• Introduce new lesson content.	<ul style="list-style-type: none">• Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations.• Practice new skills and apply new learning.	<ul style="list-style-type: none">• Strengthen skills and understanding with in-class practice time.• Reteach, reinforce, and extend learning.

A Powerful Instructional Framework: Try–Discuss–Connect

At the core of *i-Ready Classroom Mathematics* is the Try–Discuss–Connect instructional framework. This framework is used in every Strategy lesson and incorporates multiple routines and best practices into instruction while integrating language and mathematics to develop deeper understanding.





Try–Discuss–Connect Instructional Framework

The **Try–Discuss–Connect framework** helps support students in developing mathematical thinking and helps teachers in facilitating engaging, discourse-based lessons. Some teachers describe it as a “number talk” for problem solving!



Try It Teaching Tips

Make Sense of the Problem

Why? Make sure students understand the context, vocabulary, and important information.

How? You'll usually use the routines Notice and Wonder or Three Reads as a whole class.

- In Three Reads, the teacher reads the problem first, followed by a student, then the class.
- Before the problem is read, focus students' attention on what they are listening for.
 - In the first read, students explain the context and clarify any unknown vocabulary.
 - In the second read, students focus on what they are being asked to find (but not how).
 - In the third read, students determine the important information—the known and unknown quantities (i.e., numbers) and relationships (e.g., twice as many) in the problem. An example from Grade 4 is shown below.

Jaime finds 3 times as many shells at the beach as Calvin finds.
Jaime finds 24 shells. Write and solve an equation to find the number of shells Calvin finds.

What quantities are in the problem?	What relationships are in the problem?
<ul style="list-style-type: none">• The number of shells Jaime found (Jaime has 24 shells.)• The number of shells Calvin found (We don't know this number yet.)	<ul style="list-style-type: none">• The number of shells Jaime found is three times the number of shells Calvin found. (Jaime finds 3 times as many shells as Calvin.)

Solve and Support Your Thinking

Why? Students will better understand the classroom explanations if they've had time to think about the problem on their own. It also helps promote productive perseverance.

How? Allow students to work on the problem using any strategies or tools that make sense to them.

- Avoid the temptation to step in to help students at this time. This is time for them to think. Instead ask a question to prompt or redirect thinking and walk away.
- Don't wait for every student to solve the problem. Students can share partial thinking too.



Discuss It Teaching Tips

Share Your Thinking with a Partner

Why? Students build confidence and learn from one another when they share ideas.

How? Use sentence frames and questions from the session slides to launch partner conversations.

- You may want to model student-to-student conversation to help students be successful.
- As you walk around, choose a couple of students to share their ideas or strategy with the class. Keep the goals of the lesson in mind as you choose strategies to help advance the lesson.
 - For Grades 2–8, if someone does a strategy like Picture It or Model It, choose those.
 - If several students make the same mistake, you may want to discuss that strategy.
 - Remember it's okay to choose a strategy that isn't complete to finish as a class.

Share Your Thinking with the Class

Why? Students learn to explain their thinking and critique the reasoning of others.

How? Have the selected students share their strategy with the class one at a time.

- While students share their strategies, ask other students to repeat or rephrase what was shared during the explanation. This gives all students time to process what they hear.
- Have students use hand signals to show agreement or disagreement with ideas. Then have students explain why they agree or disagree with what has been shared.
- For Grades 2–8, if no student used the standards-aligned strategies shown in Picture It or Model It, display the strategy and give students time to make sense of it before asking the questions in the notes section of the session slides.



Connect It Teaching Tips

Make Connections and Reflect on What You Have Learned

Why? When students find the similarities and differences between strategies, it builds flexibility, helps advance student thinking, and develops critical thinking.

How? Choose a few of the Connect It questions that have not already been asked to discuss orally with the class. If time allows, you may want to have students respond to one or two in writing.

Apply Your Thinking to a New Problem

Why? Students reinforce understanding of the strategies in the lesson by answering new questions.

How? Students do the Apply It questions and/or the green Practice pages in their Student Worktext.

- Have students, especially English Learners, use the Three Reads Notecatcher on [page 16](#) to support making sense of the problem and persevering in solving problems.
- For additional practice options, see [pages 60–61](#).

Supporting All Learners with Problem Solving

Why Is It Important to Teach through Problem Solving?

Problem solving provides context to help students visualize a situation mathematically. A student who doesn't know how to multiply has no entry into understanding what 16×28 means, but if they are given a problem like the one shown in which they can picture 16 rows of chairs with 28 chairs in each row, students have a way to access the mathematics.

Chairs are set up in a school auditorium for a play. There are 16 rows of chairs. Each row has 28 chairs. How many chairs are set up for the play?

When students see a word problem, it can feel overwhelming. *i-Ready Classroom Mathematics* has built-in support and resources to help ALL students become effective problem solvers.



TIPS TO

Help Students Persevere in Solving Problems



Try It Problem-Solving Support

- Model how to **use the Three Reads Notecatcher** (see [page 16](#)) to Make Sense of the Problem. Use the notecatcher a few times as a class to teach students how to use it. Then slip it into a document sleeve and let students use it when they work on problems on their own.
- Frame the Solve and Support Your Thinking as time to think about the problem on their own so they can better understand the classroom conversation. Have students think about this as their **initial thinking**. They will be more likely to participate if they know they can revise their thinking or that they aren't expected to be perfect all the time.
- **If students are stuck, ask questions**, such as "Can you draw a picture to represent the situation?" or "How could you show the numbers?" to prompt their thinking—then walk away. You can also remind students what they can do if they are stuck and **celebrate students' efforts**.

I'm Stuck . . .

- ☐ Have I drawn a picture?
- ☐ Have I tried a tool?
- ☐ Have I asked someone how they got started?
- ☐ Have I seen a problem like this before?
- ☐ What if I changed the numbers? Would that help me?



Discuss It Problem-Solving Support

- In Share Your Thinking with a Partner, **students learn from one another**, build confidence, and practice explaining their thinking and critiquing the reasoning of others.
- Use the **Sentence Starters** built into the program or others from the **Discourse Cards** to help focus students during partner conversation.



- During the classroom conversation, **select a few students' strategies** using the Select and Sequence support in the slide notes. If no students do the standards-aligned strategies shown in the Picture It or Model It, **use the questions in the slide notes** to have them analyze a strategy as if it was another student's strategy.
- As students share strategies with the class, it is important to give listeners time to process what is being said. When a student is sharing their strategy, pause them at key points in their explanation to **allow classmates to repeat or rephrase ideas before the student explainer continues**. This gives all students time to clarify language, stay engaged, and deepen mathematical understanding. Learn more about repeating and rephrasing, part of the Four Rs Teacher Move, in the Language Routines found in Lesson 0 on the Teacher Toolbox.
- Remind students **mistakes can be learning opportunities**. If a number of students share a common misconception or mistake, you may want to have them share their thinking with the class. Be sure to thank them for helping everyone learn from their mistakes.
- Learn about the Language Routines and the Teacher Moves in Lesson 0 on the Teacher Toolbox. These provide additional ways to **engage students in doing the thinking and talking** during the lesson to internalize learning. You'll see them referenced in the slide notes.



Connect It Problem-Solving Support

- Many of the Connect It questions will likely be asked during the classroom conversation. Choose a few to **ask orally as a class**. You may want to have students write responses to one or two.
- **If students are absent**, have them use the Connect It questions to analyze the standards-aligned strategies in Picture It and Model It. They can also **view the Develop Session Videos**.



Try It



- Model how to **use the Three Reads Notecatcher** (found on [page 16](#)) to Make Sense of the Problem. Use the notecatcher a few times as a class to teach students how to use it. Then slip it into a document sleeve and let students use it when they work on their own.
- During the Make Sense of the Problem, use the **Develop Academic Language** notes to clarify words and phrases in the problem.
- The Solve and Support Your Thinking **gives students time to think** about a problem on their own before trying to understand a partner or classroom conversation.

DEVELOP ACADEMIC LANGUAGE

WHY? Clarify the meaning of the term *row*.

HOW? Explain to students that the word *row* can be a straight line of people or things that are next to one another. Remind students that they line up in a row, or straight line, one after another, when they go to the cafeteria or library. Ask students to give real-world examples of rows they may see at home or in school. Have students close their eyes and visualize rows of chairs in a school auditorium or cafeteria and then describe to partners what they see in their mental images.

Discuss It/Connect It



- Use the **sentence starters** built into the program or from the **Discourse Cards** to help students during partner conversation.
- As students share strategies with the class, it is important to give listeners time to process what is being said. When a student is sharing their strategy, pause them at key points in their explanation to **allow classmates to repeat or rephrase ideas before the student explainer continues**. This gives all students, but especially English Learners, time to clarify language and deepen mathematical understanding.
- Learn more about repeating and rephrasing, as well as other supports in the **Language Routines, Teacher Moves, and Conversation Tips** shown below and described in Lesson 0 on the Teacher Toolbox.
- **Ask the Connect It questions orally.** Many will likely be asked during the classroom conversation.



Additional Support

- **Language Objectives** at the beginning of each lesson in the Teacher's Guide indicate the language students are expected to understand and produce as they work on the content objectives.
- **Graphic Organizers** help students access prior knowledge and vocabulary in each Explore session.
- **Connect to Language Development** provides specific support for each day of a lesson focused on developing listening, speaking, talking, and writing skills for different levels of language proficiency tied to the mathematics of the day. Language Expectations are also provided at the beginning of each unit.
- **Family Letters** are available for each lesson in multiple languages, including Spanish, Amharic, Arabic, Korean, Mandarin, Portuguese, Russian, Somali, Tagalog, Vietnamese, and English.

DIFFERENTIATION ENGLISH LEARNERS		
Levels 1–3: Listening/Speaking	Levels 2–4: Listening/Speaking	Levels 3–5: Listening/Speaking
Read Model It problem 5 aloud. Begin a Co-Constructed Word Bank by writing the term <i>multiplication equation</i> and facilitating discussion about each part of the problem. Invite students to identify more terms to add to the bank. Include visuals and cognates. If needed, offer <i>factor</i> , <i>equal groups</i> , <i>product</i> , and <i>result</i> . Read the last sentence of problem 5 aloud. Ask student to repeat the italicized words. Have partners work together to draft a sentence frame for reading a multiplication equation.	Read Model It problem 5 aloud. Have students work with a partner to complete the statements. Then ask students to circle words they would add to a Co-Constructed Word Bank . Compile the words into a class word bank. Invite students to add synonyms or other useful terms. Chorally read the last sentence of problem 5. Have partners work together to underline the words that would stay the same if the equation had different factors.	Have students read and respond to Model It problem 5 with a partner. Ask individuals to jot down words and phrases that help them clearly understand their partner's ideas. Compile the words into a Co-Constructed Word Bank . Invite students to add terms that support their understanding to their own personal lists. Have partners read the last sentence of problem 5 chorally. Then have them take turns covering the text and reading the multiplication equation using the correct format.

Developing Vocabulary and Academic Language

- **Build Your Vocabulary** appears at the beginning of each unit in the Student Worktext and Teacher's Guide. It includes graphic organizers, sentence frames, and review words to help support students' mathematical language development.
- A **Vocabulary Routine** is provided to support students in developing math vocabulary and academic language.
- A **Cognate Support Routine** enables students who speak Spanish or other Latin-based languages to use their home language as an asset for learning English.
- **New, Review, and Academic Vocabulary** used in the lesson is identified in the Teacher's Guide at the beginning of each lesson.
- **Multilingual Glossaries** are available to support students in Arabic, Chinese, French, Haitian Creole, Portuguese, Russian, Spanish, Tagalog, Urdu, and Vietnamese.
- **Vocabulary Cards** at the end of the unit in the Student Worktext for Grades 2–8 allow students to customize examples, definitions, and add their own words.

Academic Vocabulary Routine

Use with *Build Your Vocabulary*.

1 Assess prior knowledge.

- Assess prior knowledge by asking students to place a check mark next to any vocabulary words they know or are familiar with.
- Have students work in pairs to briefly discuss how and when they have used the words. Listen to assess if perceived knowledge is correct.
- If you have Spanish speakers or speakers of other Latin-based languages, use the *Cognate Support* routine.

2 Pronounce the words.

- Review the *Academic Vocabulary*.
- Say each of the words aloud and then have students repeat to ensure correct pronunciation.

3 Define the words.

- Call on volunteer pairs to provide meanings of the words they know.
- Note which word(s) need more direct instruction and modeling.
- Model the usage of the word(s) in context, using topics that connect with students in a meaningful way.
- Provide the meaning of the word(s). See *Academic Vocabulary Glossary* on the Teacher Toolbox.

4 Use the words.

- Have students write the word(s), their own descriptions or examples, and a picture, symbol, or graphic representation in their math journal.
- Review the activity as a whole class and remediate where needed.

Academic Vocabulary Routine example from Grade 3, Unit 1

Cognates for Academic Vocabulary in Unit 3		
ACADEMIC WORD	SPANISH COGNATES	HAITIAN CREOLE COGNATES
correct	correcta/o	kòrèk
possible	posible	posib
strategy	estrategia	estrategi
total	total	total

place value the value assigned to a digit based on its position in a number. For example, the 2 in 324 is in the tens place and has a value of 2 tens or 20.

My Example

My Word: _____

My Example

Vocabulary Cards example from Grade 2, Unit 3

Supports for Language in the TRY-DISCUSS-CONNECT Framework

for Engaging Children in Productive Mathematical Practices

TRY IT



Language Routines

- Three Reads
- Co-Craft Questions
- Notice and Wonder
- Say It Another Way

Teacher Moves

- Turn and Talk
- Individual Think Time

DISCUSS IT



Language Routines

- Compare and Connect
- Collect and Display

Teacher Moves

- Turn and Talk
- Individual Think Time
- Four Rs

Conversation Tips

- Listen
- Explain
- Justify
- Agree and Build On
- Disagree and Explain
- Make Connections

CONNECT IT



Language Routines

- Collect and Display
- Compare and Connect

Teacher Moves

- Turn and Talk
- Individual Think Time
- Four Rs

Conversation Tips

- Listen
- Explain
- Justify
- Agree and Build On
- Disagree and Explain
- Make Connections

ROUTINES that Empower Children

These research-based language routines help children learn to use the specialized academic language of mathematics. While these routines are well suited for English learners, the routines promote learning in all children as they access and express their growing mathematical understanding.

THREE READS

TRY IT

What: A routine that guides children to interpret the language in mathematical tasks or problems without oversimplifying the text or reducing mathematical rigor. A problem is read three times, each with a specific focus, to ensure that children fully understand the problem situation and what is being asked of them.

Why: Reading a problem more than once gives children the time to understand the situation and mathematical relationships without the pressure they often feel when presented with a word problem.

How: With each read the teacher records children's responses.

- **Read 1:** The focus is on comprehending the text. The problem is read aloud and children bear in mind the question: *What is this problem about?*
- **Read 2:** The focus is on understanding the question. The problem is read aloud while the others listen and think: *What are we trying to find out?*
- **Read 3:** The focus is on identifying and analyzing the important information in the problem. The problem is read chorally, and children think: *What are the important quantities and how are they related?*

CO-CRAFT QUESTIONS

TRY IT

What: A common adaptation of Three Reads in which teachers present the problem without the question. Children develop their own questions that can be answered with mathematics before seeing and solving the given problem.

Why: When given the time to "mathematize" a situation, children build understanding of the context and often uncover implicit relationships among quantities. Creating their own questions allows children to develop a more complete grasp of the context and to produce the language of mathematical questions. It boosts engagement and offers multiple points of entry into the problem.

How: The teacher presents a problem situation, geometric figure, or visual representation without a question. Children work with a partner or in small groups to come up with questions that could be answered using the information. Teachers may facilitate the brainstorming and recording for younger children or those for whom writing is challenging. Children discuss their questions with the class before setting to work on the question posed in the worktext. Teachers may ask children to answer the questions that they generated at a later time.

NOTICE AND WONDER

TRY IT

What: A routine to guide children in making meaning from a problem context or a non-contextualized display, such as geometric figures, data displays, expressions, or equations.

Why: Similar to Co-Craft Questions, Notice and Wonder encourages children to think about things around them through a mathematical lens. It helps create a safe learning environment, because no response is incorrect. It removes the pressure of problem solving and allows children to make sense of the problem or display that has been presented.

How: Teachers display a problem situation, a complete problem, or a mathematical or geometric task. Children respond to the question: *What do you notice?* Teachers record as many responses as time and interest allow without comment or with only encouraging comments. Then children respond to the question: *What do you wonder?* or *What are you wondering that mathematics can answer?* Teachers record responses. Teachers call attention to the question or the problem or task and lead a discussion about the things children noticed and wondered that might be relevant to the problem.

SAY IT ANOTHER WAY

TRY IT

What: A routine to help children paraphrase as a way to process a word problem or other written text and confirm understanding.

Why: Paraphrasing helps children figure out whether they have understood something they have read or heard. It gives them the opportunity to self-correct or to ask for clarification. Say It Another Way also ensures all children in the group hear the problem more than once and in more than one way.

How: Children read or listen to a word problem or other written text. One child paraphrases the text. Other children give a thumbs-up to show that the paraphrase is accurate and complete. Children who give a thumbs-down explain their reasoning, and the group goes back to the written problem to clarify the meaning. Teachers may call on several children to “say it another way” in order to keep everyone engaged or to give the class time to think about what the problem means.

COMPARE AND CONNECT

DISCUSS IT, CONNECT IT

What: A routine to identify, compare, and contrast mathematical language, representations, models, and approaches.

Why: When children are provided with the opportunity and time to compare, make connections between, and reflect on mathematical ideas or strategies, their meta-awareness increases, understandings are solidified, and mathematical discourse is supported.

How: The teacher carefully selects and sequences children’s strategies and representations, following the suggestions in the Teacher’s Guide if applicable. Children present the selected strategies one at a time. In partner, small-group, and whole-class discussion, children answer the questions: *How are they alike?* *How are they different?* and *How are they related?* as a way to process and discuss the connections among the strategies. The teacher asks other questions specific to the problem to help children see the underlying mathematics or formulate important generalizations.

COLLECT AND DISPLAY

DISCUSS IT, CONNECT IT

What: A routine in which teachers collect children’s informal language and match it up with more precise academic or mathematical language to increase sense-making and academic language development.

Why: When teachers record children’s language and facilitate making connections, children develop precise academic vocabulary. The display that is created becomes a reference for children to turn to when they talk or write about mathematics throughout the lesson or unit.

How: The teacher collects children’s informal, oral language during partner, small-group, and whole-class discussions. The teacher organizes the words and key phrases, adds diagrams or pictures when helpful, and helps children explicitly connect their informal language to more precise academic and mathematical language. The display is posted for children to refer during academic discussions or when writing about the lesson. The display may be updated and revised throughout the unit.



THREE READS NOTECATCHER

Make Sense of the Problem

Name:









As we work together to make sense of the problem, please use this notecatcher to help guide your thinking and build your understanding.

1st Read	What is the problem about? Share three to four words to describe what the problem is about.	
2nd Read	What are we trying to find out? Think about what the question is asking and then restate it in your own words.	
3rd Read	What information is important? Identify the important quantities mentioned in the problem, and describe what each one represents.	



TIPS

Ideas for What to Do When . . .

Scenario	Possible Solution
You ask a question and no one responds, or the same student(s) respond all the time.	 Give students time to turn and talk to a partner and then prompt them to share what their partner said.
A student makes an important point.	 Ask at least one other student to restate or rephrase the key idea that was shared.
A student is explaining to the group but is really talking directly to the teacher.	 Use gestures to bring in the group or ask the student who is explaining to shift position a bit so all students can engage with the explanation.
A student is explaining their strategy but is using imprecise or unclear language.	 Ask if another student can say it another way and use math words when they can.
You want to encourage students to talk and listen to each other.	 Provide sentence starters or questions they can ask each other. Use them yourself, regularly!
You find yourself asking students too many questions at once.	 Tell your students, “I just asked you too many questions at once. Let me do that over.” Take a minute to identify one purposeful question that fits the moment and ask it.
Most of the students did the Try It problem incorrectly.	 Have a student talk through an incorrect strategy. Have students use estimation and reasoning to assess accuracy. Don’t tell students what to do, but after some class conversation, give students time to revise their thinking.
The first student response to one of your questions seems to end the conversation.	 Tell students more ideas and explanations are needed. One response is not enough. Ask how they could explain the idea in another way.

Try-Discuss-Connect Reflection Form



TRY IT

Rich tasks provide multiple entry points and hands-on learning to engage individual students' preconceptions and build on prior knowledge. Students solve the problem on their own using the strategies and tools of their choice.

Make Sense of the Problem

What Happens in the Classroom

- ☐ Teachers use one of four language routines to focus students on the important pieces of information in the problem and how they relate.
- ☐ Teachers use moves such as Turn and Talk and rephrasing to engage all students and highlight key ideas.
- ☐ Students actively engage in Individual Think Time and discussion to Make Sense of the Problem.

Routines to Make Sense of the Problem

- ☐ **THREE READS:** The problem is read three times. After each read, students respond to one of these questions: What is the problem about? What are we trying to find out? What is the important information?
- ☐ **CO-CRAFT QUESTIONS:** Teachers present the problem situation without the question. Students identify the important quantities and then craft their own questions about the situation.
- ☐ **NOTICE AND WONDER:** Teachers present the problem, situation, or image without the question. Teachers record students' responses to the question, "What do you notice?" without comment. The class follows the same process with the question, "What do you wonder?" Teacher shares the full problem and sets students to work. At a later time, students might go back to find answers to the questions they wondered about.
- ☐ **SAY IT ANOTHER WAY:** The problem is read aloud, and teachers call on one or more students to explain the problem in their own words. Listeners decide whether the explanations are complete and accurate and revise or add to the explanations as needed.

Notes

Solve and Support Your Thinking

Teacher Look Fors

- ☐ Provides "just-right" Individual Think Time for students to solve
- ☐ Provides access to a variety of tools and manipulatives to represent the problem situation
- ☐ Walks around to see representations students are using
- ☐ Promotes productive struggle by resisting temptation to explain or show students how to approach the problem and instead asks questions to help students begin to think about possible solution pathways

Student Look Fors

- ☐ Uses whatever method or approach they choose to represent the problem situation
- ☐ Has access to a variety of manipulatives and tools to support solving
- ☐ Attempts to solve using more than one strategy, showing concrete or visual representations, equations, and/or models

Notes



Watch Out For:

- Overscaffolded supports provided to students, such as encouraging use of certain strategies or interpreting the problem for them
- Modeling or solving the problem for students, which reduces their capacity to try and think
- Providing too little or too much think time
- Providing hints or showing students how to solve if they get stuck



DISCUSS IT

Students turn and talk to a partner and discuss strategies. Student work is strategically shared during a class discussion to build conceptual understanding.

Share Your Thinking with a Partner

Teacher Look Fors

- ☐ Displays Discuss It questions and sentence starters in the Student Worktext to support partner conversations; may also use Discourse Cards or Cubes to promote and maintain discussion
- ☐ Establishes structure for sharing (e.g., A/B partners) and designates who shares first, promoting student ownership of discourse
- ☐ Walks around listening to student conversations and selects and sequences strategies to discuss as a class
- ☐ Gathers formative assessment information from all students by observing their thinking and explanations

Student Look Fors

- ☐ Explains their own thinking and asks questions of partner's thinking
- ☐ Respectfully critiques each other's reasoning and looks for connections

Notes

Compare Strategies

Teacher Look Fors

- ☐ May record students' explanations to encourage attention to precision and accuracy and use as a reference for comparing to other shared strategies
- ☐ Frequently asks all students to repeat, rephrase, or add on to other students' explanations
- ☐ Probes students to make connections between shared strategies
- ☐ Asks students to use established norms and hand signals to show agreement or disagreement with students' thinking and explanations, gaining formative assessment information

Student Look Fors

- ☐ Actively analyzes representations selected for whole class discussion to develop understanding of strategy
- ☐ Considers privately and publicly how representations are the same, different, and related
- ☐ Reviews and interprets representations in the Student Worktext, particularly if none arose from the class
- ☐ In partnerships, discusses connections between strategies in the Student Worktext, their own strategies, and the strategies discussed as a class

Notes



Watch Out For:

- Students who are unsure who should talk first, suggesting unclear discussion expectations and structures
- One partner taking over the conversations
- Teacher repeating or rephrasing ideas for students
- Only selecting correct strategies—It is important that misconceptions are discussed as needed to provide clarity and emphasize the value of mistakes as learning opportunities.
- Students not engaged during discussion of strategies—The teacher should consider ways to engage all students in conversations to ensure understanding of key selected ideas.



CONNECT IT

Students make connections between the strategies discussed and those in the book to reinforce and extend their understanding.

Make Connections and Explain Your Thinking

Teacher Look Fors

- ☐ Strategically selects Connect It questions to focus students
- ☐ Flexibly facilitates questions individually, in partners, and/or as a class, but avoids treating question/response in traditional workbook format
- ☐ Focuses whole class discussion on questions that summarize key understanding
- ☐ Allows time for students to formalize understanding from the session and use to assess student understanding of key discussion points

Student Look Fors

- ☐ Writes answers to Connect It questions independently (or in pairs to support language production, as needed) to solidify understanding and make further connections
- ☐ If in pairs, talks through how they would respond to questions, then forms an independent response

Notes

Apply Your Thinking to a New Problem

Teacher Look Fors

- ☐ Provides access to and encourages use of various mathematical tools and manipulatives
- ☐ May provide time to explain thinking to a partner using discourse strategies, sentence starters, and questions from Discourse Cards
- ☐ Circulates to assess students' understanding and provide differentiated support
- ☐ Gathers formative assessment data to inform upcoming whole class and differentiated instruction
- ☐ May work with small groups of students on Hands-On or Visual Activities as needed to provide equity and promote student autonomy

Student Look Fors

- ☐ Applies thinking and strategies to new problems
- ☐ Uses strategies appropriate to the problem and to support their thinking using pictures, diagrams, or mathematical representations
- ☐ Exhibit agency over learning needs by joining a teacher-led activity, working with a partner, or working individually

Notes



Watch Out For:

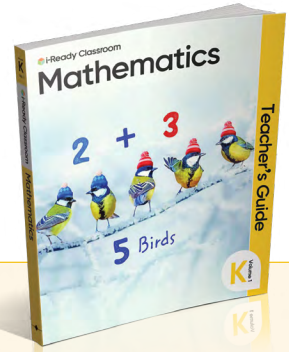
- Using the Connect It questions like a traditional workbook, not as a continuation of classroom conversation
- Teachers who jump in to help students right away on the Apply It questions

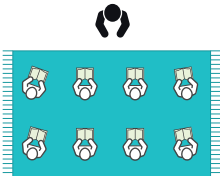
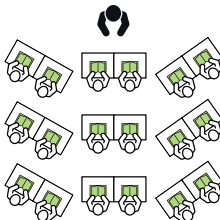
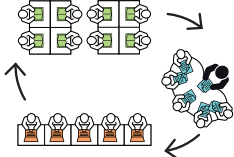
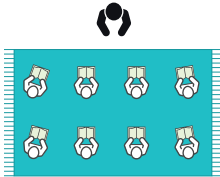
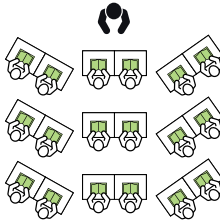
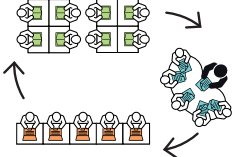
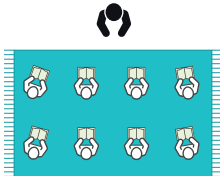
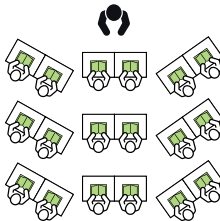
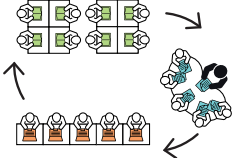
Quick-Start Guide: Grades K–1



Overview of a Lesson Grade K

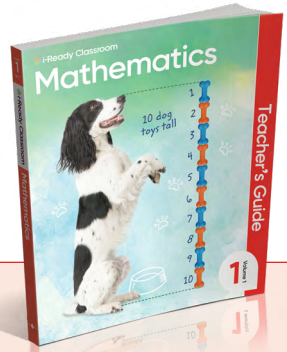
The images shown are an example of how each day of instruction might look. However, *i-Ready Classroom Mathematics* is intended to be flexible based on the needs of students to accomplish learning goals.



Explore 1 DAY		<ul style="list-style-type: none"> Discover and investigate concepts concretely Connect to prior knowledge Introduce new lesson content 	
Number Sense <ul style="list-style-type: none"> Notice and Wonder Show It Another Way How Many? Quick Images Same and Different 	Discover It 	Investigate It 	Connect to Prior Knowledge <p>Address prerequisite skills based on Grade-Level Planning (Prerequisites) report</p> 
Develop 2 DAYS		<ul style="list-style-type: none"> Experience the Try–Discuss–Connect framework Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations Practice new skills and apply new learning 	
Number Sense <ul style="list-style-type: none"> Notice and Wonder Show It Another Way How Many? Quick Images Same and Different 	Try–Discuss–Connect 	Apply It and Practice 	Centers, Differentiation, and Practice <p>Address prerequisite skills based on Grade-Level Planning (Prerequisites) report</p> 
Refine 2 DAYS		<ul style="list-style-type: none"> Make connections, go deeper, and solidify learning Strengthen skills and understanding with in-class practice time Reteach, reinforce, and extend learning 	
Number Sense <ul style="list-style-type: none"> Notice and Wonder Show It Another Way How Many? Quick Images Same and Different 	Make Connections or Analyze It 	Apply It, Practice, or Assessment 	Post-Assessment Differentiation <p>Address prerequisite skills based on Grade-Level Planning (Prerequisites) report</p> 

Overview of a Lesson Grade 1

The images shown are an example of how each day of instruction might look. However, *i-Ready Classroom Mathematics* is intended to be flexible based on the needs of students to accomplish learning goals.



Explore

1 DAY

- Discover and investigate concepts concretely
- Connect to prior knowledge
- Introduce new lesson content

Number Sense	Discover It and Investigate It	Build Concepts	OR Connect to Prior Knowledge
<ul style="list-style-type: none"> • How Many? • Quick Images • Show It Another Way • Which One Doesn't Belong? • Data Talk 			<p>Address prerequisite skills based on Grade-Level Planning (Prerequisites) report</p>

Develop

2 DAYS

- Experience the Try–Discuss–Connect framework
- Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations
- Practice new skills and apply new learning

Number Sense	Try–Discuss–Connect	Apply It and Practice	Centers, Differentiation, and Practice
<ul style="list-style-type: none"> • How Many? • Quick Images • Show It Another Way • Which One Doesn't Belong? • Data Talk 			<p>Address prerequisite skills based on Grade-Level Planning (Prerequisites) report</p>

Refine

2 DAYS

- Make connections, go deeper, and solidify learning
- Strengthen skills and understanding with in-class practice time
- Reteach, reinforce, and extend learning

Number Sense	Make Connections or Analyze It	Apply It, Practice, or Assessment	Post-Assessment Differentiation
<ul style="list-style-type: none"> • How Many? • Quick Images • Show It Another Way • Which One Doesn't Belong? • Data Talk 			<p>Address prerequisite skills based on Grade-Level Planning (Prerequisites) report</p>



CHECKLIST

Explore (Session 1)

Connect to and build prior knowledge | Introduce new lesson content

As you prepare for the Explore sessions, review this checklist while filling out your planning template.

- ☐ Note the *Purpose* in the **Teacher's Guide** on the top left corner and determine how it supports the Lesson Objective(s).
- ☐ Review the **Number Sense and Counting activity**. These activities can be done any time throughout the day.
- ☐ Prepare to increase engagement by incorporating:
 - Engagement Protocols
 - Connect to Language Development
- ☐ Download slides for the Explore session. Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.

- ☐ Review the **Discover It activity** and consider the following:
 - Will this activity be done on the carpet, at tables, or in small groups?
 - What signal will be used to get students' attention?
 - How will students know it is time to transition to a different activity/location?
- ☐ Gather materials to prepare for **Discover It**.

- ☐ Review the **Investigate It activity**.
 - Will this activity be done on the carpet, at tables, or in small groups?
 - What signal will be used to get students' attention?
 - How will students know it is time to transition to a different activity/location?
- ☐ Gather materials to prepare for **Investigate It**.

Close

- ☐ Preview the Math Reflection and Self-Reflection.
- ☐ Ask multiple students to share their thinking.
- ☐ Have students use hand signals to show agreement or disagreement with other students' thinking as a way to check for understanding.
- ☐ Consider how families will access the **Family Letter**:
 - Student Worktext
 - Family Resources via Student eBook (multiple languages available)

**Number Sense and Counting Activities**

- ☐ Notice and Wonder
- ☐ Show It Another Way
- ☐ How Many?

- ☐ Quick Images
- ☐ Same and Different

Engagement Protocols:

Supporting English Learners:

Discover It

Materials:

Investigate It

Materials:

Student Workmat page, symbol, and color in Student Worktext:

Close

- ☐ Math Reflection
- ☐ Self-Reflection

Family Letter

- ☐ Student Worktext
- ☐ Student eBook



CHECKLIST

Develop (Sessions 2–3)

Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations | Explore new strategies and develop new learning

As you prepare for the Develop sessions, review this checklist while filling out your planning template.

- ☐ Review the **Number Sense and Counting Activity** and *Purpose* in the **Teacher's Guide** on the top left corner.
- ☐ Prepare to increase engagement by incorporating Engagement Protocols and Connect to Language Development.
- ☐ Download slides for the Develop sessions. Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.

Try It	Discuss It	Connect It
Make Sense of the Problem Students make sense of the problem and persevere in solving them.	Select and Sequence Students share ideas with a partner, then discuss and compare teacher-selected strategies.	Compare and Connect Dive deeper into conceptual understanding and strategies.
Effective Practices		
<input type="checkbox"/> Give students time to think, but don't wait for all students to develop a full solution. This is "think time." <input type="checkbox"/> Circulate the room to observe student work, listen to discussions, and select and sequence the student strategies to be shared in a way that builds thinking as students work and discuss their ideas with a partner.	<input type="checkbox"/> Display and pose a sentence starter/question using session slides or Discourse Cards. <input type="checkbox"/> Display preselected student strategies, then provide individual think time and partner talk to build student ownership of making sense of each representation. <input type="checkbox"/> Use Teacher's Guide questions to prompt students to recognize, explain, and build on classmates' reasoning and/or errors in a solution strategy.	<input type="checkbox"/> Connect student thinking with the session purpose using Ask/Listen Fors questions. <input type="checkbox"/> Early finishers? Use the Centers Library.
<input type="checkbox"/> Review the Apply It activity and what materials will be used. <input type="checkbox"/> Review the Error Alert in Develop session 1 of 2 and identify students who will most benefit from this opportunity before continuing to Develop session 2 of 2 and the Refine session. <input type="checkbox"/> Consider which sentence frames you will use to support children in their explanations of strategies.		
Centers and Differentiation Options —Choose 2 or 3 stations to use and gather the materials for each.		
Centers Student-Led Practice <input type="checkbox"/> Organize the lesson's Student-Led Stations <ul style="list-style-type: none">• Session Centers• Centers Library: Fluency or Skills Review	Differentiation Teacher-Led Small Group <input type="checkbox"/> Differentiate in small groups to support needs observed during the Apply It activity <ul style="list-style-type: none">• Teacher's Guide Reteach Activity• Teacher's Guide Extend Activity	
Practice (Choose 1 or 2) <input type="checkbox"/> Independent Practice <input type="checkbox"/> Fluency and Skills	<input type="checkbox"/> Assignable Interactive Practice <input type="checkbox"/> Learning Games <input type="checkbox"/> Assignable <i>i-Ready</i> Interactive Tutorial	<input type="checkbox"/> Grade Level Games <input type="checkbox"/> Centers Library
Close	<input type="checkbox"/> Math Reflection	<input type="checkbox"/> Self-Reflection



PLANNING TEMPLATE

Develop (Sessions 2–3)

Number Sense and Counting Activity

- | | |
|----------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> Notice and Wonder | <input type="checkbox"/> Quick Images |
| <input type="checkbox"/> Show It Another Way | <input type="checkbox"/> Same and Different |
| <input type="checkbox"/> How Many? | |

Engagement Protocols:

Supporting English Learners:

Try–Discuss–Connect (Encourage students to compare and connect strategies. See Ask/Listen For guidance in the Teacher's Guide.)

Make Sense of the Problem Language Routine:

- | | | | |
|--------------------------------------|---------------------------------------------|---------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> Three Reads | <input type="checkbox"/> Co-Craft Questions | <input type="checkbox"/> Say It Another Way | <input type="checkbox"/> Notice and Wonder |
|--------------------------------------|---------------------------------------------|---------------------------------------------|--------------------------------------------|

Apply It (What materials are recommended for this activity? See the Teacher's Guide.)

Student Workmat page, symbol, and color in Student Worktext:

Centers and Differentiation

Centers

Session Centers:

Centers Library:

Teacher-Led Small Group

- ☐ Reteach
☐ Extend

Practice

- | | | | |
|-----------------------------------------------|-----------------------------------------------|--------------------------------------------|--------------------------------------------------------------|
| <input type="checkbox"/> Independent Practice | <input type="checkbox"/> Interactive Practice | <input type="checkbox"/> Grade Level Games | <input type="checkbox"/> <i>i-Ready</i> Interactive Tutorial |
| <input type="checkbox"/> Fluency and Skills | <input type="checkbox"/> Learning Games | <input type="checkbox"/> Centers Library | |

Close

- | | |
|------------------------------------------|------------------------------------------|
| <input type="checkbox"/> Math Reflection | <input type="checkbox"/> Self-Reflection |
|------------------------------------------|------------------------------------------|



CHECKLIST

Refine (Sessions 4–5)

Strengthen skills and understanding with in-class practice | Reteach, reinforce, and extend learning

As you prepare for the Refine sessions, review this guide to focus on grade-level differentiation and cumulative lesson practice while filling out your planning template.

- ☐ Review the *Purpose* in the Teacher's Guide on the top left corner.
- ☐ Understand the **Number Sense and Counting Activity**.
- ☐ Prepare to support English Learners.
- ☐ Download the Refine session slides. Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.

Session 4: Make Connections

- ☐ Prepare recommended manipulatives. See the Math Toolkit in the Teacher's Guide.
- ☐ Display and introduce **sentence frames**.

Apply It Activity

- ☐ Preview the student workmat in the **Student Worktext**.
- Children can continue the Apply It activity as a center.

Centers, Differentiation, and Practice

Read over the **If/Then** scenarios.

Organize the lesson's Student-Led Stations:

- ☐ Session Centers
- ☐ Centers Library: Skill Review
- ☐ Centers Library: Fluency

Once children are familiar with a center, the activity can be used independently with different content as the year progresses.

Explore and select Independent Practice:

- ☐ Student Worktext
- ☐ Digital Practice
- ☐ Learning Game(s)

Close

- ☐ Preview the **Math Reflection** and **Self-Reflection**.

Session 5: Analyze It

- ☐ Review the activity and make connections to the Lesson Objective(s) and Session Purpose.

Deepen Understanding

- ☐ Review the mini-lesson and make connections to the Lesson Objective(s) and Session Purpose.

Assessment, Centers, and Practice

Assessment type:

- ☐ Prepare Activity-Based Assessment
- ☐ Print Lesson Quiz
- ☐ Assign Digital Comprehension Check (Form A/B)

Organize the lesson's Student-Led Stations:

- ☐ Lesson Reflection
- ☐ Session Centers
- ☐ Centers Library: Skill Review
- ☐ Centers Library: Fluency

Explore and select Independent Practice:

- ☐ Student Worktext
- ☐ Digital Practice
- ☐ *i-Ready Personalized Instruction*

Review and prepare Post-Assessment Differentiation:

- ☐ **Reteach:** Tools for Instruction
- ☐ **Reinforce:** Learning Activities
- ☐ **Extend:** Enrichment Activities



Number Sense and Counting Activity

- ☐ Notice and Wonder
- ☐ Show It Another Way
- ☐ How Many?

- ☐ Quick Images
- ☐ Same and Different

Engagement Protocols:

Supporting English Learners:

Session 4: Make Connections

Which manipulatives and sentence frames are suggested for this activity?

Session 5: Analyze It

Student Workmat page, symbol, and color in Student Worktext:

Student Workmat page, symbol, and color in Student Worktext:

Apply It Activity

If/Then:

Deepen Understanding

Assessments, Centers, Differentiation, and Practice

Student-Led Stations:

Lesson Reflection: Centers Library: Skill Review

Session Centers: Centers Library: Fluency

Which Independent Practice did you select?

- ☐ Student Worktext
- ☐ Interactive Digital Practice
- ☐ *i-Ready Personalized Instruction*
(see Digital Correlations in Teacher Toolbox)

Which assessment did you choose?

- ☐ Activity-Based Assessment Lesson Quiz
- ☐ Digital Comprehension Check:
- ☐ Form A
- ☐ Form B

Student-Led Stations:

Lesson Reflection: Centers Library: Skill Review

Session Centers: Centers Library: Fluency

Which Independent Practice did you select?

- ☐ Student Worktext
- ☐ Interactive Digital Practice
- ☐ *i-Ready Personalized Instruction*

Close

- ☐ Math Reflection
- ☐ Self-Reflection



CHECKLIST

Explore (Session 1)

Connect to and build prior knowledge | Introduce new lesson content

As you prepare for the Explore sessions, review this guide while filling out your planning template.

- ☐ Note the *Purpose* in the **Teacher's Guide** on the top left corner and determine how it connects to the Lesson Objective(s).
 - ☐ Review the **Number Sense and Counting Activity**. These activities can be done any time throughout the day.
 - ☐ Prepare to increase engagement by incorporating Engagement Protocols and Connect to Language Development.
 - ☐ Download the presentation slides for *Session 1: Explore*.
 - ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.
-
- ☐ Review the **Discover It activity** and consider the following:
 - Will this activity be done on the carpet, at tables, or in small groups?
 - What signal will be used to get students' attention?
 - How will students know it is time to transition to a different activity/location?
 - ☐ Gather materials to prepare for **Discover It**.
-
- ☐ Review the **Investigate It activity**.
 - Will this activity be done on the carpet, at tables, or in small groups?
 - What signal will be used to get students' attention?
 - How will students know it is time to transition to a different activity/location?
 - ☐ Gather materials to prepare for **Investigate It**.
-
- ☐ Choose **Build Concepts** (Practice) or **Grade-Level Planning (Prerequisites) Report Groupings**.
 - Build vocabulary and explore math concepts.
 - Use a graphic organizer to build vocabulary.
-
- ☐ Preview the **Math Reflection** and **Self-Reflection**.
-
- ☐ Consider how families will access the **Family Letter**:
 - Student Worktext
 - Family Resources via Student eBook (multiple languages available)



PLANNING TEMPLATE

Explore (Session 1)

Number Sense and Counting Activity

- ☐ Which One Doesn't Belong
- ☐ Show It Another Way
- ☐ How Many?

- ☐ Quick Images
- ☐ Data Talk

Engagement Protocols:

Supporting English Learners:

Discover It

Materials:

Investigate It

Materials:

Student Workmat page, symbol, and color in Student Worktext:

Build Concepts or Grade-Level Planning (Prerequisites) Report Groupings

Math Vocabulary:

Close

☐ Math Reflection

☐ Self-Reflection



CHECKLIST

Develop (Sessions 2–3)

Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations | Explore new strategies and develop new learning

As you prepare for the Develop sessions, review this checklist while filling out your planning template.

- ☐ Review the **Number Sense and Counting Activity** and *Purpose* in the **Teacher's Guide** on the top left corner.
- ☐ Prepare to increase engagement by incorporating Engagement Protocols and Connect to Language Development.
- ☐ Download slides for the Develop sessions.
- ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.

Try It	Discuss It	Connect It
Make Sense of the Problem Students make sense of the problem and persevere in solving them.	Select and Sequence Students share ideas with a partner, then discuss and compare teacher-selected strategies.	Compare and Connect Dive deeper into conceptual understanding and strategies.
Effective Practices		
<input type="checkbox"/> Give students time to think, but don't wait for all students to develop a full solution. This is "think time." <input type="checkbox"/> Circulate the room to observe student work, listen to discussions, and select and sequence the student strategies to be shared in a way that builds thinking.	<input type="checkbox"/> Display and pose a sentence starter/question using session slides and Discourse Cards. <input type="checkbox"/> Display preselected student strategies, then provide individual think time and partner talk to build student ownership of making sense of each representation. <input type="checkbox"/> Prompt students to recognize, explain, and build on classmates' reasoning and/or errors in a solution strategy.	<input type="checkbox"/> If no students represent the model shown on the Student Worktext page, connect the drawing and equation to the children's models by having children identify how the strategies represent the math story. <input type="checkbox"/> Early finishers? Centers Library!
<input type="checkbox"/> Review the Apply It activity and what materials will be used. <input type="checkbox"/> Review the Error Alert in Develop session 1 of 2 and identify students who will most benefit from this opportunity before continuing to Develop session 2 of 2 and the Refine session. <input type="checkbox"/> Consider which sentence frames you will use to support children in their explanations of strategies.		
Centers and Differentiation Options —Choose 2 or 3 stations to use and gather the materials for each activity.		
Centers Student-Led Practice		Differentiation Teacher-Led Small Group
<input type="checkbox"/> Organize the lesson's Student-Led Stations: Session Centers, Centers Library: Fluency, Centers Library: Skill Review		<input type="checkbox"/> Differentiate in small groups to support needs observed during the Apply It activity: Reteach, Extend
Practice (Choose 1 or 2) <input type="checkbox"/> Independent Practice <input type="checkbox"/> Fluency and Skills	<input type="checkbox"/> Assignable Interactive Practice <input type="checkbox"/> Learning Games <input type="checkbox"/> Assignable <i>i-Ready</i> Interactive Tutorial	<input type="checkbox"/> Grade Level Games <input type="checkbox"/> Centers Library
<input type="checkbox"/> Close		



PLANNING TEMPLATE

Develop (Sessions 2–3)

Number Sense and Counting Activity

- ☐ Which One Doesn't Belong
- ☐ Show It Another Way
- ☐ How Many?

- ☐ Quick Images
- ☐ Data Talk

Engagement Protocols:

Supporting English Learners:

Try–Discuss–Connect (Encourage students to compare and connect strategies. See Ask/Listen For guidance in the Teacher's Guide.)

Make Sense of the Problem Language Routine:

- ☐ Three Reads
- ☐ Co-Craft Questions
- ☐ Say It Another Way
- ☐ Notice and Wonder

Model It/Teacher-Led:

Apply It (What materials are recommended for this activity? See the Teacher's Guide.)

Student Workmat page, symbol, and color in Student Worktext:

Centers, Differentiation, and Practice

Centers

Session Centers:

Centers Library:

Teacher-Led Small Group

- ☐ Reteach
- ☐ Extend

Practice

- ☐ Apply It
- ☐ Fluency and Skills
- ☐ Learning Games
- ☐ Centers Library
- ☐ Independent Practice
- ☐ Interactive Practice
- ☐ Grade Level Games
- ☐ i-Ready Interactive Tutorial

Close

- ☐ Math Reflection
- ☐ Self-Reflection



CHECKLIST

Refine (Sessions 4–5)

Strengthen skills and understanding with in-class practice | Reteach, reinforce, and extend learning

As you prepare for the Refine sessions, review this guide to focus on grade-level differentiation and cumulative lesson practice while filling out your planning template.

- ☐ Review the *Purpose* in the Teacher's Guide on the top left corner.
- ☐ Understand the **Number Sense and Counting Activity**.
- ☐ Prepare to support English Learners.

- ☐ Download the Refine session slides.
- ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.

Session 4: Make Connections

- ☐ Prepare recommended manipulatives. See the Math Toolkit in the Teacher's Guide.
- ☐ Display and introduce sentence frames.

Centers, Differentiation, and Practice

- ☐ Read over the **If/Then** scenarios.
- ☐ Preview the **Check for Understanding**.

Organize the lesson's Student-Led Stations:

- ☐ Session Centers
- ☐ Centers Library: Skill Review
- ☐ Centers Library: Fluency

Explore and select Independent Practice:

- ☐ Apply It
- ☐ Independent Practice
- ☐ Digital Practice
- ☐ Learning Game(s)

Session 5: Analyze It

- ☐ Review the activity and make connections to the Lesson Objectives and Session Purpose.

Deepen Understanding

- ☐ Review the mini-lesson and make connections to the Lesson Objectives and Session Purpose.

Assessment, Centers, and Practice

- ☐ Read over the **If/Then** scenarios.
- ☐ Preview the **Check for Understanding**.

Assessment type:

- ☐ Print Lesson Quiz
- ☐ Assign Digital Comprehension Check (Form A/B)

Organize the lesson's Student-Led Stations:

- ☐ Session Centers
- ☐ Centers Library: Skill Review
- ☐ Centers Library: Fluency

Explore and select Independent Practice:

- ☐ Independent Practice
- ☐ Learning Games
- ☐ *i-Ready Personalized Instruction*

Review and prepare Post-Assessment Differentiation:

- ☐ **Reteach:** Tools for Instruction
- ☐ **Reinforce:** Learning Activities
- ☐ **Extend:** Enrichment Activities

Close

- ☐ Preview the **Math Reflection** and **Self-Reflection**.

Number Sense and Counting Activity

- | | |
|---------------------------------------------------|---------------------------------------|
| <input type="checkbox"/> Which One Doesn't Belong | <input type="checkbox"/> Quick Images |
| <input type="checkbox"/> Show It Another Way | <input type="checkbox"/> Data Talk |
| <input type="checkbox"/> How Many? | |

Engagement Protocols:

Supporting English Learners:

Session 4: Make Connections

Which manipulatives and sentence frames are suggested for this activity?

Session 5: Analyze It

Student Workmat page, symbol, and color in Student Worktext:

Student Workmat page, symbol, and color in Student Worktext:

Apply It Activity

Deepen Understanding

If/Then:

Centers, Differentiation, and Practice

Assessments, Centers, and Practice

Teacher-Led Small Group

Check for Understanding:

Student-Led Stations:

Session Centers:

Centers Library: Skill Review

Centers Library: Fluency

Which Independent Practice did you select?

- ☐ Apply It
- ☐ Digital Practice (Assignable)
- ☐ Learning Game(s)
- ☐ *i-Ready Personalized Instruction*
(see Digital Correlations in Teacher Toolbox)

Which assessment did you choose?

- ☐ Lesson Quiz
- ☐ Digital Comprehension Check: ☐ Form A ☐ Form B

Student-Led Stations:

Session Centers:

Centers Library: Skill Review

Centers Library: Fluency

Which Independent Practice did you select?

- ☐ Apply It
- ☐ Independent Practice
- ☐ Digital Practice (Interactive Practice)

Post-Assessment Differentiation

- ☐ **Reteach:** Tools for Instruction
- ☐ **Reinforce:** Learning Activities
- ☐ **Extend:** Enrichment Activities

Close

- | | |
|------------------------------------------|------------------------------------------|
| <input type="checkbox"/> Math Reflection | <input type="checkbox"/> Self-Reflection |
|------------------------------------------|------------------------------------------|

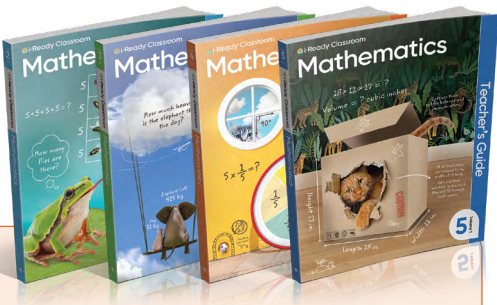
Notes:

Quick-Start Guide: Grades 2–5



Overview of a Lesson Grades 2–5

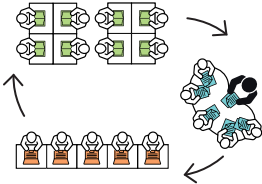
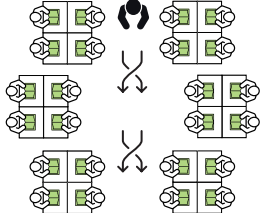
The images shown are an example of how each day of instruction might look. However, *i-Ready Classroom Mathematics* is intended to be flexible based on the needs of students to accomplish learning goals.



Explore

1 DAY

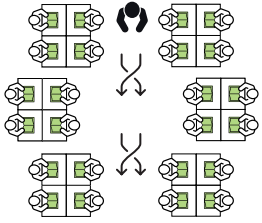
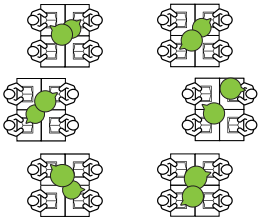
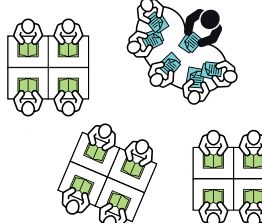
- Connect to prior knowledge
- Introduce new lesson content

Start Activity	Connect to Prior Knowledge	Whole Class Exploration
<ul style="list-style-type: none"> • Always, Sometimes, Never • Same and Different • Which One Doesn't Belong? • Which Would You Rather? 	<ul style="list-style-type: none"> • Address prerequisite skills based on Grade-Level Planning (Prerequisites) report • Whole class or small groups 	<p>See Teacher's Guide</p> 

Develop

1–3 DAYS

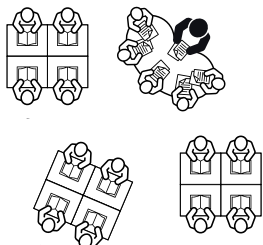
- Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations
- Practice new skills and apply new learning

Start Activity	Try–Discuss–Connect Framework		
<ul style="list-style-type: none"> • Always, Sometimes, Never • Same and Different • Which One Doesn't Belong? • Which Would You Rather? 	<p>Student Processing Time</p> 	<p>Student-Centered Math Discussions</p> 	<p>Deepen Learning and Practice</p> 

Refine

1 DAY

- Strengthen skills and understanding with in-class practice time
- Reteach, reinforce, and extend learning

Start Activity	Differentiation—Practice and Centers	
<ul style="list-style-type: none"> • Check for Understanding • Error Analysis 		<p>Student-Led Options: Center Activities (current or Prerequisite Lessons), Enrichment Activities, Unit Games (on-grade level to review, prerequisites to accelerate to grade level), Grade Level Games (Grades K–2)</p> <p>Teacher-Led Options: Teacher's Guide Activities, Tools for Instruction, Center Activities, Interactive Tutorials (current or Prerequisite Lessons)</p> <p>Independent Options: Refine Practice (Student Worktext), Fluency and Skills Practice, Digital Learning Games, <i>i-Ready Personalized Instruction</i></p>



ADDRESSING PREREQUISITES

Guidance for Grade-Level Planning (Prerequisites) Report

Derived directly from your students' Diagnostic results, the Grade-Level Planning (Prerequisites) report is one powerful data tool available to support your on-grade level instruction. This report identifies learning needs and suggests student groups that align with each *i-Ready Classroom Mathematics* unit, eliminating the need to assess students before the unit.

As you plan a unit or lesson, you should use the information provided in the Grade-Level Planning (Prerequisites) report to inform plans for whole class instruction and make strategic choices about instructional resources to be used with small groups as needed.

Use this report to see a picture of students' learning needs in relation to the grade-level content of the *i-Ready Classroom Mathematics* unit selected, including:

A. Use the **top navigation dropdown** to select an *i-Ready Classroom Mathematics* unit and set of lessons within the unit as the focus for the report.

B. **Know the Math** provides an overview of the concept and skills developed throughout the unit and links to the **Unit Flow and Progression Video** and **Learning Progression** for deeper understanding of the mathematics content.

C. **Identify Class Prerequisite Needs** provides a high-level overview of whole class readiness for the selected lessons.

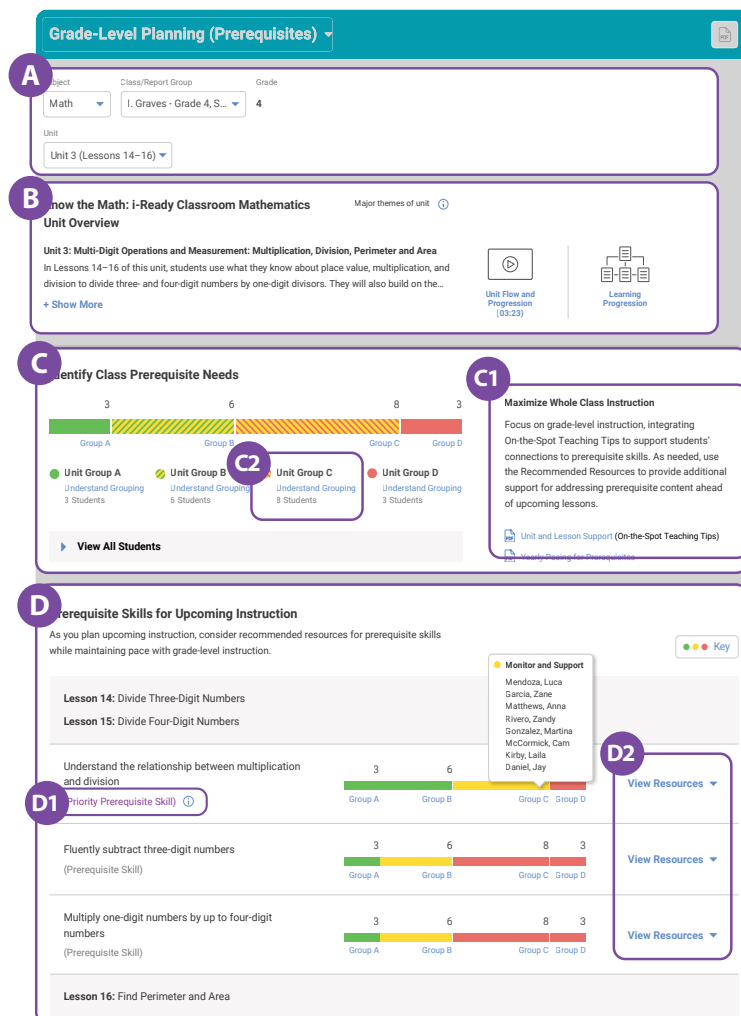
C1. **Maximize Whole Class Instruction** includes resources such as **Unit and Lesson Support** for on-the-spot teaching tips to scaffold grade-level instruction or the **Yearly Pacing for Prerequisites** with suggestions to consolidate or adjust lessons in the unit to further address prerequisite skills.

C2. **Understand Grouping** provides information from the Diagnostic Assessment as context for students' Unit Group placements.

D. **Prerequisite Skills for Upcoming Instruction** details prerequisite skills for the content in the lesson(s). Students are separated into three or four groups based on their results from the most recent Diagnostic. Individual student names are displayed by clicking the group name. Within each group, the data indicates which students have likely acquired each skill (Likely Acquired), may need monitoring and support of the skill (Monitor and Support), or may benefit from more significant work on a skill (In-Depth Review).

D1. The **Priority Prerequisite Skill** indicates that this prerequisite skill is a key skill students will build upon in the lesson(s). If students need support with numerous prerequisite skills, teachers may wish to focus their efforts on this skill to optimize instructional time and stay on track with suggested pacing guidelines.

D2. **View Resources** links to recommendations of instructional resources, organized by each lesson within the unit. Use these resources to address prerequisite skill needs with students as time permits.





CHECKLIST Explore

Connect to and build prior knowledge | Introduce new lesson content

As you prepare for the Explore sessions, review this guide while filling out your planning template.

- ☐ Review the **Start Activity Routine** and *Purpose* in the **Teacher's Guide** on the top left corner.
- ☐ Prepare to increase engagement by incorporating Engagement Protocols and Connect to Language Development.
- ☐ Download the presentation slides for the Explore session.
- ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.

- ☐ Refer to **Grade-Level Planning (Prerequisites) report** groupings and use the *Recommendations* resources.
 - On page 1 of the *Recommendations* PDF, review the *Overview* section that indicates which prerequisite skills are directly connected to each of the upcoming lessons.
 - If there are multiple prerequisites, prioritize the Essential Skill or the most appropriate prerequisite skill.
 - Gather the associated resources to plan for stations below.

Stations Based on Grade-Level Planning (Prerequisites) Report

Student-Led Options (Choose One)	Independent Options (Choose One)	Whole Class/Teacher-Led Options (Choose One)
<ul style="list-style-type: none"><input type="checkbox"/> Prerequisite Center Activities (Choose from on-level, below-level, and above-level versions available under Math Center Activities on the Teacher Toolbox.)<input type="checkbox"/> Prerequisite Enrichment Activities (under the Extend column on the Teacher Toolbox)	<ul style="list-style-type: none"><input type="checkbox"/> Prerequisite Fluency and Skills Practice (in Develop sessions on the Teacher Toolbox)<input type="checkbox"/> Prerequisite Interactive (i.e., digital) Practice (Learn how to assign.)<input type="checkbox"/> Prerequisite Learning Games (Learn more about the games and their use.)<input type="checkbox"/> Prerequisite i-Ready Personalized Instruction lessons (if available for pilot)	<ul style="list-style-type: none"><input type="checkbox"/> Prerequisite Tools for Instruction (under the Reteach column on the Teacher Toolbox)<input type="checkbox"/> Prerequisite Interactive Tutorials (under Interactive Tutorials on the Teacher Toolbox)

- ☐ **Whole Class:** Introduce new lesson content. Students transfer prerequisite skills exposure to new content.

- | | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Exit Ticket | <input type="checkbox"/> Additional Practice/Homework <ul style="list-style-type: none">• Develop Math Language• Deepen Prerequisite Knowledge |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

- ☐ Consider how families will access the **Family Letter**:
 - Student Worktext
 - Family Resources via Student eBook (multiple languages available)



PLANNING GUIDE

Explore

Start Activity Routine

- ☐ Which One Doesn't Belong?
- ☐ Which Would You Rather?
- ☐ Always, Sometimes, Never
- ☐ Same and Different

Engagement Protocols:

Support for English Learners:

Student-Led Options *(Choose One)*

- ☐ **Prerequisite Center Activities**
(Choose from on-level, below-level, and above-level versions available under Math Center Activities on the Teacher Toolbox.)
- ☐ **Prerequisite Enrichment Activities**
(under the Extend column on the Teacher Toolbox)

Independent Options *(Choose One)*

- ☐ **Prerequisite Fluency and Skills Practice**
(in Develop sessions on the Teacher Toolbox)
- ☐ **Prerequisite Interactive** (i.e., digital) **Practice**
(Learn how to [assign](#).)
- ☐ **Prerequisite Learning Games**
(Learn more about the [games and their use](#).)
- ☐ **Prerequisite i-Ready Personalized Instruction lessons**
(if available for pilot)

Teacher-Led Options *(Choose One)*

- ☐ **Prerequisite Tools for Instruction** (under the Reteach column on the Teacher Toolbox)
- ☐ **Prerequisite Interactive Tutorials** (under Interactive Tutorials on the Teacher Toolbox)

Whole Class

- | | | |
|----------------------------------------|--------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> Try It | <input type="checkbox"/> Discuss It | <input type="checkbox"/> Connect It |
|----------------------------------------|--------------------------------------------|--------------------------------------------|

Prerequisites Practice Options

- | | |
|----------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Additional Practice pages | <input type="checkbox"/> Learning Games |
| <input type="checkbox"/> Fluency and Skills | <input type="checkbox"/> Unit Games |
| <input type="checkbox"/> Assignable Interactive Practice | <input type="checkbox"/> Center Activities (on/above/below) |
| <input type="checkbox"/> Fluency Flight | |

Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations | Explore new strategies and develop new learning

As you prepare for the Develop sessions, review this checklist while filling out your planning template.

- ☐ Review the **Start Activity Routine** and *Purpose* in the **Teacher's Guide** on the top left corner.
- ☐ Prepare to increase engagement by incorporating **Engagement Protocols** and **Connect to Language Development**.
- ☐ Download slides for the Develop sessions.
- ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.

Try It: Students make sense of the problem and persevere in solving them.

Make Sense of the Problem

- ☐ Select one language routine to build student ownership of reading the problem and building their understanding of the problem before attempting to solve: Three Reads, Notice and Wonder, Co-Craft Questions, Say It Another Way.

Solve and Support Thinking

- ☐ Provide access to, and encourage use of various tools and manipulatives suggested in the Teacher's Guide so students can solve using the method or approach of their choosing.

Effective Practices

- ☐ Give students time to think, but don't wait for all students to develop a full solution.
- ☐ Circulate to observe student work and select and sequence student strategies to be shared.

Discuss It: Students share ideas with a partner, then discuss and compare teacher-selected strategies.

Share Your Thinking with a Partner

- ☐ Students discuss their strategy and a partner's strategy in preparation for whole class discussion, including why it is reasonable in the context of the problem and defending their thinking verbally and using representations.
- ☐ Students show they are listening by rephrasing and asking questions of classmates to clarify understanding and discuss similarities and differences.

Compare Class Strategies

- ☐ Lead students through analysis of preselected strategies by probing the entire class to make connections between and across shared strategies.
 - Guidance in Teacher's Guide:
 - Whole Class Discussion
 - Ask/Listen For
 - Additional Resource:
 - Discourse Cards

Effective Practices

- ☐ Display session slides and Discourse Cards.
- ☐ Display preselected student strategies, then provide individual think time and partner talk to build student ownership of making sense of each representation.
- ☐ Prompt students to recognize, explain, and build on classmates' reasoning and/or errors in a solution strategy.

Connect It: Dive deeper into conceptual understanding and strategies.

Make Connections and Reflect

- ☐ Display the Picture It and Model It slides and ask the aligned questions in the Teacher's Guide, if not shared during Discuss It.
- ☐ Select 1–2 key Connect It questions for students to complete verbally and/or in writing (e.g., whole class, pairs, etc.).

Apply Your Thinking to a New Problem

- ☐ Students practice what they learned by answering Apply It problems.
- ☐ Make the Hands-On or Visual Activities available to all students to build student ownership.

Effective Practices

- ☐ Integrate a few of the Connect It questions into the Discuss It section.
- ☐ Early finishers? Get ahead by providing all students the lesson-specific Enrichment Activity.
- ☐ For Additional Practice: See the green Practice pages in the Student Worktext.

☐ **Exit Ticket**

Practice

- | | |
|----------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Apply It Problems | <input type="checkbox"/> Assignable Interactive Practice |
| <input type="checkbox"/> Additional Practice pages | <input type="checkbox"/> Learning Games |
| <input type="checkbox"/> Fluency and Skills | |

Start Activity Routine

- ☐ Which One Doesn't Belong?
- ☐ Which Would You Rather?
- ☐ Always, Sometimes, Never
- ☐ Same and Different

Engagement Protocols:

Support for English Learners:

Try It: Students make sense of the problem and persevere in solving them.

Effective Practices

Make Sense of the Problem

Which language routine will you use? (see Teacher's Guide)

Solve and Support Thinking

Which manipulatives are recommended for this session? (see Teacher's Guide)

- ☐ Give students time to think, but don't wait for all students to develop a full solution. This is "think time."
- ☐ Circulate the room to observe student work, listen to discussions, and select and sequence the student strategies to be shared.

Discuss It: Students share ideas with a partner, then discuss and compare teacher-selected strategies.

Effective Practices

Share Your Thinking with a Partner

Which student strategies are best to select for class analysis? (see Select and Sequence Strategies guidance in the Teacher's Guide)

Compare Class Strategies

Which recommended questions from the Teacher's Guide will you use?

- ☐ Display and pose a sentence starter/question using session slides and Discourse Cards.
- ☐ Display preselected student strategies, then provide individual think time and partner talk to build student ownership of making sense of each representation.
- ☐ Prompt students to recognize, explain, and build on classmates' reasoning and/or errors in a solution strategy.

Connect It: Dive deeper into conceptual understanding and strategies.

Effective Practices

Make Connections and Reflect on What You Have Learned

Which two to three Connect It questions will you address as a class?

Apply Your Thinking to a New Problem

Will students complete the Apply It practice with a partner or independently?

- ☐ Integrate a few of the Connect It questions into the Discuss It section.
- ☐ Early finishers? Provide the lesson-specific Enrichment Activity to all students.
- ☐ For Additional Practice: See the green Practice pages in the Student Worktext.

Practice

- ☐ Apply It Problems
- ☐ Additional Practice pages
- ☐ Fluency and Skills

- ☐ Assignable Interactive Practice
- ☐ Fluency Flight
- ☐ Learning Games

- ☐ Unit Games
- ☐ Center Activities (on/above/below)
- ☐ Enrichment Activity
- ☐ Comprehension Check ([Learn more.](#))



CHECKLIST Refine

Strengthen skills and understanding with in-class practice | Reteach, reinforce, and extend learning

As you prepare for the Refine sessions, review this guide to focus on grade-level differentiation and cumulative lesson practice while filling out your planning template.

- ☐ Review the **Start Activity Routine** and *Purpose* in the **Teacher's Guide** on the top left corner.
- ☐ Prepare to support English Learners.
- ☐ Review Check for Understanding and Error Analysis in your Teacher's Guide.
- ☐ Download the Refine session slides.
- ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.
- ☐ **Prepare stations** and see **Differentiated Instruction** options for Reteach, Extend, Reinforce, and Personalize guidance in the Teacher's Guide.
- ☐ To further differentiate, **locate the current grade-level lesson in Teacher Toolbox** and review **Math Center Activities** and **Enrichment Activities**.
- ☐ See **Program Implementation** to review and select the current grade-level **Digital Resource Correlations** showing the lesson associated to assign.
 - Learning Games Correlations
 - Interactive Practice Correlations
 - Prerequisite Interactive Tutorials Correlations
 - *i-Ready* Lesson Correlations

Student-Led Options	Independent Options	Whole Class/Teacher-Led Options
<ul style="list-style-type: none"><input type="checkbox"/> Grade-Level Center Activities (Choose from on-level, below-level, and above-level versions available under Math Center Activities on the Teacher Toolbox.)<input type="checkbox"/> Grade Level Games (under the Program Implementation tab on the Grades K–2 Teacher Toolbox)<input type="checkbox"/> Grade-Level Enrichment Activities (under the Extend column on the Teacher Toolbox)<input type="checkbox"/> Grade-Level Unit Games for prior units or grades (in the End of Unit resources on the Teacher Toolbox)	<ul style="list-style-type: none"><input type="checkbox"/> Student Worktext Refine practice<input type="checkbox"/> Grade-Level Fluency and Skills Practice (in Develop sessions on the Teacher Toolbox)<input type="checkbox"/> Grade-Level Interactive (i.e., digital) Practice (Learn how to assign.)<input type="checkbox"/> Learning Games (Learn more about the games and their use.)<input type="checkbox"/> Cumulative Practice (see Beginning of Unit resources on the Teacher Toolbox and in the back of the Student Worktext)<input type="checkbox"/> <i>i-Ready</i> Personalized Instruction lessons (if available for pilot)	<ul style="list-style-type: none"><input type="checkbox"/> Grade-Level Hands-On Activity (in the Teacher's Guide)<input type="checkbox"/> Grade-Level Challenge Activity (in the Teacher's Guide)<input type="checkbox"/> Grade-Level Tools for Instruction (in Teacher Toolbox)<input type="checkbox"/> Grade-Level Interactive Tutorial (in Teacher Toolbox)

☐ **Exit Ticket**

Start Activity Routine			
<input type="checkbox"/> Check for Understanding <input type="checkbox"/> Error Analysis		Engagement Protocols:	
		Support for English Learners:	
Student-Led Options <i>(Choose One)</i>		Independent Options <i>(Choose One)</i>	
<input type="checkbox"/> Grade-Level Center Activities (Choose from on-level, below-level, and above-level versions available under Math Center Activities on the Teacher Toolbox.)		<input type="checkbox"/> Student Worktext Refine practice	
<input type="checkbox"/> Grade Level Games (under the Program Implementation tab on the Grades K–2 Teacher Toolbox)		<input type="checkbox"/> Grade-Level Fluency and Skills Practice (in Develop sessions on the Teacher Toolbox)	
<input type="checkbox"/> Grade-Level Enrichment Activities (under the Extend column on the Teacher Toolbox)		<input type="checkbox"/> Grade-Level Interactive (i.e., digital) Practice (Learn how to assign.)	
<input type="checkbox"/> Grade-Level Unit Games for prior units or grades (in the End of Unit resources on the Teacher Toolbox)		<input type="checkbox"/> Learning Games (Learn more about the games and their use.)	
		<input type="checkbox"/> Cumulative Practice (see Beginning of Unit resources on the Teacher Toolbox and in the back of the Student Worktext)	
		<input type="checkbox"/> i-Ready Personalized Instruction lessons (if available for pilot)	
Teacher-Led Options <i>(Choose One)</i>			
<input type="checkbox"/> Grade-Level Hands-On Activity in the Teacher's Guide.	<input type="checkbox"/> Grade-Level Challenge Activity in the Teacher's Guide.	<input type="checkbox"/> Grade-Level Tools for Instruction in Teacher Toolbox.	<input type="checkbox"/> Grade-Level Interactive Tutorial in Teacher Toolbox.
Grade-Level Practice			
<input type="checkbox"/> Refine Practice Pages <input type="checkbox"/> Fluency and Skills	<input type="checkbox"/> Assignable Interactive Practice <input type="checkbox"/> Fluency Flight	<input type="checkbox"/> Learning Games <input type="checkbox"/> Unit Games <input type="checkbox"/> Enrichment Activity	<input type="checkbox"/> Lesson Center Activities (on/above/below) <input type="checkbox"/> Comprehension Check (Learn more.)

Notes:

Quick-Start Guide: Grades 6–8



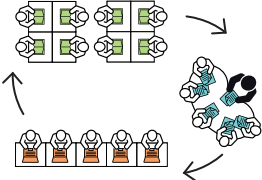
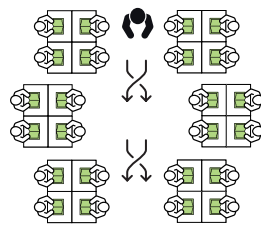
Overview of a Lesson Grades 6–8

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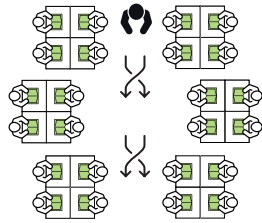
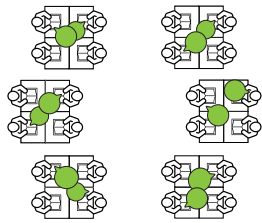
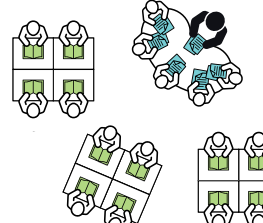
Explore 1 DAY

- Connect to prior knowledge
- Introduce new lesson content

Start Activity	Connect to Prior Knowledge	Whole Class Exploration
<ul style="list-style-type: none"> • Always, Sometimes, Never • Same and Different • Which One Doesn't Belong? • Which Would You Rather? 	<ul style="list-style-type: none"> • Address prerequisite skills based on Grade-Level Planning (Prerequisites) report • Whole class or small groups 	<p>See Teacher's Guide</p> 

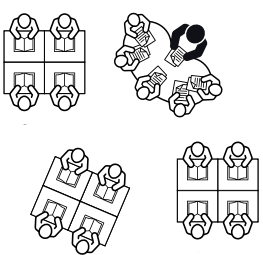
Develop 1–3 DAYS

- Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations
- Practice new skills and apply new learning

Start Activity	Try–Discuss–Connect Framework		
<ul style="list-style-type: none"> • Always, Sometimes, Never • Same and Different • Which One Doesn't Belong? • Which Would You Rather? 	<p>Student Processing Time</p> 	<p>Student-Centered Math Discussions</p> 	<p>Deepen Learning and Practice</p> 

Refine 1 DAY

- Strengthen skills and understanding with in-class practice time
- Reteach, reinforce, and extend learning

Start Activity	Differentiation—Practice and Centers	
<ul style="list-style-type: none"> • Check for Understanding • Error Analysis 		<p>Student-Led Options: Center Activities (current or Prerequisite Lessons), Enrichment Activities, Unit Games (on-grade level to review, prerequisites to accelerate to grade level), Grade Level Games (Grades K–2)</p> <p>Teacher-Led Options: Teacher's Guide Activities, Tools for Instruction, Center Activities, Interactive Tutorials (current or Prerequisite Lessons)</p> <p>Independent Options: Refine Practice (Student Worktext), Fluency and Skills Practice, Digital Learning Games, <i>i-Ready Personalized Instruction</i></p>



ADDRESSING PREREQUISITES

Guidance for Grade-Level Planning (Prerequisites) Report

Derived directly from your students' Diagnostic results, the Grade-Level Planning (Prerequisites) report is one powerful data tool available to support your on-grade level instruction. This report identifies learning needs and suggests student groups that align with each *i-Ready Classroom Mathematics* unit, eliminating the need to assess students before the unit.

As you plan a unit or lesson, you should use the information provided in the Grade-Level Planning (Prerequisites) report to inform plans for whole class instruction and make strategic choices about instructional resources to be used with small groups as needed.

Use this report to see a picture of students' learning needs in relation to the grade-level content of the *i-Ready Classroom Mathematics* unit selected, including:

- A. Use the **top navigation dropdown** to select an *i-Ready Classroom Mathematics* unit and set of lessons within the unit as the focus for the report.
- B. **Know the Math** provides an overview of the concept and skills developed throughout the unit and links to the **Unit Flow and Progression Video** and **Learning Progression** for deeper understanding of the mathematics content.
- C. **Identify Class Prerequisite Needs** provides a high-level overview of whole class readiness for the selected lessons.

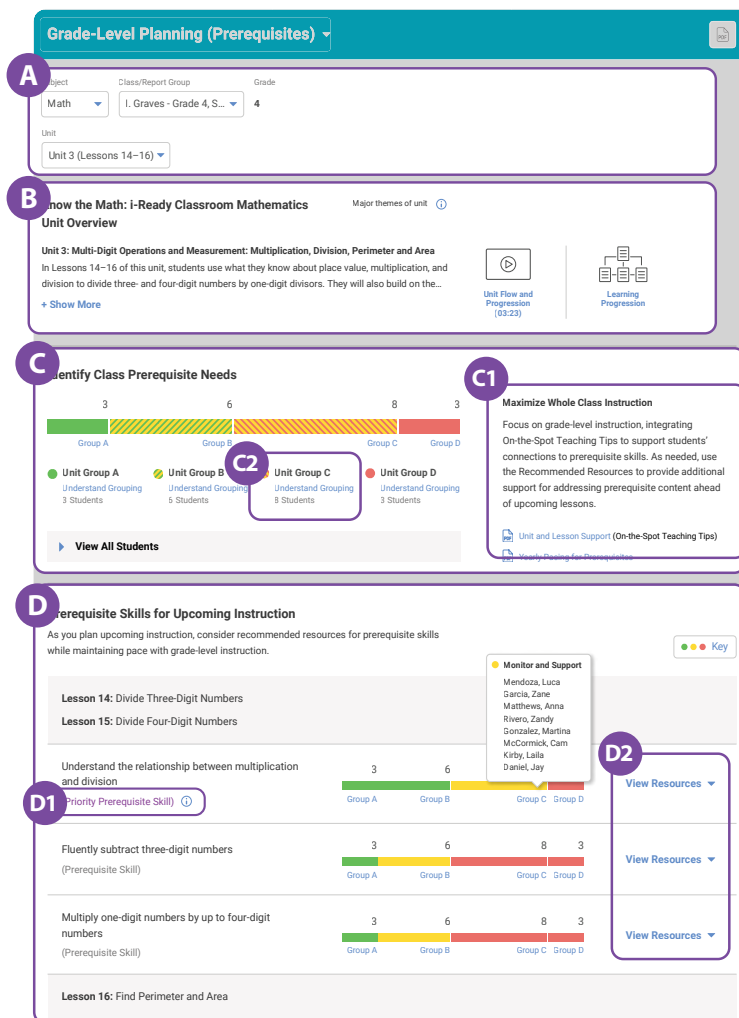
C1. **Maximize Whole Class Instruction** includes resources such as **Unit and Lesson Support** for on-the-spot teaching tips to scaffold grade-level instruction or the **Yearly Pacing for Prerequisites** with suggestions to consolidate or adjust lessons in the unit to further address prerequisite skills.

C2. **Understand Grouping** provides information from the Diagnostic Assessment as context for students' Unit Group placements.

- D. **Prerequisite Skills for Upcoming Instruction** details prerequisite skills for the content in the lesson(s). Students are separated into three or four groups based on their results from the most recent Diagnostic. Individual student names are displayed by clicking the group name. Within each group, the data indicates which students have likely acquired each skill (Likely Acquired), may need monitoring and support of the skill (Monitor and Support), or may benefit from more significant work on a skill (In-Depth Review).

D1. The **Priority Prerequisite Skill** indicates that this prerequisite skill is a key skill students will build upon in the lesson(s). If students need support with numerous prerequisite skills, teachers may wish to focus their efforts on this skill to optimize instructional time and stay on track with suggested pacing guidelines.

D2. **View Resources** links to recommendations of instructional resources, organized by each lesson within the unit. Use these resources to address prerequisite skill needs with students as time permits.





CHECKLIST Explore

Connect to and build prior knowledge | Introduce new lesson content

As you prepare for the Explore sessions, review this guide while filling out your planning template.

- ☐ Review the **Start Activity Routine** and *Purpose* in the **Teacher's Guide** on the top left corner.
- ☐ Prepare to increase engagement by incorporating **Engagement Protocols** and **Connect to Language Development**.
- ☐ Download the presentation slides for the Explore session.
- ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.
- ☐ Refer to **Grade-Level Planning (Prerequisites) report** groupings and use the *Recommendations* resources.
 - On page 1 of the *Recommendations* PDF, review the *Overview* section that indicates which prerequisite skills are directly connected to each of the upcoming lessons.
 - If there are multiple prerequisites, prioritize the Essential Skill or the most appropriate prerequisite skill.
 - Gather the associated resources to plan for stations below.

Stations Based on Grade-Level Planning (Prerequisites) Report

Student-Led Options (Choose One)	Independent Options (Choose One)	Whole Class/Teacher-Led Options (Choose One)
<input type="checkbox"/> Prerequisite Center Activities (Choose from on-level, below-level, and above-level versions available under Math Center Activities on the Teacher Toolbox.)	<input type="checkbox"/> Prerequisite Fluency and Skills Practice (in Develop sessions on the Teacher Toolbox)	<input type="checkbox"/> Prerequisite Tools for Instruction (under the Reteach column on the Teacher Toolbox)
<input type="checkbox"/> Prerequisite Enrichment Activities (under the Extend column on the Teacher Toolbox)	<input type="checkbox"/> Prerequisite Interactive (i.e., digital) Practice (Learn how to assign .)	<input type="checkbox"/> Prerequisite Interactive Tutorials (under Interactive Tutorials on the Teacher Toolbox)
	<input type="checkbox"/> Prerequisite Learning Games (Learn more about the games and their use .)	
	<input type="checkbox"/> Prerequisite i-Ready Personalized Instruction lessons (if available for pilot)	
<input type="checkbox"/> Whole Class: Introduce new lesson content. Students transfer prerequisite skills exposure to new content.		
<input type="checkbox"/> Exit Ticket		<input type="checkbox"/> Additional Practice/Homework <ul style="list-style-type: none">• Develop Math Language• Deepen Prerequisite Knowledge
<input type="checkbox"/> Consider how families will access the Family Letter : <ul style="list-style-type: none">• Student Worktext• Family Resources via Student eBook (multiple languages available)		



PLANNING GUIDE

Explore

Start Activity Routine

- ☐ Which One Doesn't Belong?
- ☐ Which Would You Rather?
- ☐ Always, Sometimes, Never
- ☐ Same and Different

Engagement Protocols:

Support for English Learners:

Student-Led Options *(Choose One)*

- ☐ **Prerequisite Center Activities**
(Choose from on-level, below-level, and above-level versions available under Math Center Activities on the Teacher Toolbox.)
- ☐ **Prerequisite Enrichment Activities**
(under the Extend column on the Teacher Toolbox)

Independent Options *(Choose One)*

- ☐ **Prerequisite Fluency and Skills Practice**
(in Develop sessions on the Teacher Toolbox)
- ☐ **Prerequisite Interactive** (i.e., digital) **Practice**
(Learn how to [assign](#).)
- ☐ **Prerequisite Learning Games**
(Learn more about the [games and their use](#).)
- ☐ **Prerequisite *i-Ready Personalized Instruction* lessons**
(if available for pilot)

Teacher-Led Options *(Choose One)*

- ☐ **Prerequisite Tools for Instruction** (under the Reteach column on the Teacher Toolbox)
- ☐ **Prerequisite Interactive Tutorials** (under Interactive Tutorials on the Teacher Toolbox)

Whole Class

- | | | |
|----------------------------------------|--------------------------------------------|--------------------------------------------|
| <input type="checkbox"/> Try It | <input type="checkbox"/> Discuss It | <input type="checkbox"/> Connect It |
|----------------------------------------|--------------------------------------------|--------------------------------------------|

Prerequisites Practice Options

- | | |
|----------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Additional Practice pages | <input type="checkbox"/> Learning Games |
| <input type="checkbox"/> Fluency and Skills | <input type="checkbox"/> Center Activities (on/above/below) |
| <input type="checkbox"/> Assignable Interactive Practice | |



CHECKLIST Develop

Build multidimensional understanding using rich tasks, problem solving, discourse, and multiple representations | Explore new strategies and develop new learning

As you prepare for the Develop sessions, review this checklist while filling out your planning template.

- ☐ Review the **Start Activity Routine** and *Purpose* in the **Teacher's Guide** on the top left corner.
- ☐ Prepare to increase engagement by incorporating **Engagement Protocols** and **Connect to Language Development**.
- ☐ Download the presentation slides for the Develop session.
- ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.

Try It: Students make sense of the problem and persevere in solving them.

Make Sense of the Problem

- ☐ Select one of the language routines to build student ownership of reading the problem and building their understanding of the problem before attempting to solve: Three Reads, Notice and Wonder, Co-Craft Questions, Say It Another Way.

Solve and Support Thinking

- ☐ Provide access to, and encourage use of various tools and manipulatives suggested in the Teacher's Guide so students can solve using the method or strategy of their choosing.

Effective Practices

- ☐ Give students time to think, but don't wait for all students to develop a full solution.
- ☐ Circulate to observe student work and select and sequence student strategies to be shared.

Discuss It: Students share ideas with a partner, then discuss and compare teacher-selected strategies.

Share Your Thinking with a Partner

- ☐ Students discuss their and their partner's strategies in preparation for whole class discussion, including why it is reasonable in the context of the problem and defending their thinking verbally and using representations.
- ☐ Students show they are listening by rephrasing and asking questions of classmates to clarify understanding and discuss similarities and differences.

Compare Class Strategies

- ☐ Lead students through analysis of preselected strategies by probing the entire class to make connections between and across shared strategies.
 - Guidance in Teacher's Guide:
 - Whole Class Discussion
 - Ask/Listen For
 - Additional Resource:
 - Discourse Cards

Effective Practices

- ☐ Display session slides and Discourse Cards.
- ☐ Display preselected student strategies. Then use individual think time and partner talk to promote students' ownership of sense making.
- ☐ Prompt students to recognize, explain, and build on classmates' reasoning and/or errors in a solution strategy.

Connect It: Dive deeper into conceptual understanding and strategies.

Make Connections and Reflect

- ☐ Display the Picture It and Model It slides. Ask the remaining aligned questions from the Teacher's Guide.
- ☐ Select 1–2 Connect It questions. Have students complete them verbally and/or in writing individually, in pairs, or as a class.

Apply Your Thinking to a New Problem

- ☐ Students practice by answering Apply It problems.
- ☐ Make Hands-On or Visual Activities available to all students.

Effective Practices

- ☐ Integrate a few of the Connect It questions into the Discuss It section.
- ☐ Provide the lesson-specific Enrichment Activity to all students.
- ☐ Use the green Additional Practice pages in the Student Worktext as needed.

☐ Exit Ticket

Practice

- | | |
|----------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Apply It Problems | <input type="checkbox"/> Assignable Interactive Practice |
| <input type="checkbox"/> Additional Practice pages | <input type="checkbox"/> Learning Games |
| <input type="checkbox"/> Fluency and Skills | |

Start Activity Routine

- ☐ Which One Doesn't Belong?
- ☐ Which Would You Rather?
- ☐ Always, Sometimes, Never
- ☐ Same and Different

Engagement Protocols:

Support for English Learners:

Try It: Students make sense of the problem and persevere in solving them.

Make Sense of the Problem

Which language routine will you use? (see Teacher's Guide)

Solve and Support Thinking

Which manipulatives are recommended for this session? (see Teacher's Guide)

Effective Practices

- ☐ Give students time to think, but don't wait for all students to develop a full solution. This is "think time."
- ☐ Circulate the room to observe student work, listen to discussions, and select and sequence the student strategies to be shared in a way that builds thinking.

Discuss It: Students share ideas with a partner, then discuss and compare teacher-selected strategies.

Share Your Thinking with a Partner

Which student strategies are best to select for class analysis? (see Select and Sequence Strategies guidance in the Teacher's Guide)

Compare Class Strategies

Which recommended questions from the Teacher's Guide will you use?

Effective Practices

- ☐ Display and pose a sentence starter/question using session slides and Discourse Cards.
- ☐ Display preselected student strategies, then provide individual think time and partner talk to build student ownership of making sense of each representation.
- ☐ Prompt students to recognize, explain, and build on classmates' reasoning and/or errors in a solution strategy.

Connect It: Dive deeper into conceptual understanding and strategies.

Make Connections and Reflect on What You Have Learned

Which two to three Connect It questions will you address as a class?

Apply Your Thinking to a New Problem

Will students complete the Apply It practice with a partner or independently?

Effective Practices

- ☐ Integrate a few of the Connect It questions into the Discuss It section.
- ☐ Early finishers? Get ahead by providing all students the lesson-specific Enrichment Activity.
- ☐ For Additional Practice: See the green Practice pages in the Student Worktext.

Practice Options

- | | | |
|----------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Apply It Problems | <input type="checkbox"/> Assignable Interactive Practice | <input type="checkbox"/> Center Activities (on/above/below) |
| <input type="checkbox"/> Additional Practice pages | <input type="checkbox"/> Learning Games | <input type="checkbox"/> Enrichment Activity |
| <input type="checkbox"/> Fluency and Skills | <input type="checkbox"/> Unit Games | <input type="checkbox"/> Comprehension Check |



CHECKLIST Refine

Strengthen skills and understanding with in-class practice | Reteach, reinforce, and extend learning

As you prepare for the Refine sessions, review this guide to focus on grade-level differentiation and cumulative lesson practice while filling out your planning template.

- ☐ Review the **Start Activity Routine** and *Purpose* in the **Teacher's Guide** on the top left corner.
- ☐ Prepare to support English Learners.
- ☐ Review Check for Understanding and Error Analysis in your Teacher's Guide.
- ☐ Download the Refine session slides.
- ☐ Decide which questions in the slide notes you would like to ask the class. You may want to add the question to the slide as a reminder.
- ☐ **Prepare groups** and see Differentiated Instruction options for Reteach, Extend, Reinforce, and Personalize guidance in the Teacher's Guide.
- ☐ To further differentiate, **locate the current grade-level lesson in Teacher Toolbox** and review Math Center Activities and Enrichment Activities.
- ☐ See **Program Implementation** to review and select the current grade-level **Digital Resource Correlations** showing the lesson associated to assign.
 - Learning Games Correlations
 - Interactive Practice Correlations
 - Prerequisite Interactive Tutorials Correlations
 - *i-Ready* Lesson Correlations

Student-Led Options	Independent Options	Whole Class/Teacher-Led Options
<ul style="list-style-type: none"><input type="checkbox"/> Grade-Level Center Activities (Choose from on-level, below-level, and above-level versions available under Math Center Activities on the Teacher Toolbox.)<input type="checkbox"/> Grade Level Games (under the Program Implementation tab on the Grades K–2 Teacher Toolbox)<input type="checkbox"/> Grade-Level Enrichment Activities (under the Extend column on the Teacher Toolbox)<input type="checkbox"/> Grade-Level Unit Games for prior units or grades (in the End of Unit resources on the Teacher Toolbox)	<ul style="list-style-type: none"><input type="checkbox"/> Student Worktext Refine practice<input type="checkbox"/> Grade-Level Fluency and Skills Practice (in Develop sessions on the Teacher Toolbox)<input type="checkbox"/> Grade-Level Interactive (i.e., digital) Practice (Learn how to assign.)<input type="checkbox"/> Learning Games (Learn more about the games and their use.)<input type="checkbox"/> Cumulative Practice (see Beginning of Unit resources on the Teacher Toolbox and in the back of the Student Worktext)<input type="checkbox"/> <i>i-Ready</i> Personalized Instruction lessons (if available for pilot)	<ul style="list-style-type: none"><input type="checkbox"/> Grade-Level Hands-On Activity in the Teacher's Guide.<input type="checkbox"/> Grade-Level Challenge Activity in the Teacher's Guide.<input type="checkbox"/> Grade-Level Tools for Instruction in Teacher Toolbox.<input type="checkbox"/> Grade-Level Interactive Tutorial in Teacher Toolbox.
<input type="checkbox"/> Exit Ticket		

Start Activity Routine

- ☐ Check for Understanding
☐ Error Analysis

Engagement Protocols:

Support for English Learners:

Student-Led Options *(Choose One)*

- ☐ **Grade-Level Center Activities**
(Choose from on-level, below-level, and above-level versions available under Math Center Activities on the Teacher Toolbox.)
- ☐ **Grade Level Games**
(under the Program Implementation tab on the Grades K-2 Teacher Toolbox)
- ☐ **Grade-Level Enrichment Activities**
(under the Extend column on the Teacher Toolbox)
- ☐ **Grade-Level Unit Games** for prior units or grades
(in the End of Unit resources on the Teacher Toolbox)

Independent Options *(Choose One)*

- ☐ **Student Worktext Refine practice**
- ☐ **Grade-Level Fluency and Skills Practice**
(in Develop sessions on the Teacher Toolbox)
- ☐ **Grade-Level Interactive** (i.e., digital) **Practice**
(Learn how to [assign](#).)
- ☐ **Learning Games** (Learn more about the [games and their use](#).)
- ☐ **Cumulative Practice** (see Beginning of Unit resources on the Teacher Toolbox and in the back of the Student Worktext)
- ☐ **i-Ready Personalized Instruction lessons** (if available for pilot)

Teacher-Led Options *(Choose One)*

- | | | | |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <input type="checkbox"/> Grade-Level Hands-On Activity in the Teacher's Guide. | <input type="checkbox"/> Grade-Level Challenge Activity in the Teacher's Guide. | <input type="checkbox"/> Grade-Level Tools for Instruction in Teacher Toolbox. | <input type="checkbox"/> Grade-Level Interactive Tutorial in Teacher Toolbox. |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|

Grade-Level Practice

- | | | | |
|------------------------------------------------|----------------------------------------------------------|----------------------------------------------|------------------------------------------------------------------------------|
| <input type="checkbox"/> Refine Practice Pages | <input type="checkbox"/> Assignable Interactive Practice | <input type="checkbox"/> Learning Games | <input type="checkbox"/> Lesson Center Activities (on/above/below) |
| <input type="checkbox"/> Fluency and Skills | <input type="checkbox"/> Fluency Flight | <input type="checkbox"/> Unit Games | <input type="checkbox"/> Comprehension Check (Learn more .) |
| | | <input type="checkbox"/> Enrichment Activity | |

Notes:

Appendix 1: Resources Overview

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Lesson-Level Practice Options

Apply It Practice

(Student Worktext)

LESSION 15 DEVELOP

LESSION 3 • 4 • 5

APPLY IT

Use what you just learned to solve these problems.

1 Serina collects 3 bins of seawater. She uses 2,500 mL of water of 1 to water her indoor plants. How many mL of water does Serina have left? Show your work. (1 pint = 1,000 mL water)

Solution

2 A farmer makes 4 quarts of yogurt to take to a local market. He has a scale to weigh an equivalent to find the number of quarts of yogurt he will bring. Show your work.

Capacity of Liquid Volume

1 quart = 4 fluid ounces

1 quart = 2 cups

1 quart = 2 pints

1 quart = 4 cups

1 gallon = 8 quarts

LESSION 16 DEVELOP

LESSION 3 • 4 • 5

APPLY IT

Use what you just learned to solve these problems.

1 Chen has 14 ounces of beans and 2 pounds of peas. How many more ounces do the peas weigh than the beans? Show your work. (1 pound = 16 ounces)

16

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Solution

2 The area of a school field has a mass of 2 kilograms. Give a digit to find the mass in grams. Show your work.

Measure Units of Mass

1 gram = 1,000 milligrams

1 kilogram = 1,000 grams

Solution

3 The table shows the mass of three different variety of beans. Complete the table to show the mass of each of the beans in grams. Show your work.

	Beans in Ounces	Mass in Milligrams
Del1	9	
Del2	7	

222

Additional Practice

(Student Worktext)

LESSON 12. ANSWERS

Prepare for Your Multiplication to Convert Measurements

1 Think about what you know about measurements. Fill in each box. Use words, numbers, and pictures. Show how they relate to one another.

P, g, kg, Mg, Mb, Mb	Pg
Examples	Convert measurements

ANSWERS TO QUESTIONS

1 Know your units. Show your work.

Look at each table and decide to add or subtract. It will help you know the units you do convert before the other number.

Change the number of boxes in both tables to be the same by a number of multiples to find out.

Initial value	Final value
1000 mg = 1 g	1000 g = 1 kg
1000 g = 1 kg	1000 kg = 1 Mg
1000 kg = 1 Mg	1000 Mb = 1 Gb

Definition

1 Check your answer. Show your work.

1 Know how the value of the number when converting from larger to smaller units of measurement?

Answer by 10
Answer by 1000

ANSWERS TO QUESTIONS 1

Practice Converting Units of Weight and Mass

1 Write the number of grams in each of 12 ounces of raisins. How much does the raisinometer weigh that the problem? 2 Repeat 1 for 10 pounds of raisins.

EXAMPLE

1 Write the number of grams in each of 12 ounces of raisins. How much does the raisinometer weigh that the problem? 2 Repeat 1 for 10 pounds of raisins.

Find the weight difference between the weight of the raisinometer and the weight of the raisins.

Find the weight difference between the weight of the raisinometer and the weight of the raisins.

The raisinometer weighs 10 ounces more than the raisins.

1 Consider how a mass of kilograms, kilograms, kilograms. Then write the number of kilograms in grams.

1 kg = 1000 g
1000 g = 1 kg
1000 kg = 1 Mg

grams

1 Consider how a mass of kilograms, kilograms, kilograms. Then write the number of kilograms in grams. Use it to find the number of kilograms.

1 Convert the units of weight.

1 kg = 1000 g 1000 g = 1 kg 1000 kg = 1 Mg

1 Compare the value to convert from a larger unit to a smaller unit of weight.

Problem	1	2	3	4	5	6	7	8	9	10
1000 g = 1 kg	1000 kg = 1 Mg	1000 Mb = 1 Gb	1000 g = 1 kg	1000 kg = 1 Mg	1000 Mb = 1 Gb	1000 g = 1 kg	1000 kg = 1 Mg	1000 Mb = 1 Gb	1000 g = 1 kg	1000 kg = 1 Mg

1 Repeat for 10 pounds of raisins. How much does the raisinometer weigh that the problem?

Find the weight difference between the weight of the raisinometer and the weight of the raisins. Use it to find the number of kilograms.

1 Repeat for 10 pounds of raisins. How much does the raisinometer weigh that the problem?

Definition

1 Know the objects that weigh about 1 pound.

1 About 1000 g = 1 kg

1 About 1000 kg = 1 Mg

1 About 1000 Mb = 1 Gb

1 About 1000 g = 1 kg

1 About 1000 kg = 1 Mg

1 About 1000 Mb = 1 Gb

1 About 1000 g = 1 kg

1 About 1000 kg = 1 Mg

1 About 1000 Mb = 1 Gb

1 About 1000 g = 1 kg

1 About 1000 kg = 1 Mg

1 About 1000 Mb = 1 Gb

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1 About 1000 g = 1 kg

1 About 1000 kg = 1 Mg

1 About 1000 Mb = 1 Gb

1 About 1000 g = 1 kg

1 About 1000 kg = 1 Mg

1 About 1000 Mb = 1 Gb

1 About 1000 g = 1 kg

1 About 1000 kg =

Refine Session Practice

(Student Worktext)

LESSON 19

SECTION 6 • 1 • 1

Rethink Using Multiplication to Convert Measurements

Complete the Example below. Then solve problems 1–9 using the Math Formative Sheet as necessary.

EXAMPLE

A sheet is 1 meters long. How many centimeters long is the sheet?

Look at how you could draw your work using a picture and an equation.

There is $1 \text{ meter} = 100 \text{ centimeters}$.

The drawing of a meter stick is labeled to show that 1 meter is equal to 100 centimeters.

A horizontal line representing a meter stick. It has tick marks every 100 units. The numbers 100, 200, 300, 400, and 500 are written below the line. The line starts at 100 and ends at 500.

$$100 \times 1 = 100 \quad 100 \times 5 = 500$$

Solution:

The student calculated
that 1 meter is
 $1 \times 100 = 100$

PAIR SHARE

How did you solve
this problem?

https://www.ck12.org/

APPLY IT

1. A book has a mass of 4 kilograms. The book is placed on a scale. The weight on the scale is 4 kilograms. How many grams does the book weigh?

Solution:

2. One month long, the Earth has 30 days. How many hours does the Earth have?

Solution:

LESSON 19: REVIEW

1. The amount of liquid in two containers is shown below. How many milliliter measurements from these containers will fill a 1 liter?

Show your work.

2 gallons 3 quarts 15 cups

There are 4 quarts in
1 gallon. There are
16 cups in
1 quart.

Solution:

2. Salvador is 60 inches tall. In order to ride a roller coaster at an amusement park, a person must be 5 feet tall. Is Salvador tall enough to ride the roller coaster? How many inches shorter or taller is he than 5 feet?

- Ⓐ Yes, he is 3 inches shorter than 5 feet.
- Ⓑ No, he is 3 inches taller than 5 feet.
- Ⓒ No, he is 3 inches shorter than 5 feet.
- Ⓓ No, he is 17 inches shorter than 5 feet.

Show your work as the correct answer. How did you get the answer?

PAIR SHARE

How did you solve the problem?

There are 12 inches in a foot.

PAIR SHARE

How can you check your answer?

Fluency and Skills Practice

Teacher Toolbox (Develop Sessions)

FLUENCY AND SKILLS PRACTICE | Name: _____

LESSON 12

Multiplying by Two-Digit Numbers

Estimate each multiplication problem to check if the student's answer is reasonable. If not, cross out the answer and write the correct answer.

Multiplication Problems

Student Answers

18×12

216

$\text{Estimate } 18 \times 20 = 360$

15×19

285

21×18

312

18×13

28

FLUENCY AND SKILLS PRACTICE | Name: _____

LESSON 12

Multiplying by Two-Digit Numbers

Estimate each multiplication problem to check if the student's answer is reasonable. If not, cross out the answer and write the correct answer.

Multiplication Problems

Student Answers

18×12

216

$\text{Estimate } 18 \times 20 = 360$

15×19

285

21×18

312

18×13

28

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Multiplying by Two-Digit Numbers

Page 1 of 1

Centers Library (Grades K-1)

Teacher Toolbox
(Lessons or Implementation Tab)

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Show It

13 Show, Count, and Write Numbers to 20 SHOW IT

OPTIONS

- 13 Stems Worksheet
- Show It Within 10 Worksheet
- Show It Within 20 Worksheet

MATERIALS (per pair)

- Student Card Deck
- Counters
- Clipboard

PREPARATION

1. Select a range of numbers for children to work with at the center.
2. Place the selected range of numbers on cards and counters on the table.
3. Select a mathematics for the available options.

DIRECTIONS

1. Partner place the cards in a stack, face-down.
2. Mix the cards and partner select a card.
3. Together, they show the number shown on the card.
4. Each partner shows the number on a counter.
5. Partner compare their models.
6. Repeat by switching roles and drawing the number a different way.
7. Play until out of time or clock.

Teacher Tip: Children could select one model they would like to present with the class. Have children compare, explain each model and all at the different ways numbers could be shown.

QUICK CHECK

Ask the *Myths* how the number 13 is different from your partner's model.

Listen for: A student who notices ____ is different because ____.

A Show It Within Worksheet

A Show It Within 10 Worksheet

A Show It Within 20 Worksheet

Assignable Digital Interactive Practice

Teacher Dashboard
([Learn how to assign here.](#))

ADD THE HUNDREDTHS

3 hundredths + 2 hundredths = hundredths

ones	tenths	hundredths
3	7	7
1	9	7

3 hundredths + 2 hundredths = hundredths

HOW DO YOU BREAK APART THE FACTOR 10 INTO TENS AND ONES?

10 = 10

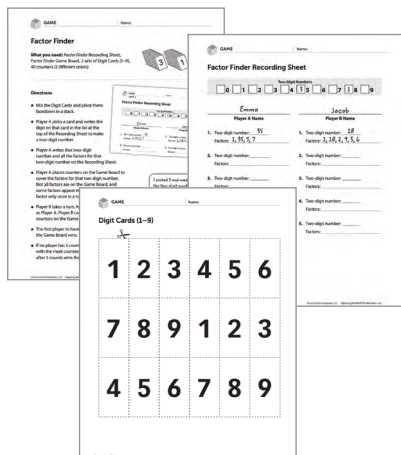
10 = 10

DONE

Unit-Level Practice Options

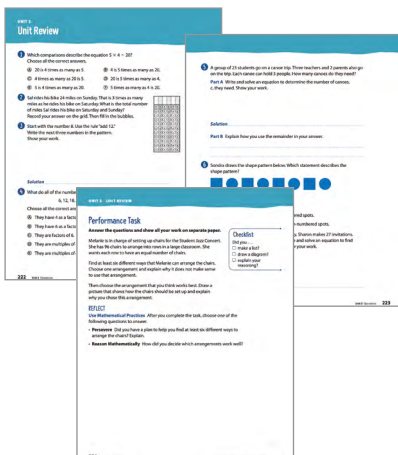
Unit Games

(Teacher Toolbox)



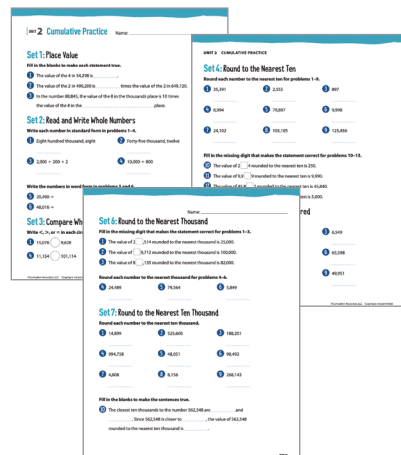
Unit Review

(Student Worktext)



Cumulative Practice

(Student Worktext)



Ongoing Practice Options

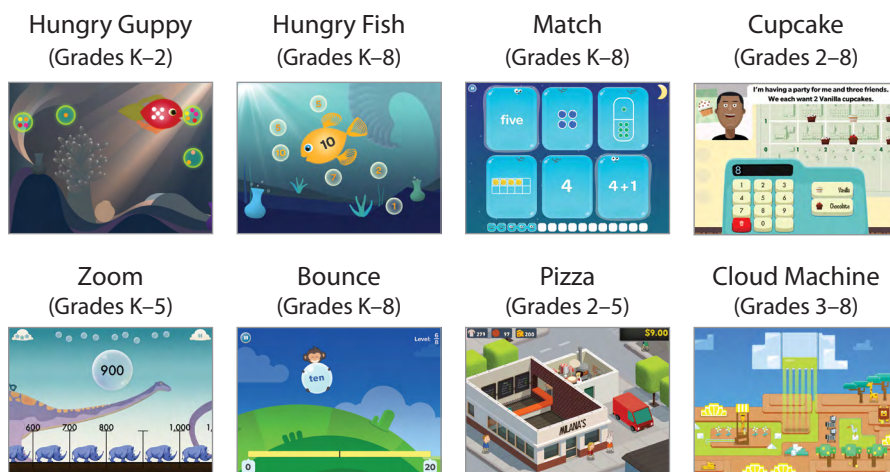
Grade Level Games (Grades K–2)

(Teacher Toolbox)



Learning Games ([Learn more here.](#))

(Teacher Toolbox)



Fluency Flight, available separately, provides a motivating game environment to help students develop fact fluency. It is available for use on computers and provides data to teachers.

Differentiation and Center Resources

In addition to built-in differentiation in the Try–Discuss–Connect framework, numerous resources are available to address students’ needs.

Student-Led Activity Options

- Center/Learning Activities (current or Prerequisite Lessons)
- Enrichment Activities
- Unit Games (on-grade level to review, prerequisites to fill gaps)
- Grade Level Games (Grades K–2)
- Student Worktext Center Activities (Grades K–1)
- Centers Library (Grades K–1)

Independent Activity Options

- Refine Practice (Student Worktext)
- Fluency and Skills Practice
- Digital Learning Games
- *i-Ready Personalized Instruction*

Teacher-Led Activity Options

Current or Prerequisite Lessons:

- Teacher’s Guide
 - Hands-On Activities
 - Deepen Understanding
 - Reteach Activities
 - Challenge Activities
- Tools for Instruction

Teacher-Led Activity Options

Teacher’s Guide Activities

DIFFERENTIATION | EXTEND

Hands-On Activity

Use base-ten blocks to model the problem.

DIFFERENTIATION | EXTEND

Deepen Understanding

Partial Products

When discussing the partial products model, prompt students to consider the effect of changing the order of the factors. Display the vertical multiplication problem 16×28 with the order of the factors reversed. Work together with students to solve the problem.

ASK Compare this multiplication with the multiplication shown in the Model It. What is the same about the partial products? What is different?

LISTEN FOR The partial products are the same but in a different order.

ASK Why does it make sense that the partial products are the same?

LISTEN FOR You multiply the same ones and tens digits in 16 by the same ones and tens digits in 28. In the four partial products are the same.

Generalize Do you think this is true for multiplying any two-digit number by any other two-digit number? Have students explain their reasoning. Listen for understanding that you can multiply 2 two-digit numbers in any order and the partial products will be the same.

Develop Session (Grades 2–8)

DIFFERENTIATION

RETEACH

Hands-On Activity

Use place value blocks to model the problem.

EXTEND

Challenge

Solve two-step word problems involving multiplication.

Students extending beyond proficiency will benefit from deepening understanding by solving two-step word problems that involve multiplication.

Have students solve the following problem.

Amelia earns \$12 for each hour she works as a math tutor. She works as a tutor for 16 hours one week. She also earns \$25 that week for watering her neighbor’s garden. How much does Amelia earn altogether that week? (\$217)

Refine Session (Grades 2–8)

RETEACH

Use with children who need additional support with solving subtraction problems.

Materials: two-color counters (1 per child), Num 0 to 4 and one set of num 1 to 4

Place the two sets of cards. Have a volunteer take a card. Tell children they will use model subtracting the number on the card from the number on the card.

Have children show the counters in their 10-frames. Next, have children model flipping over red counters.

Ask children how many in equation would show the on the board.

Repeat as time allows.

EXTEND

Use with children who have demonstrated ability to solve subtraction problems.

Materials: two-color counters (10 per child), 10-frames Worksheet (1 per child)

Say: There are apples in a basket. Some are taken away. 2 apples are left.

Tell children that their goal number is 2 apples.

Have children find as many pairs of numbers as they can that, when subtracted, result in 2. Ask children what the numbers in each pair represent. If needed, suggest that children use counters and a 10-frame for support.

Record answers on the board in order of ascending or descending starting numbers. Ask children if they notice a pattern.

Repeat with other goal numbers.

Develop Session (Grades K–1)

Deepen Understanding | SMP 2

Representing Problems with Equations

When strategies have been shared, have children discuss how they can use equations to model word problems. Using numbers and symbols to decontextualize a word problem in order to manipulate the numbers and then reconnecting their work to the problem context shows that children can think abstractly and quantitatively.

ASK What do each number and symbol in Boon’s equation represent?

LISTEN FOR descriptions that 6 and 4 represent the number of friends at the start and the number who join. The plus sign shows that these numbers are added to find the total number of friends. The equal sign shows that the total is 10 friends because $6 + 4 = 10$.

Prompt children to describe how modeling a problem with an equation can be helpful.

Refine Session (Grades K–1)

Tools for Instruction

Tools for Instruction

Solve One-Step Addition and Subtraction Word Problems

Objective: Solve addition and subtraction word problems within 100 using a variety of strategies.

Word problems are challenging for many students. Solving word problems draws upon students’ skills with basic operations. In addition to being able to operate with numbers, students have to recognize which operations to use for a problem. It is important to work with students on making sense of word problems, as well as reviewing addition and subtraction. This activity focuses on addition and subtraction word problems within 20. Fluency.

Tools for Instruction

Provide a result unknown addition word problem.

Write an addition word problem on the board or an index card, such as: Samir has 6 books. Today he read 4 more. How many books does Samir have now?

Have the student fill in the bar model and number bond to represent the problem.

Have the student write an equation to model the number bond and solve the problem.

If time allows, provide more addition and subtraction word problems and have the student practice solving by using bar models and number bonds.

Check for Understanding

Give the student the following problem: Carl has a box of 12 raisins. He gives 5 raisins to Edward. How many raisins does Carl have left? Show your work. ($12 - 5 = 7$)

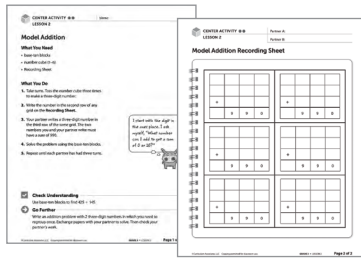
For the student who struggles, use the table below to help pinpoint where extra help may be needed.

If you observe...	the student may...	Then try...
the student struggles to make sense of the problem.	not recognize how the numbers in the problem relate to one another.	having the student fill in a bar model to help make sense of the problem.
the student uses the wrong operation.	not know that a known part can be subtracted from a total to find an unknown part.	working with the student to think about which operation can be used to find an unknown part or an unknown total.
the student models the problem correctly but gets an incorrect answer.	need help with subtraction.	providing subtraction practice with counters and 10-frames.

Solve One-Step Addition and Subtraction Word Problems | Page 3 of 3

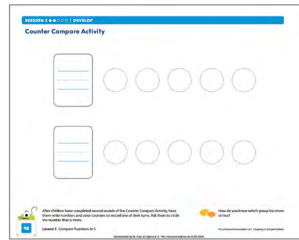
Teacher Toolbox (Grades K–8)

Student-Led Activity Options

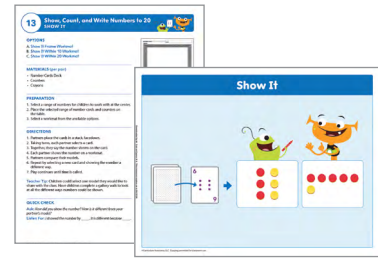


Center (Learning) Activities (Grades K–8)

See list on [pages 66–93](#).



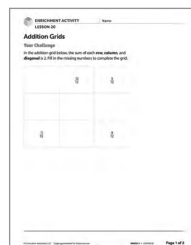
Student Worktext Activities (Grades K–1)



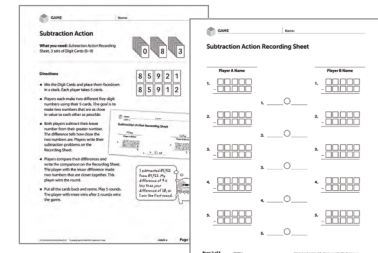
Centers Library (Grades K–1)



Grade Level Games (Grades K–2)



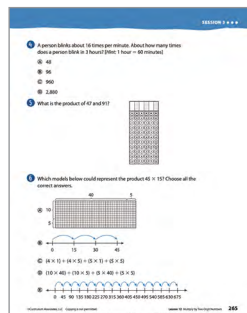
Enrichment Activities (Grades K–8)



Unit Games (Grades K–8)

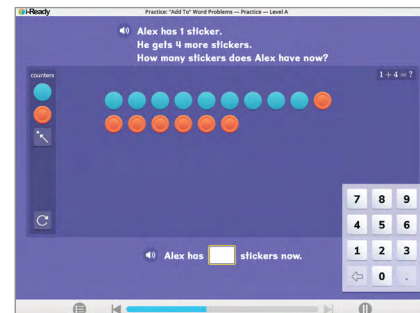
Independent Activity Options

In addition to the resources below, see the practice options on [pages 60–61](#).



Student Worktext Practice (Grades K–8)

Did you know . . . there are two pages of practice in the format of state assessment items in every lesson (Grades 2–8) in the Student Worktext Refine session?



Personalized Instruction (Grades K–8)

These interactive tutorial lessons are automatically assigned to students based on their Diagnostic results, allowing you to customize learning to each students' needs. Reports allow you to see how students are progressing.

Lesson Quizzes, Mid-Unit Assessments, and Unit Assessments

LESSON 2 • QUIZ Name: _____

Solve the problems.

1 Choose $>$ or $<$ to complete a true comparison for each pair of numbers.

3,668	<input type="checkbox"/> 15,667	$>$	$<$
6,196	<input type="checkbox"/> 6,096	$>$	$<$
5,397	<input type="checkbox"/> 5,379	$>$	$<$
67,499	<input type="checkbox"/> 67,500	$>$	$<$

2 Mrs. Mendes wrote the following comparison on the board:
 $705,532 > 706$
 Use the digits 3, 5, 7, or 9 only once each to write a number that makes the comparison true. One of the digits will not be used.
 Write your answer in the blanks.

3 In April, the number of visitors at the museum is sixty-four thousand, seventy-two. In May, the number of visitors is $60,000 + 4,000 + 500 + 20 + 1$. Which comparison of the visitor numbers is correct? Which month has more visitors?
☐ $64,720 > 64,521$; April has more visitors than May.
☐ $64,072 < 64,072$; April and May have the same number of visitors.
☐ $64,072 < 64,521$; May has more visitors than April.
☐ $64,072 > 64,021$; April has more visitors than May.

LESSON 2 • QUIZ Name: _____

4 Which statements correctly compare each pair of numbers? Choose all the correct answers.
☐ $263,203 > 200,000 + 60,000 + 3,000 + 20 + 3$
☐ $263,203 > 263,300$
☐ $263,203 = 263,203$
☐ $263,203 > 263,230$
☐ $263,203 > 263,099$
☐ $263,203 < 263,099$

5 Eastern Elementary School raises \$15,359 for local animal shelters. Western Elementary School raises \$15,530 for the shelters. Use $>$, $<$, or $=$ to write a comparison of the amounts that the two schools raise. Which school raises more money? Show your work.

Printable Assessments (Grades K–8)

- Quizzes appear in the Assess column of the Teacher Toolbox. Unit Assessments are in the End of Unit row in the Assess column.
- Mid-Unit and Unit Assessments are available in Form A and Form B versions.
- Download as a PDF or editable Microsoft Word® document.
- Easily assign resources to Google Classroom™ or upload PDFs to a Learning Management System (LMS).

Comprehension Check Results

Subject: Math
 Grade: 4
 Session: 5
 Assessment: Comprehension Check
 Assessment Language: English
 Date: 12/1/22

Item 2
 The student chose a strategy to solve the problem.

Completed this item to determine how many items you answered in the session.

Item 2
 Mr. Bell needs to solve 32×16 .
 Decide if each expression can be used to find the product.
 Choose Yes or No for each expression.

$(16 \times 20) + (16 \times 3)$	<input type="radio"/> Yes	<input type="radio"/> No
$(32 \times 10) + (32 \times 6)$	<input type="radio"/> Yes	<input type="radio"/> No
$(10 \times 30) + (10 \times 2) + (6 \times 30) + (6 \times 2)$	<input type="radio"/> Yes	<input type="radio"/> No
$(16 \times 3) + (16 \times 2)$	<input type="radio"/> Yes	<input type="radio"/> No

0 of 8 Completed Finish Later Submit

Digital Assessments (Grades K–8)

- Assign premade versions or customize to add or remove questions. Learn how to [assign assessments](#).
- Each is automatically graded and provides individual student and class reports.
- Class reports let teachers know at a glance which questions the class struggled with the most, making it easy to know what to review.
- Individual student reports include an error analysis of each question providing possible insights into why students got a question incorrect.

LESSON 5

Activity-Based Assessment

For an observational, hands-on option, use the **Activity-Based Assessment**. Work with an individual child or small groups of 3 to 5 children. During the activity, children will show a number using counters, find one more, and then compare their group to another group of counters.

Tested Skills Compare two numbers and quantities within 5. Identify the number that is one more than a given number.

1
 1 more is 2

4
 1 more is 5

1 is less than 4

Materials

Math Toolkit

- Counters
- Connecting cubes
- 5-Frames Workmat

Two-color counters (10 per child)

Number and Dot Row Cards (Numbers 1 to 4, 2 sets)

Tested Skills
 Assesses K.CC.B.4c, K.CC.C.6, K.CC.C.7

Activity Instructions

- Place the deck of cards facedown in front of the group. Have items from the Math Toolkit available.
- Have a child turn over the top card and show that number using counters.
- Ask the child to tell you the number that is one more than their number. DOK 1 | SMP 4

Activity-Based Assessments (Grade K)

- Assess student understanding of lesson content in a small group setting, often using hands-on materials.
- Observe students' strengths and areas of need.
- An Assessment Recording Sheet is provided to document observational notes.

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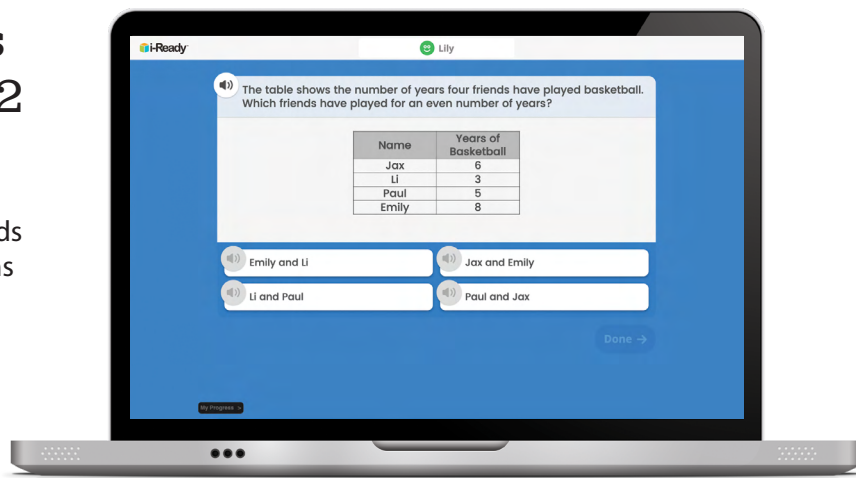
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Accelerate to Grade-Level Learning

The purpose of assessment is to measure student learning and use that information to inform the next instructional steps. Actionable reports provide teachers with guidance on what to teach and how to differentiate instruction to address the needs of all students. For more information, [see page 39](#).

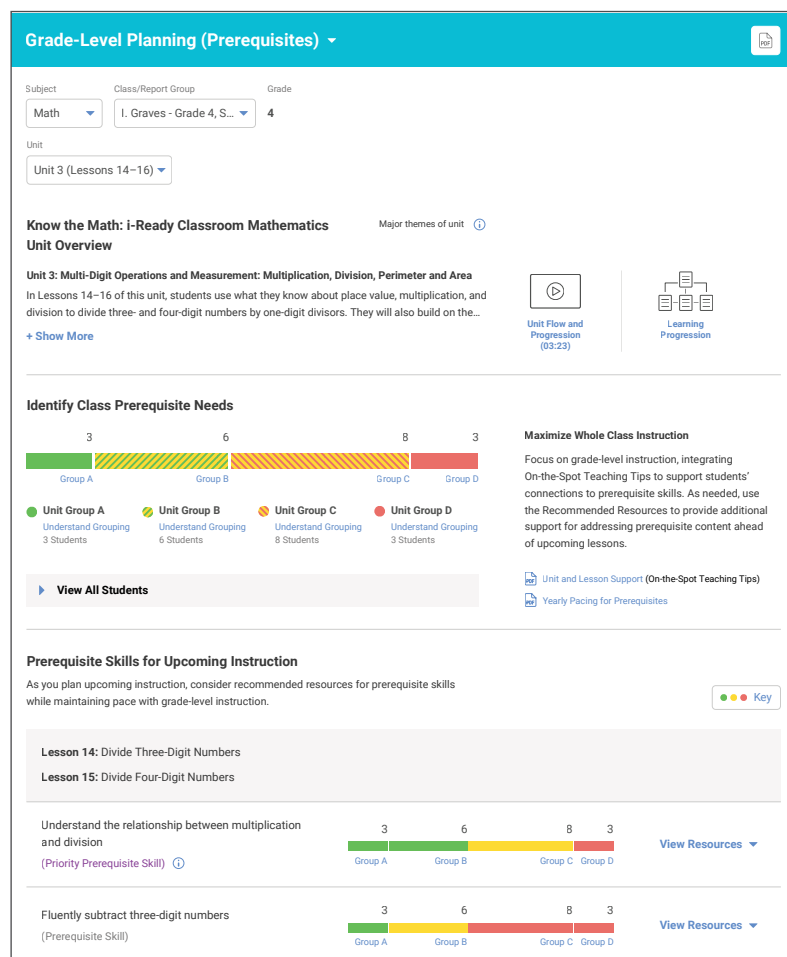
Diagnostic (Prerequisites Screener) for Grades K–12

- An online, adaptive assessment that is given three times a year
- Pinpoints a students' strengths and needs across all Grades K–12 skills and domains
- Provides actionable next steps and recommended resources
- The Diagnostic's validity and reliability have been vetted by third parties.



Grade-Level Planning (Prerequisites) Report

- The Diagnostic automatically generates a Prerequisites report with resources to address various student needs.
- Students are grouped according to their understanding of the prerequisites for an upcoming group of lessons.
- Recommendations for each group provide teacher-led, partner, and individual resources that can be used to address students' unfinished learning or reinforce key prerequisite concepts that will be used in upcoming lessons.
- Unit Pacing includes instructional notes to support grade-level instruction with students who may need additional help.
- Yearly Pacing highlights ways to adapt the grade-level sequence when the majority of students need in-depth review of prerequisites.
- **For more information on the Prerequisites reports, see [page 39](#).**



Notes:

Appendix 2:

Activities for Centers

Grade K.....	<u>66</u>
Grade 1.....	<u>71</u>
Grade 2.....	<u>76</u>
Grade 3.....	<u>80</u>
Grade 4.....	<u>84</u>
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Grade 6.....	<u>88</u>
Grade 7.....	<u>90</u>
Grade 8.....	<u>92</u>





Centers Library

The Centers Library provides activities to review key skills and further develop fluency. These centers are simple to teach and learn with visual instructions for students on the front and detailed instructions for teachers on the back.

Once students learn the activity, they can be used by student pairs independently with different content throughout the year.

Show It

13 Show, Count, and Write Numbers to 20
SHOW IT

OPTIONS

- A. Show It Frame Worksheet
- B. Show It Within 10 Worksheet
- C. Show It Within 20 Worksheet

MATERIALS (per pair)

- Number Cards Deck
- Counters
- Cupcake

PREPARATION

1. Select a range of numbers for children to work with at the center.
2. Place the selected range of number cards and counters on the table.
3. Select a worksheet from the available options.

DIRECTIONS

1. Partners place the cards in a stack, face down.
2. Taking turns, each partner selects a card.
3. Together, they say the number shown on the card.
4. Each partner shows the number on a worksheet.
5. Partners compare their models.
6. Repeat by selecting a new card and showing the number a different way.
7. Play continues until time is called.

Teacher Tip: Children could select one model they would like to show with the class. Have children complete a gallery walk to look at all the different ways numbers could be shown.

QUICK CHECK
Ask: How did you show the number? How is it different from your partner's model?
Listen for: My partner showed the number by _____. It is different because _____.

Tile Puzzles

17 Compose and Decompose within 10
TILE PUZZLES

OPTIONS

- A. 10-Frame with Number Partners Worksheet
- B. Count and Draw Number Partners Worksheet
- C. Draw and Write Number Partners Worksheet

MATERIALS (per child)

- 1 inch square tiles
- Puzzle worksheets (available on Teacher Toolbelt)
- Worksheet

PREPARATION

1. Select the number range of puzzle worksheets to work with at this center.
2. Gather tiles of two different colors.
3. Select a worksheet from the available options.

DIRECTIONS

1. Each partner has a copy of the same tile puzzle worksheet.
2. Partners use tiles to fill their puzzle with no overlap or gaps.
3. Each partner counts the number of tiles used to fill the puzzle.
4. Partners compare and describe their filled puzzle (e.g., I used 4 red and 2 yellow tiles to make 10. I used 5 yellow tiles and 1 red tile to make 10).
5. Partners color and write the number partners on a worksheet to show the tiles they used to fill the puzzle.
6. Partners remove the tiles, select a new puzzle, and repeat.
7. Play continues until time is called.

Teacher Tip: Children could be challenged to show all possible number partners for a given puzzle.

QUICK CHECK
Ask: How does your puzzle show number partners for ____?
Listen for: My puzzle shows ____ because ____.

Choose from These Flexible Centers to Support Each Domain

Centers Library	Counting & Cardinality	Operations & Algebraic Thinking	Numbers & Operations in Base Ten	Measurement & Data	Geometry
Memory		◆			◆
Board Game	◆				◆
Go Fish	◆				
Sort It Out				◆	◆
Shake and Spill	◆	◆			
Build to Compare	◆			◆	
Tile Puzzles	◆	◆			
Counting Collections	◆	◆	◆		
Let's Move	◆				
Estimate and Count	◆				
Writing Center	◆				
Show It	◆				
Roll and Cover		◆			
Dominoes		◆			
Dare to Compare	◆				

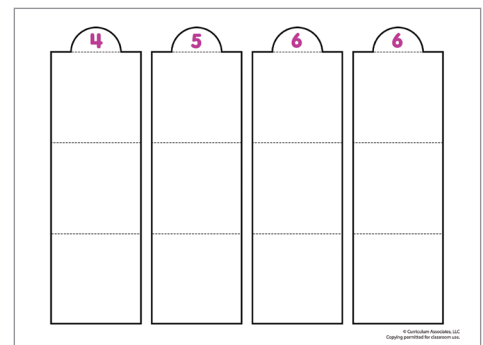
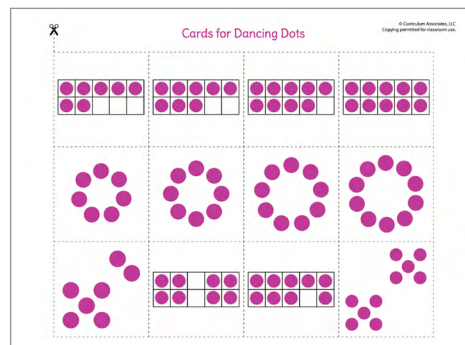
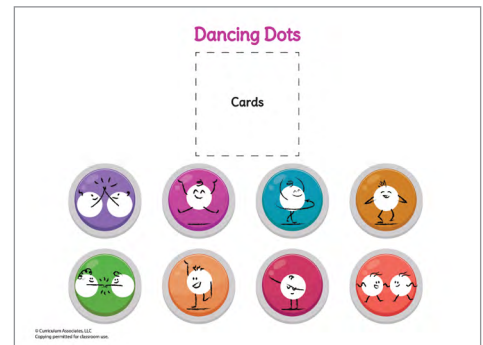
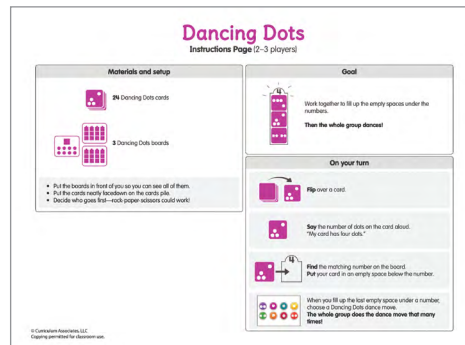


Grade Level Games

Students can play Grade Level Games throughout the school year to develop and reinforce key grade-level concepts. The games are available in English and in Spanish for math topics in Grades K–2. They can be found under the Program Implementation tab (at the top left) on the Teacher Toolbox. The student versions of the games for Grade K are shown below.

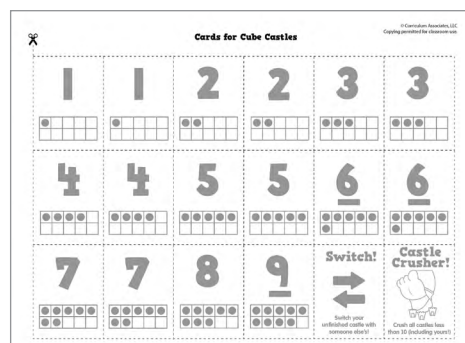
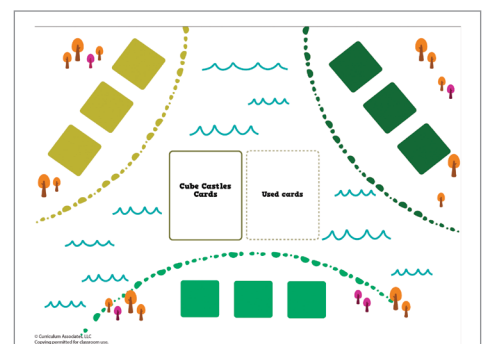
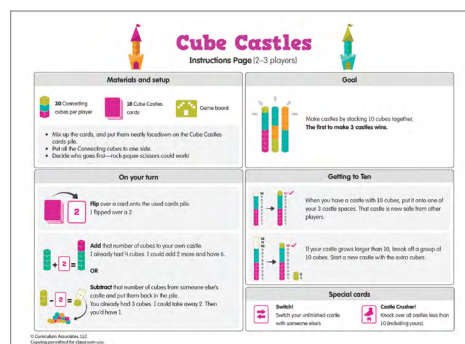
Dancing Dots

Students reinforce counting up to 10 objects in diverse arrangements. When they fill a column on the gameboard, they pick a dancing dot move for the class to do.



Cube Castles

Students build fluency with addition and subtraction using a variety of strategies and strengthen their strategic thinking. Students make cube castles with exactly 10 connecting cubes by deciding whether they want to add or subtract the number of connecting cubes on the card they draw.



Teddy Bears’ Picnic

Students reinforce reading numbers and counting forward from any number within 20, 40, or 120. Six bear counters are placed on one of three number boards. Students work together to get the bear counters off the number board to the Teddy Bears’ picnic. To do that, they determine what number the bear is covering and say it aloud.

TEDDY BEARS' PICNIC

Instructions Page (2 players)

Materials and setup

Picnic game board

Number chart
1-10, 1-40, or 1-120

Bear counters
4, 10, or 16

- Each player places their bears on the number chart.
- Makes sure each bear covers one number.
- Roll a game die.

Goal

Get all the bears to the picnic by guessing the hidden numbers!

On your turn

Pick:
Put your finger on a bear's head, but don't lift it!

Guess:
Guess the number under the bear by saying it out loud.

Pick:
Check if your partner is correct by lifting the bear and reading the number out loud.

✓ **If the guess was correct,** give the bear to your partner.

✗ **If the guess was wrong,** put the bear back!

Guess:
If you were correct, **put** the bear on the picnic!

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

How Many Fingers?

Students build fluency with addition within 10 or 20 and fluency with subtraction within 5. To do this, students work together to make a specified sum (or difference) by adding (or subtracting) the number of fingers they show at a specified time.

How Many Fingers?

Instructions Page (2 players)

Setup

- Stand back to back with your partner.
- Each player takes 3 steps backwards.

Goal

Make a sum of 5 by adding your fingers to your partner's. Take enough steps forward to meet in the middle and high-five!

Physical/limited space accommodation

Instead of taking steps forward and backward, move a game piece for each player along the game board.

On your turn

Think: Up a number between 0 and 5, and **put** your hand behind your back, holding up that many fingers.

Together with your partner, chant:
"How many fingers?"
On "Together," show your partner your hand.

5 + 1 → If the fingers you and your partner are holding up add up to 5, take a step forward.

7 + 1 → If the fingers you and your partner are holding up add up to 7, take a step back.

Optional game board

PLAYER 1 START

0 1 2 3 4 5

WIN!

PLAYER 2 START

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Learning Activities

In addition to these grade-level activities, Learning Activities are available on the Teacher Toolbox for other grades to support unfinished learning and prerequisite review. Additional Hands-On Activities are available in the Teacher's Guide for each lesson to reinforce and support on-grade level learning.

Lesson	Center 1	Level			Center 2	Level			Center 3	Level			
		Below	On	Above		Below	On	Above		Below	On	Above	
Unit 1													
1	Position Vocabulary	◆	◆	◆									
2	Length Vocabulary	◆	◆	◆	Compare Length	◆	◆	◆					
3	Sort Objects	◆	◆	◆	Look for Categories	◆	◆	◆					
Unit 2													
4	Count and Match	◆	◆	◆	Pick and Color	◆	◆	◆	Count Two Ways	◆	◆	◆	
5	1 More	◆	◆	◆	Compare Vocabulary	◆	◆	◆	0 to 5 Match	◆	◆	◆	
6	Which Weighs More?	◆	◆	◆	Heavier or Lighter?	◆	◆	◆					
Unit 3													
7	Addition Vocabulary	◆	◆	◆									
8	Shape Vocabulary	◆	◆	◆	Match and Draw	◆	◆	◆	Shape Bingo	◆	◆	◆	
9	Subtraction Vocabulary	◆	◆	◆									
10	5 Beans	◆	◆	◆									
Unit 4													
11	Show Numbers	◆	◆	◆	Count to Match	◆	◆	◆	Count and Write	◆	◆	◆	
	Count to 10 Match	◆	◆	◆									
12	Which Group Is Greater?	◆	◆	◆	Count and Compare	◆	◆	◆	Which Is Greater?	◆	◆	◆	
	Compare and Color	◆	◆	◆									
13	Make a Shape	◆	◆	◆	Shape Shift	◆	◆	◆					
14	Make 10	◆	◆	◆	Draw to Make 10	◆	◆	◆					
15	Find the Missing Number	◆	◆	◆									
Unit 5													
16	Pick and Write	◆	◆	◆									
17	Keep Counting	◆	◆	◆									
18	Fish to Make Numbers	◆	◆	◆	Count and Circle	◆	◆	◆					
19	Show the Number	◆	◆	◆	Show and Write	◆	◆	◆					

Lesson	Center 1	Level			Center 2	Level			Center 3	Level			
		Below	On	Above		Below	On	Above		Below	On	Above	
Unit 6													
20	Tell Addition Stories	◆	◆	◆									
21	Subtract and Match	◆	◆	◆	Subtract and Color	◆	◆	◆					
22	How Many Are Left?	◆	◆	◆	Match and Complete	◆	◆	◆					
Unit 7													
23	Teen Number Vocabulary	◆	◆	◆									
24	Is It Flat or Solid?	◆	◆	◆									
25	Roll and Make Teen Numbers	◆	◆	◆									

The Centers Library provides activities to review key skills and further develop fluency. These centers are simple to teach and learn with visual instructions for students on the front and detailed instructions for teachers on the back.

Once students learn the activity, they can be used by student pairs independently with different content throughout the year.

Shake and Spill

1 Add or Subtract Within 20 SHAKE AND SPILL

OPTIONS

- A. 10-Frame with Number Partners Worksheet
- B. Count and Write Equations Worksheet
- C. Draw and Write Equations Worksheet

MATERIALS (per pair/group)

- Two-color counters
- Cup
- Worksheet

PREPARATION

- Select a number (0 to 20) for children to work with at the center.
- Place the selected number of counters in each cup.
- Select a worksheet from the available options.

DIRECTIONS

- Taking turns, each partner spills the counters onto the table and counts the number of red and the number of yellow counters.
- Partner draws and/or writes the numbers that correspond with each color counter on the worksheet.
- Together, the partners write an addition or subtraction equation that represents the numbers.

Teacher Tip: For Option C, partners could reinforce adding these numbers. Provide partners with a cup of counters, each with three different colors and number combinations. For each round, partners shake and spill counters from one cup onto the table and represent them using three addends in an equation.

QUICK CHECK

Ask: What are some ways to make the number _____?

Listen For: The number _____ and _____ and _____

Show It

12 Show, Count, or Write Numbers to 120 SHOW IT

OPTIONS

- A. Spin, Draw, Write Worksheet
- B. Spin, Make, Write Worksheet
- C. Spin and Write Worksheet

MATERIALS (per pair)

- Base ten blocks
- Spinner
- Counters (optional)
- Worksheet

PREPARATION

- Select a worksheet from the available options.
- Place base ten blocks on the table.

DIRECTIONS

- Partner 1 spins to find the number in the tens place and the number in the ones place.
- Partner 1 draws or makes the number using base ten blocks.
- Partner 1 names the number.
- Partner 2 checks that the number is shown and written correctly.
- Partners switch roles and repeat the steps.
- Play continues until time is called.

Teacher Tip: For a game alternative, provide partners with counters of two different colors. Each partner places a number on their number on a 120 chart. The partner with the number closest to 120 when time is called, wins the game.

QUICK CHECK

Ask: How are the base ten blocks the same as the number you wrote?

Listen For: The base ten blocks and number both show _____ tens and _____ ones.

Choose from These Flexible Centers to Support Each Domain

Centers Library	Operations & Algebraic Thinking	Numbers & Operations in Base Ten	Measurement & Data	Geometry
Shake and Spill	◆			
Counting Collections		◆	◆	
Show It		◆	◆	
Sort It Out	◆		◆	◆
Go Fish	◆	◆		
Write or Show Numbers		◆		
Tell Me a Story	◆			
Board Game		◆		◆
Race to the Finish Line	◆	◆		
Build to Compare		◆	◆	
Target Number	◆			
Spin It, Make It, Name It		◆		
Memory	◆		◆	
Dare to Compare		◆		
Roll, Solve, and Cover		◆		
Let's Move		◆		
Dominoes	◆			

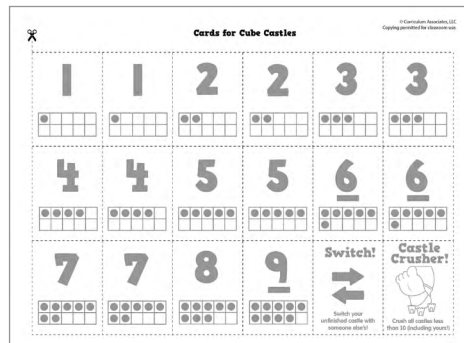
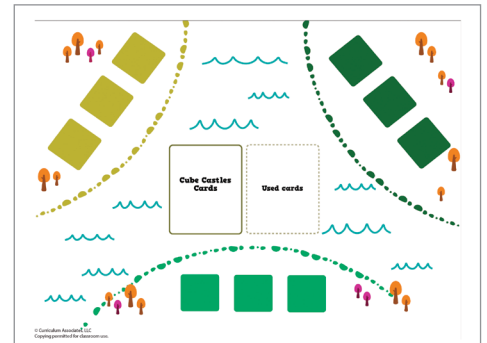
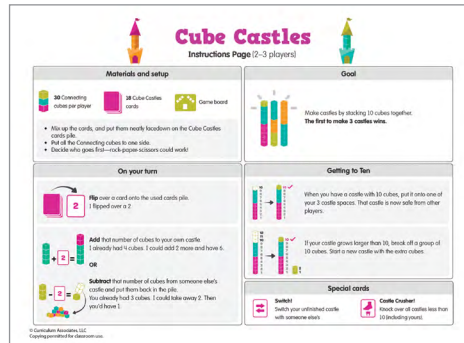
Grade 1

Grade Level Games

Students can play Grade Level Games throughout the school year to develop and reinforce key grade-level concepts. The games are available in English and in Spanish for math topics in Grades K–2. They can be found under the Program Implementation tab (at the top left) on the Teacher Toolbox. The student versions of the games for Grade 1 are shown below.

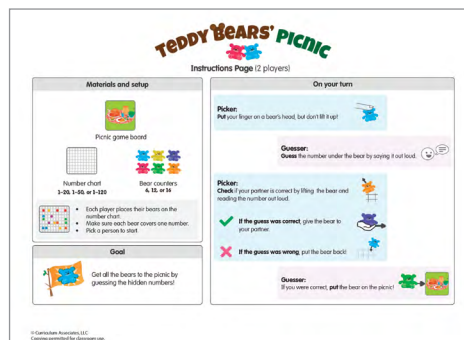
Cube Castles

Students build fluency with addition and subtraction using a variety of strategies and strengthen their strategic thinking. Students make cube castles with exactly 10 connecting cubes by deciding whether they want to add or subtract the number of connecting cubes on the card they draw.



Teddy Bears' Picnic

Students reinforce reading numbers and counting forward from any number within 20, 40, or 120. Six bear counters are placed on one of three number boards. Students work together to get the bear counters off the number board to the Teddy Bears' picnic. To do that, they determine what number the bear is covering and say it aloud.



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

How Many Fingers?

Students build fluency with addition within 10 or 20 and fluency with subtraction within 5. To do this, students work together to make a specified sum (or difference) by adding (or subtracting) the number of fingers they show at a specified time.

How Many Fingers?
Instructions Page (2 players)

Setup

- Stand back to back with your partner.
- Each player takes 5 steps backwards.

Goal

Make a sum of 5 by adding your fingers to your partner's. Take enough steps forward to meet in the middle and high five.

Physical/limited space accommodation

Instead of taking steps forward and backward, move a game piece for each player along the game board.

On your turn

Think of a number between 0 and 5, and **put** out how many fingers you want.

Together with your partner, **chant** "How Many Fingers?" On "Fingers" show your partner your hand.

5 + 1 → If the fingers you and your partner are holding up add up to 5, take a step forward.

7 + 1 → If the fingers you and your partner are holding up add up to 7, take a step back.

How Many Fingers?
Optional game board

PLAYER 1 START

WIN!

PLAYER 2 START

0 1 2 3 4 5

Treasure Islands

Students practice subtracting within 10, addition within 20, and comparing numbers. Students roll two dice and subtract the lesser number from the greater number to determine how many spaces they move on the game board. As they move on the Treasure Islands game board, they collect coins. The person with the most coins at the end of the treasure hunt wins the game.

Treasure Islands
Instructions Page (2-3 players)

Materials and setup

- 2 special number cubes: Cube 1 (10, 10, 10, 10, 9, 8); Cube 2 (8, 5, 5, 5, 5, 1)
- 2-3 game pieces: 1 per player
- 10-15 coins
- Game board

Goal

Collect as many coins as you can before they're all gone. The player with the most coins wins!

On your turn

Roll both number cubes. For example, you roll 8 and 5.

8 - 5 = 3 Find the difference of the numbers you rolled. Use the Thinking sheet if you want. Say the difference out loud. "8 minus 5 equals 3."

Move your game piece forward by the difference. You're on 3 and roll 8 & 4. You move forward 2 spaces, ending your turn at 5.

As you pass 20, continue to 1 and keep counting.

Scoring

- Collect coins each time you land on a space with a coin on it.
- The game ends when all the coins are gone from the treasure chest.

Treasure Islands

20 You found 2 coins!

19 You found 1 coin!

18 You found 1 coin!

17 You found 1 coin!

16 You found 1 coin!

15 You found 1 coin!

14 You found 1 coin!

13 You found 2 coins!

12

11

10 You found 2 coins!

9

8

7 You found 1 coin!

6

5 You found 1 coin!

4

3

2

1

Treasure Islands
Thinking Sheet

Greater number - Lesser number = Difference

1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	----

Learning Activities

In addition to these grade-level activities, Learning Activities are available on the Teacher Toolbox for other grades to support unfinished learning and prerequisite review. Additional Hands-On Activities are available in the Teacher's Guide for each lesson to reinforce and support on-grade level learning.

Lesson	Center 1	Level			Center 2	Level			Center 3	Level		
		Below	On	Above		Below	On	Above		Below	On	Above
Unit 1												
1	Match to Make 10	◆	◆	◆								
2	Partners for 6 and 7	◆	◆	◆	Number Bonds for 8 and 9	◆	◆	◆	Cube Trains for 8 and 9	◆	◆	◆
3	Counting On Cube Trains	◆	◆	◆	Addition to 7	◆	◆	◆				
4	Complete the Number Bonds	◆	◆	◆	Missing Number Trains	◆	◆	◆	Number Bond Equations	◆	◆	◆
	Count On to Subtract	◆	◆	◆								
5	Solve Addition and Subtraction Problems	◆	◆	◆	Counting On Match	◆	◆	◆				
Unit 2												
6	Make Teen Numbers	◆	◆	◆	Teen Number Match	◆	◆	◆				
7	Strategies to Add Three Numbers	◆	◆	◆	Three Addends	◆	◆	◆				
8	Make a Ten to Add Numbers Within 20	◆	◆	◆								
9	Use Ten	◆	◆	◆	Partners for Teen Numbers	◆	◆	◆				
10	Use Doubles and Near Doubles Facts	◆	◆	◆								
Unit 3												
11	I Went Shopping	◆	◆	◆								
12	Subtract to Compare	◆	◆	◆								
13	Make a Tally Chart	◆	◆	◆	Picture Graph Questions	◆	◆	◆				
14	Use Vocabulary for Equal	◆	◆	◆	True Equations	◆	◆	◆	Find the Missing Number	◆	◆	◆


Lesson	Center 1	Level			Center 2	Level			Center 3	Level		
		Below	On	Above		Below	On	Above		Below	On	Above
Unit 4												
15	Groups of Ten	◆	◆	◆	Using Tens and Ones	◆	◆	◆	Tens and Ones Match	◆	◆	◆
16	Counting Vocabulary	◆	◆	◆	More and Less	◆	◆	◆				
17	Comparison Vocabulary	◆	◆	◆	Roll and Compare Numbers	◆	◆	◆				
Unit 5												
18	Use Vocabulary for 10 More, 10 Less	◆	◆	◆	10 More, 10 Less	◆	◆	◆	Add and Subtract 10s Match	◆	◆	◆
	Subtract 10s Bingo	◆	◆	◆								
19	Add 10s to a Number	◆	◆	◆								
20	Race to ...	◆	◆	◆								
21	Add and Regroup	◆	◆	◆								
Unit 6												
22	Draw Two Shapes	◆	◆	◆	Shape Attributes	◆	◆	◆	Shape Match	◆	◆	◆
	Put Shapes Together	◆	◆	◆								
23	Parts of Shapes Match	◆	◆	◆	Draw to Show Parts	◆	◆	◆				
24	Vocabulary for Time	◆	◆	◆	Telling Time Match	◆	◆	◆				
25	Use Vocabulary for Length	◆	◆	◆	Shorter and Longer Objects	◆	◆	◆				
26	Measure Length with Objects	◆	◆	◆	Measure the Path	◆	◆	◆				
27	Money Match	◆	◆	◆	Coin Combination Match	◆	◆	◆				

Grade
2

Students can play Grade Level Games throughout the school year to develop and reinforce key grade-level concepts. The games are available in English and in Spanish for math topics in Grades K–2. They can be found under the Program Implementation tab (at the top left) on the Teacher Toolbox. The student versions of the games for Grade 2 are shown below.


Place Race

Students build fluency with place value with three-digit numbers and comparing three-digit numbers. Students draw number cards and decide if they will put that number in the hundreds, tens, or ones place. The goal is to create a three-digit number greater than the other player. Students move up the race track for each round they win. The first player to the finish line wins.




Place Race


Instructions Page 12 (players)




Materials and setup




Place Race cards



Dry erase marker




Place value board




Rolling game board
in plastic baggie or piece of tissue

On your turn




Ready?

Ask if your partner is ready.




Say Flip! Flip over the top card of your pile of the same time as the other player.

The player with the greatest number goes first.




Place the card on your side, on any place value spot.



Six Tens

Say the number of the card and the place value.

Goal



978 > 210

Write number comparisons to be the first to reach the finish line!

The image shows a 'Place value board' for a game called 'Place Race'. It features two identical boards, one for Player 1 and one for Player 2. Each board has three boxes labeled 'Hundreds', 'Tens', and 'Ones' from left to right. A dashed line runs vertically between the two boards. Below the boards, there are two boxes labeled 'Place Race' for 'Player 1 cards' and 'Player 2 cards'.

Start Player 1

>

Finish

Start Player 2

>

Finish

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Toy Shop

















Students build fluency with recognizing and adding coins. Students collect coins and add them up to buy “toys” on the game cards. Students need at least 16¢ to buy a toy. The first student who can purchase three toys wins.

TOY SHOP

Instructions Page 12 (pages)

Materials and setup	On your turn
<p style="text-align: center;">Materials and setup</p> <p>2 coins, 1 robot, 10 cards</p> <p style="text-align: center;">Toy shop game board</p> <p style="text-align: center;">Draw marker</p>	<p style="text-align: center;">On your turn</p> <p>Choose a coin from the cash register to flip.</p> <p>If it's heads, give it to the heads player.</p> <p>If it's tails, give it to the tails player.</p> <p>If you choose to keep a coin,</p> <p>Pay for the toy by giving your money to the cash register. Make change if you need it.</p> <p>Take the toy from the toy shop, and put it on your shelf.</p> <p>Flip over a new toy from the cards pile to replace the toy you just took.</p>
<p style="text-align: center;">Goals</p> <p style="text-align: center;">Be the first to buy 7 toys from the toy shop!</p>	

 Dimes 10 ¢	 Nickels 5 ¢	 Pennies 1 ¢

 15p	 10p	 37p	 18p
 18p	 19p	 17p	 20p
 20p	 20.2p	 31p	 30.2p
 22p	 30.2p	 24p	 10.2p

Equal Heights

Students work together to build connecting cube towers that are the same height. They use repeated addition and arrays as they work together to create a “community” of equal-height “buildings.” Students write equations and draw arrays to record their thinking.

Equal Heights

Instructions Page (2 players)

Materials

- 85 Connecting cubes
- Dry erase marker
- Building zones game board
- Recording sheet in a plastic baggie w/ marker

On your turn

- Roll the number cube
- Connect the cubes together to match that number's picture on the chart
- Place the cubes on a building zone. (You can put two towers anywhere but you can't break any single tower apart.)
- If the building zone is filled with towers that are equal height, record the equation on the recording sheet.

Goal

Work together to build and record five zones of equal height towers!

Towers taller than 5

If any towers in a building zone are taller than 5, knock down that building zone and start building again.

Equal Heights

Recording sheet

2 + 2 + 2 = 6

Equal Heights

Building Zones

1 : 2 : 3 : 4 : 5 : 6 :

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Center Activities

In addition to these grade-level activities, Center Activities are available on the Teacher Toolbox for other grades to support unfinished learning and prerequisite review. Additional Hands-On Activities are available in the Teacher's Guide for each lesson to reinforce and support on-grade level learning.

Lesson	Center 1	Level			Center 2	Level			Center 3	Level		
		Below	On	Above		Below	On	Above		Below	On	Above
Unit 1												
1	Make a Ten	x	x	x								
2	Use Mental Math to Subtract	x	x	x								
3	Word Problem Equation Match	x	x	x								
4	Use Data Vocabulary	x	x	x	Draw and Use a Bar Graph	x	x	x				
5	Solve Word Problems	x	x	x								
Unit 2												
6	100 or Not!	x	x	x								
7	Add and Subtract within 100	x	x	x	Solve a Subtraction Equation	x	x	x				
8	First to 5	x	x	x	First to 10	x	x	x				
9	Word Problem Race	x	x	x								
10	Find the Value of Coins and Bills	x	x	x	Make Change	x	x	x				
11	Tell Time Vocabulary	x	x	x	Tell Time from Analog and Digital Clocks	x	x	x				
Unit 3												
12	Three-Digit Number Vocabulary	x	x	x	Understand Three-Digit Numbers	x	x	x	Skip Count by 10s and 100s	x	x	x
13	Three-Digit Number Vocabulary Match	x	x	x	Ways to Write a Number	x	x	x				
14	Compare Three-Digit Number Vocabulary	x	x	x	Compare Three-Digit Numbers	x	x	x				
15	3 in a Row	x	x	x								
16	Add Three-Digit Numbers	x	x	x	Add 10 or 100 to a Three-Digit Number	x	x	x	Use Addition Strategies to Solve	x	x	x
17	Subtract Three-Digit Numbers	x	x	x	Subtract 10 or 100 from a Number	x	x	x	Use Subtraction Strategies to Solve	x	x	x
18	3-Digit Slam	x	x	x								

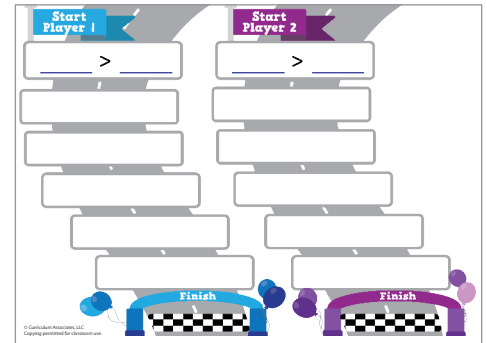
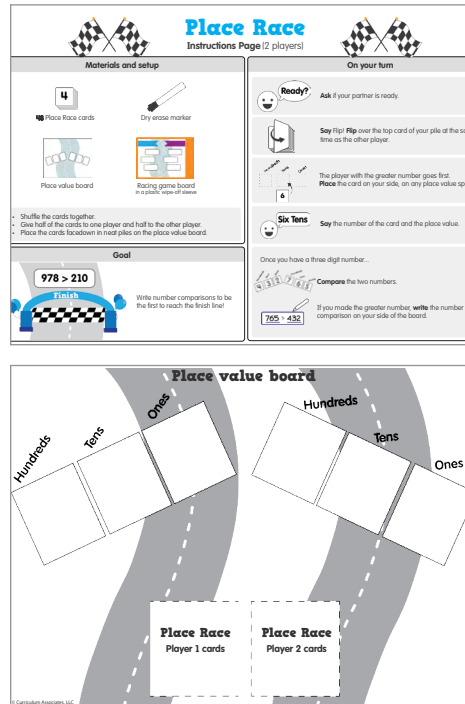
Lesson	Center 1	Level			Center 2	Level			Center 3	Level		
		Below	On	Above		Below	On	Above		Below	On	Above
Unit 3, Cont'd.												
19	Use Place Value to Add Two-Digit Numbers	x	x	x	Use Properties to Add Two-Digit Numbers	x	x	x				
Unit 4												
20	Measure in Centimeters	x	x	x								
21	Measure Lengths of Objects	x	x	x								
22	Measure with Different Units	x	x	x	Compare Units	x	x	x				
23	Estimate Lengths	x	x	x	Estimated and Actual Lengths	x	x	x				
24	Compare Centimeter Lengths	x	x	x	Compare Lengths	x	x	x				
25	Solve Measurement Word Problems	x	x	x	Measurement Word Problem Equation Match	x	x	x				
26	Whole Numbers as Lengths	x	x	x	Diagram Problem Match	x	x	x	Operation Number Line	x	x	x
27	Complete a Line Plot	x	x	x	Measure Objects and Make a Line Plot	x	x	x				
Unit 5												
28	Geometry Vocabulary Match	x	x	x	Attributes of Shapes	x	x	x				
29	Equal Shares Vocabulary	x	x	x	Draw Equal Shares	x	x	x				
30	Tile Rectangles	x	x	x	Fill Rectangles with Squares	x	x	x				
31	Use Array Vocabulary	x	x	x	Use Arrays to Add	x	x	x	Skip-Count by Fives	x	x	x
32	Even or Odd?	x	x	x	Facts for Even and Odd Numbers	x	x	x				

Grade Level Games

Students can play Grade Level Games from Grade 2 to review and reinforce key prior-grade concepts. The games are available in English and in Spanish for math topics in Grades K–2. They can be found under the Program Implementation tab (at the top left) on the Teacher Toolbox. The student versions of the games for Grade 2 are shown below.

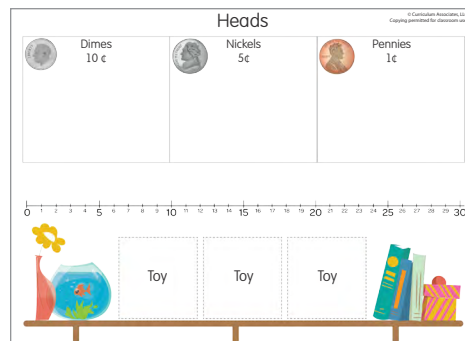
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Toy Shop

Students build fluency with recognizing and adding coins. Students collect coins and add them up to buy “toys” on the game cards. Students need at least 16¢ to buy a toy. The first student who can purchase three toys wins.



Equal Heights

Students work together to build connecting cube towers that are the same height. They use repeated addition and arrays as they work together to create a “community” of equal-height “buildings.” Students write equations and draw arrays to record their thinking.

Equal Heights

Instructions Page (2 players)

Materials

85 Connecting cubes

Dry erase marker

Building zones game board

Recording sheet in a plastic wrap-off sleeve

Goal

Work together to build and record five zones of equal height towers!

On your turn

Roll the number cube.

Connect the cubes together to match that number's picture on the chart.

Place the cubes on a building zone. You can put two towers anywhere but you can't break any single tower apart!

If the building zone is filled with towers that are equal height, record the equation on the recording sheet.

Towers taller than 5

If any towers in a building zone are taller than 5, knock down that building zone and start building again.

Equal Heights

Recording sheet

2 + 2 + 2 = 6

Equal Heights

Building Zones

1 : 2 : 3 : 4 : 5 : 6 :

Center Activities

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Lesson	Center 1	Level			Center 2	Level			Center 3	Level			
		Below	On	Above		Below	On	Above		Below	On	Above	
Unit 1													
1	Rounding Vocabulary Match	x	x	x	Round Numbers	x	x	x					
2	Model Addition	x	x	x	Add within 1000	x	x	x					
3	Model Subtraction	x	x	x	Subtract within 1000	x	x	x					
Unit 2													
4	Multiplication Vocabulary Match	x	x	x	Multiplication Stories	x	x	x					
5	Multiplication Race 1	x	x	x									
6	Break Apart a Factor	x	x	x	Toss and Multiply	x	x	x					
7	Multiplication Race 2	x	x	x									
8	Multiply Three Numbers	x	x	x									
9	Multiply Multiples of 10	x	x	x	Match the Product	x	x	x					
10	Division Stories	x	x	x	Division Vocabulary Match	x	x	x					
11	Use a Related Fact	x	x	x	Find the Missing Number	x	x	x	Use Multiplication to Solve Division	x	x	x	
12	Place Missing Numbers	x	x	x	Complete a Fact Family	x	x	x					
13	Pattern Vocabulary Match	x	x	x	Identify Patterns	x	x	x					
Unit 3													
14	Square Units	x	x	x	Find Area	x	x	x	Area Game	x	x	x	
15	Area Problems	x	x	x									
16	Decompose to Find Area	x	x	x									

Lesson	Center 1	Level			Center 2	Level			Center 3	Level		
		Below	On	Above		Below	On	Above		Below	On	Above
Unit 3, <i>Cont'd.</i>												
17	Solve Word Problems	X	X	X	Writing Equations	X	X	X				
18	Solve Two-Step Word Problems	X	X	X	Check Reasonableness	X	X	X				
19	Use Data Vocabulary	X	X	X	Make a Bar Graph	X	X	X				
Unit 4												
20	Write the Fraction	X	X	X	Show Fractions	X	X	X				
21	Use Fraction Vocabulary	X	X	X	Identify Fractions on a Number Line	X	X	X				
22	Fraction Match	X	X	X								
23	Building Equivalent Fractions	X	X	X								
24	Fraction Comparison	X	X	X								
25	Comparing Fractions	X	X	X								
26	Measure Objects	X	X	X	Make a Line Plot	X	X	X				
Unit 5												
27	Time Match	X	X	X	Solve Time Word Problems	X	X	X				
28	Word Problem Race	X	X	X								
29	Use Measurement Vocabulary	X	X	X	Solve Measurement Problems	X	X	X				
Unit 6												
30	Geometry Vocabulary Match	X	X	X								
31	Quadrilaterals	X	X	X								
32	Use Perimeter and Area Vocabulary	X	X	X	Work with Perimeter	X	X	X				
33	Equal Areas	X	X	X	Divide Shapes	X	X	X				

Center Activities

In addition to these grade-level activities, Center Activities are available on the Teacher Toolbox for other grades to support unfinished learning and prerequisite review. Additional Hands-On Activities are available in the Teacher's Guide for each lesson to reinforce and support on-grade level learning.

Lesson	Center 1	Level			Center 2	Level			Center 3	Level		
		Below	On	Above		Below	On	Above		Below	On	Above
Unit 1												
1	The Value of a Digit	x	x	x	Expanded Form and Place Value	x	x	x				
2	Use Place Value Vocabulary	x	x	x	Comparing Numbers	x	x	x				
3	Rounding Whole Numbers	x	x	x	Rounding to the Same Number	x	x	x				
4	Add Whole Numbers	x	x	x	Find Sums	x	x	x				
5	Find Differences	x	x	x	Subtract Whole Numbers	x	x	x				
Unit 2												
6	Writing Comparisons from Multiplication Equations	x	x	x	Writing Multiplication Equations	x	x	x				
7	Multiplication Word Problems	x	x	x	Multiplication and Division Word Problems	x	x	x				
8	Use Multiplication Vocabulary	x	x	x	Using Factors and Multiples	x	x	x				
9	Use Pattern Vocabulary	x	x	x	Making Patterns	x	x	x				
10	Modeling Multi-Step Problems	x	x	x	Solving Multi-Step Problems	x	x	x				
Unit 3												
11	Multiplying by One-Digit Numbers	x	x	x								
12	Multiplying by Two-Digit Numbers	x	x	x								
13	Using Tables to Convert Measurements	x	x	x	Measurement Conversions	x	x	x				
14	Dividing by One-Digit Numbers	x	x	x								
15	Division Methods	x	x	x								
16	Use Perimeter and Area Vocabulary	x	x	x	Perimeter and Area Problems	x	x	x				

Lesson	Center 1	Level			Center 2	Level			Center 3	Level			
		Below	On	Above		Below	On	Above		Below	On	Above	
Unit 4													
17	Find Equivalent Fractions	x	x	x	Finding the Missing Number in Equivalent Fractions	x	x	x					
18	Use Fraction Vocabulary	x	x	x	Comparing Fractions	x	x	x					
19	Match It!	x	x	x									
20	Make a Whole	x	x	x	Different Ways to Show Sums	x	x	x					
21	Add and Subtract Mixed Numbers	x	x	x									
22	Line Plots	x	x	x	Using Line Plots	x	x	x					
23	Multiplying with Fractions	x	x	x									
24	Fraction Word Problems	x	x	x									
25	Tenths to Hundredths	x	x	x	Adding Tenths and Hundredths	x	x	x					
26	Modeling Decimals and Fractions	x	x	x	Decimals and Fractions on a Number Line								
27	Comparing Decimals	x	x	x	Greater Than and Less Than	x	x	x					
28	Multi-Step Money Problems	x	x	x									
29	Distance Problems	x	x	x									
Unit 5													
30	Geometry Vocabulary Match	x	x	x	Drawing for Geometry	x	x	x					
31	Angle Vocabulary Match	x	x	x	Angles and Circles	x	x	x	Measuring Angles	x	x	x	
	Drawing Angles	x	x	x									
32	Adding Angles	x	x	x	Unknown Angle Measures	x	x	x					
33	Triangle Vocabulary Match	x	x	x	Classifying Shapes	x	x	x					
34	Recognizing Lines of Symmetry	x	x	x	Drawing Lines of Symmetry	x	x	x					

Center Activities

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Lesson	Center 1	Level			Center 2	Level		
		Below	On	Above		Below	On	Above
Unit 1								
1	Build a Rectangular Prism	x	x	x	Use Volume Vocabulary	x	x	x
2	Same Volume, Different Shape	x	x	x	Find the Prism	x	x	x
3	Use Volume Vocabulary	x	x	x	Volume of Composite Figures	x	x	x
4	Use Multiplication Vocabulary	x	x	x	Equivalent Multiplication Expressions	x	x	x
5	Division with Area Models	x	x	x	Solve Area Problems with Division	x	x	x
Unit 2								
6	10 Times as Much as or One-Tenth Of?	x	x	x	Values of Digits	x	x	x
7	Powers of Ten Vocabulary Match	x	x	x	Patterns of Zeros	x	x	x
8	Decimal Number Forms	x	x	x				
9	Round Decimal Numbers	x	x	x	Use Comparing and Rounding Vocabulary	x	x	x
10	Decimal Addition Match	x	x	x				
11	Decimal Subtraction Match	x	x	x				
12	Fraction Addition: True or False	x	x	x				
13	Fraction Subtraction: True or False	x	x	x				
14	Estimate Fraction Sums and Differences	x	x	x	Use Fraction Vocabulary	x	x	x
Unit 3								
15	Cover Up Multiply	x	x	x				
16	Decimal Multiplication Slam	x	x	x	Represent Decimal Products	x	x	x
17	Cover Up Division	x	x	x				
18	Fractions as Quotients	x	x	x	Relate Situations to Fractional Quotients	x	x	x
19	Fraction Area Models	x	x	x				
20	Tile Dimensions	x	x	x				
21	Multiplication as Scaling	x	x	x	Multiplication as Scaling Vocabulary	x	x	x
22	Write a Word Problem	x	x	x	Real-World Multiplication Situations	x	x	x
23	Quotients—Greater Than 1 or Less Than 1?	x	x	x				
24	Find the Division Expression	x	x	x				

Lesson	Center 1	Level			Center 2	Level		
		Below	On	Above		Below	On	Above
Unit 4								
25	Converting Units Vocabulary Match	x	x	x				
26	Measurement Match	x	x	x				
27	Line Plot Vocabulary Match	x	x	x	Fractions as Data	x	x	x
28	Classify Quadrilaterals	x	x	x	Classify Triangles	x	x	x
29	Organize Polygons on a Venn Diagram	x	x	x	Organize Triangles on a Venn Diagram	x	x	x
Unit 5								
30	Less Than, Equal To, Greater Than	x	x	x	Make It True	x	x	x
	Write a Numerical Expression	x	x	x	Find the Expression	x	x	x
31	Shapes on a Coordinate Plane	x	x	x	Find the Point	x	x	x
32	Moves on a Coordinate Plane	x	x	x	Use Graphs to Answer Questions	x	x	x
33	Use Number Sequence Vocabulary	x	x	x	Plot Points	x	x	x

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Lesson	Center Activity	Level		
		Below	On	Above
Unit 1				
1	Parallelogram Area Puzzle	X	X	X
2	Find the Polygon	X	X	X
3	Match Nets with Shapes and Surface Area	X	X	X
4	Use Vocabulary for Algebraic Expressions	X	X	X
5	Evaluate Expressions with Exponents	X	X	X
6	Find GCF and LCM	X	X	X
Unit 2				
7	Number Tiles: Compute with Decimals	X	X	X
8	Card Fill-Up: Decimal Division	X	X	X
9	Modeling Division: Fractions Divided by Fractions	X	X	X
10	Use Fraction Division Vocabulary	X	X	X
11	Match Volume Cards	X	X	X
Unit 3				
12	Describe Ratios	X	X	X
13	Find Equivalent Ratios	X	X	X
14	Ratio Word Problem Match Up	X	X	X
Unit 4				
15	Rate Comparison Game	X	X	X
16	Use Ratio and Rate Vocabulary	X	X	X
17	Match Percent, Fraction, and Model	X	X	X
18	Percent 4-in-a-Row	X	X	X
Unit 5				
19	Match Expressions	X	X	X
20	Solutions of Equations	X	X	X
21	Equation Writing	X	X	X
22	Use Equation Vocabulary	X	X	X

Lesson	Center Activity	Level		
		Below	On	Above
Unit 6				
23	Opposite Challenge	X	X	X
24	Number Sense	X	X	X
25	Absolute Value Puzzler	X	X	X
26	High Point Inequalities	X	X	X
27	Quadrant Quest	X	X	X
28	The Greatest Distance	X	X	X
Unit 7				
29	Match Questions and Distributions	X	X	X
30	Use Vocabulary for Data Distributions	X	X	X
31	Find the Box Plot	X	X	X
32	Find Mean and MAD	X	X	X
33	Use Vocabulary for Summarizing Data Sets	X	X	X



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Lesson	Center Activity	Level		
		Below	On	Above
Unit 1				
1	Match Scale Copies	X	X	X
2	Use Vocabulary for Unit Rates and Fractions	X	X	X
3	Proportion Tic Tac Toe	X	X	X
4	Proportional Relationships Go Fish	X	X	X
5	Recipe Scramble	X	X	X
6	Use Circle Vocabulary	X	X	X
Unit 2				
7	Adding Integers Go Fish	X	X	X
8	Mixing Chemicals: Addition with Negative Numbers	X	X	X
9	Match Two Expressions: Subtracting Integers	X	X	X
10	Ocean Addition and Subtraction	X	X	X
Unit 3				
11	Around the Square: Multiplication with Integers	X	X	X
12	First Five Equations: Multiplication and Division	X	X	X
13	Use Vocabulary When Expressing Fractions as Decimals	X	X	X
14	Rational Expression Go Fish	X	X	X
Unit 4				
15	Match the Expression	X	X	X
16	Situation Match-Up	X	X	X
17	Use Vocabulary for Solving One-Variable Equations	X	X	X
18	Write and Solve Algebraic Equations	X	X	X
19	Inequality Bingo	X	X	X

Lesson	Center Activity	Level		
		Below	On	Above
Unit 5				
20	Use Markdowns	X	X	X
21	Find Percent Change	X	X	X
22	Use Vocabulary or Random Sampling	X	X	X
23	Make Inferences about Samples	X	X	X
24	Compare Samples	X	X	X
Unit 6				
25	Match Prisms with Surface Area	X	X	X
26	Find the Missing Volume Label	X	X	X
27	Plane Section Go Fish	X	X	X
28	Use Angle Vocabulary	X	X	X
29	Sort Shape Descriptions	X	X	X
Unit 7				
30	Probability Card Fill-Up	X	X	X
31	Experimental Probability Cube Roll	X	X	X
32	Spinner Go Fish	X	X	X
33	Compound Event Bingo	X	X	X

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Lesson	Center Activity	Level		
		Below	On	Above
Unit 1				
1	Identify Rigid Transformations	X	X	X
2	Hidden Transformations	X	X	X
3	Identify Sequences of Transformations	X	X	X
Unit 2				
4	Use Transformation Vocabulary	X	X	X
5	Identify Sequences of Transformations with Dilations	X	X	X
6	Identify Pairs of Angles	X	X	X
7	Similarity Search	X	X	X
Unit 3				
8	Find the Slope	X	X	X
9	Use Slope-Intercept Vocabulary	X	X	X
10	Match the Solution	X	X	X
11	Write an Equation	X	X	X
12	Make Systems of Equations	X	X	X
13	Find Four Solutions	X	X	X
14	Match Scenarios and Systems	X	X	X
Unit 4				
15	Use Function Vocabulary	X	X	X
16	Find the Function	X	X	X
17	Compare Functions	X	X	X
18	Graphs and Stories	X	X	X
Unit 5				
19	Equivalent Exponential Expressions	X	X	X
20	Expressions with Integer Exponents	X	X	X
21	Comparing Quantities with Powers of 10	X	X	X
22	Use Scientific Notation Vocabulary	X	X	X

Lesson	Center Activity	Level		
		Below	On	Above
Unit 6				
23	Four Square Roots and Cube Roots in a Row	X	X	X
24	Convert Repeating Decimals	X	X	X
25	Irrational Go Between	X	X	X
26	Use Pythagorean Theorem Vocabulary	X	X	X
27	Find Pythagorean Triples	X	X	X
28	Use Volume Vocabulary for Cylinders, Cones, and Spheres	X	X	X
Unit 7				
29	Use Vocabulary for Scatter Plots	X	X	X
30	Scatter Plot Predictions	X	X	X
31	Complete Two-Way Tables	X	X	X
32	Match Relative Frequency	X	X	X

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