

Curriculum Associates Commitment to Supporting Culturally Responsive Teaching

How the Ready Classroom Mathematics K-8 Curriculum directly supports ISBE's guiding principles for the new Illinois Culturally Responsive Teaching and Leading Standards.

<https://www.isbe.net/Lists/News/NewsDisplay.aspx?ID=1349>

1. Self-reflect and gain a deeper understanding of how their life experiences affect their perspectives.

Curriculum Associates fundamentally believes that all students deserve access to high-quality, equitable educational resources. As such, we strive to ensure that all learners, regardless of disability, cultural identity, economic status or circumstance, and linguistic background can:

- Believe in themselves and see themselves as learners
- Access and engage with our instruction and assessment materials
- See their personal and cultural experiences reflected in our content
- Engage with ideas and rigorous standards by meeting individual student needs.

Self Check: At the beginning of every Unit, students evaluate their understanding of key Lesson skills using the Self Check and then revisit the list as they work through the Lessons to monitor their progress.

Self Reflections (Grades 1–8), at the end of every unit, give students a moment to reflect on their understanding of key Lesson concepts from the unit. This allows students to develop self-inventory skills as they assess what they know and can do better at various points in the learning progression of their grade level content.

Show what you learned (Grade K) gives students a moment to reflect on their learning from the unit. This allows students to begin developing self-inventory skills as they review what they have learned.

2. Understand that systems in our society create and reinforce inequities.

Curriculum Associates understands that effective treatment of multicultural issues requires consideration of the age and ability levels of students, and whether or not it is appropriate to include multicultural issues in the study of a particular topic. The characters and overall design used reflect both multicultural fairness and advocacy, but as the students mature, so do the main characters, graphics, and situations.

Ready Classroom Mathematics Lessons and tasks advance student learning with clear purpose written in standards-based, student-friendly language. On the first page of the first session, students are presented with a Learning Target for each Lesson in the *Student Worktext*. Students engage in low-threshold, high-ceiling tasks that are clear and standards-based. *Ready Classroom Mathematics* also provides instruction and practice to help students acquire and develop vocabulary.

Math in Action Lessons (performance tasks) offer students a low-threshold, high-ceiling opportunity to interact with rich multi-step problems and exemplary responses, then apply critical thinking to solve the task another way. These complex problems integrate multiple standards from the Unit and include open-ended, real-world problems that help students refine their ability to answer more robust performance tasks that combines numerous standards in a robust problem-solving task that focuses on cultural and STEM related topics.

3. Learn from and about their students' cultures, languages, and learning styles to make instruction more meaningful and relevant to their students' lives.

Before every session of each Lesson, **Connect to Language** support and scaffolds are provided in a chart format. These Language Development charts provide content-specific guidance for the different language proficiency levels, so teachers can address language needs throughout the Lesson and provide strategic scaffolds for different language domains. These charts appear on the *Teacher's Guide* page immediately preceding the applicable session, with a yellow arrow noting specific parts of the session where the scaffolds will be used. These Language Development charts provide content-specific guidance for the different WIDA language proficiency levels.

Connect to Language

▶ For English language learners, use the Differentiation chart to scaffold the language in each session. Use the Academic Vocabulary routine for academic terms before Session 1.

DIFFERENTIATION | ENGLISH LANGUAGE LEARNERS

Use with Session 1 Model It

MATH TERMS	Levels 1–3: Speaking/Writing	Levels 2–4: Speaking/Writing	Levels 3–5: Speaking/Writing
<p>The <i>difference</i> is the result of subtraction.</p> <p>The <i>sum</i> is the result of addition.</p> <p>An <i>addend</i> is a number being added. In an equation, addends can include variables.</p> <p>A <i>value</i> is a number represented by a variable.</p>	<p>Help students interpret Model It problem 5. Introduce a word bank with the Math Terms. Review definitions and have partners use the terms to tell how the equations are the same and different.</p> <p>Review that <i>reasoning</i> means the process of thinking about something in order to form a conclusion. Provide think time for students to reason about the value of y in each equation. Guide students to use the word bank to help them complete the sentence frames:</p> <ul style="list-style-type: none"> • For each equation, I think about _____ first. • Then I think about _____. 	<p>Have students read Model It problem 5 and prepare to answer. Review <i>reasoning</i> and note that it can be a noun or an -ing verb. Then provide think time for students to compare the equations and to reason about the values of y. Have partners turn and talk about their reasoning. Use a Co-Constructed Word Bank to help students list terms they can use to write, like the Math Terms.</p> <p>Have partners write responses using:</p> <ul style="list-style-type: none"> • Reasoning about _____ is the same in both equations because _____. • Reasoning about _____ is different because _____. 	<p>Have students read Model It problem 5 and prepare to describe their reasoning. Provide students with individual think time to compare the equations and reason about the values of y. Ask partners to turn and talk about their reasoning. Next, have students use Co-Constructed Word Bank to list terms they can use in their written responses, like <i>difference</i> and <i>sum</i>. Encourage partners to discuss words from the questions that can help them describe their reasoning. Then have students write their responses individually, referring to the word bank as needed.</p>

Resources to **Connect to Community and Cultural Responsiveness** are provided at the beginning of each Lesson in the *Teacher's Guide*. These activities connect with and leverage the diverse backgrounds and experiences of all students.

Connect to Community and Cultural Responsiveness

Use these activities to connect with and leverage the diverse backgrounds and experiences of all students.

<p>Session 1 Use with Connect It problem 2.</p> <ul style="list-style-type: none"> • Change the context of the problem to reflect the cultural backgrounds and diets of your students. Ask students to share food items that they are familiar with that can be purchased in packs or boxes, for example, different types of rice, falafel, samosas, and tamales. Guide students to come to a consensus as to what the packages in the problem will represent. <p>Session 2 Use with Try It.</p> <ul style="list-style-type: none"> • Ask students if they enjoy visiting the school's library and why. Remind students that school libraries are sometimes called media centers because items other than books are also available. Ask students if they have been to the public library. Ask students to share what items can be checked out from a library other than books. Students may share items such as DVDs, CDs, and magazines. Add that different libraries around the United States have unusual items that can be borrowed. Metal detectors, telescopes, microscopes, and musical instruments are among the unusual items that can be checked out from some libraries. Ask students to share something they wish they could check out from the library. 	<p>Session 3 Use with Try It.</p> <ul style="list-style-type: none"> • Ask students to share any jewelry that they own or are currently wearing. Explain that jewelry is a way for people to express themselves and is a way of decorating oneself like the gloves are decorated in the problem. Explain that many different cultures like to decorate their clothing to reflect colors and designs they feel are special. Have students look at their own clothing for decorative designs. Explain that different cultures may use embroidery, beads, shells, or ribbon, in addition to jewels like rhinestones, to decorate their clothing. <p>Session 4 Use with Try It.</p> <ul style="list-style-type: none"> • Discuss with students fruits or vegetables that they have seen that can be purchased in multiples. Record students' suggestions. After brainstorming, review each suggestion for the presence or absence of equal groups. For instance, if grapes are suggested, discuss whether each bunch has the same number of grapes. Ask students to share why the number of bananas in the problem can be found using multiplication.
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Real World Connections in the *Teacher's Guide* provide educators with discussion ideas to show connections between the mathematics the students are learning and the real world.

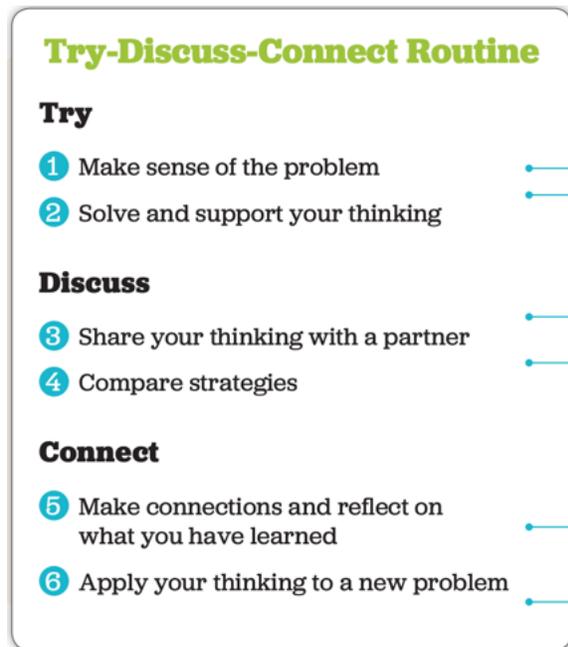
Curriculum Associates understands that effective treatment of multicultural issues requires consideration of the age and ability levels of students, and whether or not it is appropriate to include multicultural issues in the study of a particular topic. The characters and overall design used reflect both multicultural fairness and advocacy, but as the students mature, so do the main characters, graphics, and situations.

4. Value students' feedback and leadership.

The *Ready Classroom Mathematics* instructional approach builds on some hallmarks of students' developmental stages. Collaborative learning activities offers students ways to meet their increasingly important interest in interactions with peers. Regular opportunities for reflection and self-assessment helps them monitor—and celebrate—their learning independently. Partner, small group, and whole-class discussion in every Lesson gives students regular opportunities to take leadership, share and defend their reasoning.

Within Lessons, each Explore and Develop session utilizes the **Try–Discuss–Connect** instructional routine.

- During **Try It**, students spend time making sense of the problem presented, thinking about what they need to find, what information is important and discussing strategies with a partner and with the class.
- During **Discuss It**, Students develop greater understanding of mathematical representations and solution strategies using partner talk and whole class discourse.
- In **Connect It**, students answer questions to deepen understanding and make further connections between models and representations.
- Students then apply what they have learned in the **Apply It** portion of each Lesson session. Teachers encourage students to solve the problems in more than one way to build flexibility in their thinking.



5. Support and create opportunities for student advocacy.

Pair/Share prompts in the Refine sessions provide additional opportunities for teachers to listen to and monitor student discussions of their problem solutions. These prompts focus on the Lesson standards and give teachers a moment to observe student understanding.

CONSIDER THIS . . .

You can multiply both sides by a power of 10 to eliminate the decimals.

PAIR/SHARE

What is another way you could solve this problem?

Math Center Activities are collaborative games and activities for small groups available in three versions that are adapted to address students' level of mastery of the topic (on-level, below-level and above-level) making the mathematics accessible for all students.

Adaptive **Learning Games**, which are provided on the Student Dashboard, merge gameplay and learning to provide engaging digital fluency practice across a wide range of content. The format and adaptive nature of the games provide novel ways for students to visualize different procedures and concepts. Students receive subtle and direct feedback that encourages multiple attempts. The more support students need, the more detailed the feedback. These games generate reports to support teachers in understanding students' progress towards specific skills and factors of learning such as confidence and growth mindset. There are currently eight games, and each has numerous levels that support students at multiple grade levels and ability levels. Students can choose which **Learning Games** to play and when to advance their learning and self-manage their engagement. They can also choose the context of games (e.g., focus on addition vs. subtraction skills) and the level of challenge (e.g., single vs. two digit number, and whether the game is timed).

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6. Develop relationships with families and the community.

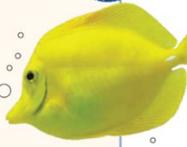
Family Letters and **Activities** in the *Student Worktext* are available for every Lesson. These letters provide support to parents and caregivers about the mathematics program as well as the standards, strategies and methods students will be learning in that Lesson. Family Letters will be in the following languages (digitally) for the 2021-2022 school year: English, Spanish, Tagalog, Russian, Arabic, Mandarin, Korean, Vietnamese. These letters include an activity that caregivers can do with students to further support learning. These short activities use resources easily accessible in most households. Letters are also provided digitally in the Family Center found online on the Student Dashboard.

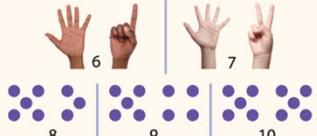
Count and Write to 10

Dear Family,
This week your child is building counting skills with numbers up to 10.

The lesson includes practice with counting up to 10 objects. Strategies for keeping track of what has been counted remain important, especially when counting these larger groups. For example, touching or pointing to each object or marking each object in a picture as it is counted are ways to ensure that no items have been missed.

Building on earlier lessons, your child will explore how numbers 6, 7, 8, 9, and 10 relate to other numbers. For example, the pictures below show how the numbers 6 through 10 visually relate to 5 using fingers or counters. Understanding these numbers as 5 and some more prepares your child for addition concepts and for thinking about these numbers as sums of other numbers.

Invite your child to share what he or she knows about counting to 10 by doing the following activity together.

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LESSON
6

Dear Family,

This week your student is learning about circumference and area of circles.

Circumference is the distance around a circle, or its perimeter. Area is the amount of space inside a circle.

The **radius, r**, is the distance from the **center** of a circle to any point on the circle. The **diameter, d**, is the distance from one side of the circle to the other, passing through the center of the circle.

A special relationship exists between the circumference of a circle and its diameter. No matter the size of the circle, the quotient of $\frac{\text{circumference}}{\text{diameter}}$ is constant. This quotient is called pi, and the symbol for pi is π . π represents a decimal that goes on forever without repeating. You can approximate π with a decimal or a fraction.

$\pi \approx 3.14$, or $\frac{22}{7}$

The formulas for the circumference and area of a circle involve π .

Circumference: $C = \pi d$ Area: $A = \pi r^2$

Your student will be solving circumference and area problems like the one below.

A circular traffic sign has diameter 36 inches. How can you measure the traffic sign?

▶ ONE WAY to measure the traffic sign is to find its circumference.

$$C = \pi d$$

$$= \pi(36)$$

The circumference is 36π in.

▶ ANOTHER WAY to measure the traffic sign is to find its area.

The diameter is 36 in. So, the radius is 18 in.

$$A = \pi r^2$$

$$= \pi \left(\frac{36}{2}\right)^2$$

$$= \pi(18)^2$$

The area is 324π in.².

Use the next page to start a conversation about circumference and area of circles.

In *Ready Classroom Mathematics* the **Community & Cultural Responsiveness** feature extends the understanding and appreciation of multiple cultures beyond fair representation as it truly embraces multicultural context with information about ways to honor differences, ways to promote a positive self-image, and ways to develop healthy attitudes/values.

Connect to Community and Cultural Responsiveness

Use these activities to connect with and leverage the diverse backgrounds and experiences of all students.

Session 1 Use with Try It.

- Depending on their background, some students may have little or no experience mailing a letter with a stamp. Technology has made it possible to reduce outgoing mail use. Encourage students to share their experiences with mailing or receiving a letter, postcard, or e-mail. On the board, make a 3-column chart with the headings *letter, postcard, and e-mail*. As students respond, mark with an X under the appropriate column. Once all students have responded, ask for volunteers to group the Xs under each category by **making a ten**. Then **count on** to find the difference between the group with the least number of Xs and the group with the greatest number of Xs. Explain that subtraction can be used to find the difference between two numbers.

Session 2 Use with Try It.

- Ask students to think of a time they participated in a party. Ask them to describe the memory: *What did you see? What did you hear? What did you smell? What was being celebrated at the party?* Explain that sometimes children who attend parties receive treats. Ask students to share their own experiences with parties or other cultural celebrations.

Session 3 Use with Connect It.

- In this session, students will expand their understanding of the relationship between adding and subtracting, as shown by fact families. Use an example from a children's book to show the relationship between family members. Explain that numbers in fact families are also related.

Example 2 parents have 3 children, so the family has 5 members. Each child in the family has 2 siblings and 2 parents.

Session 4 Use anytime during the session.

- As students learn various mental math strategies for subtracting, they are able to make connections to problems they encounter in the real world. In pairs, have students think of a problem they may encounter outside of school that requires subtracting with a mental math strategy. Have students identify the problem, the mental math strategy for subtraction they would use, and why it is the best strategy for solving the problem.

7. Curate the curriculum to include and represent a wide spectrum of identities.

Ready Classroom Mathematics is designed to capture the interests and meet the developmental needs of contemporary students. *Student Worktexts* have been developed so that all students see their experiences and interests reflected in the word problems. The contexts reflect the diversity of geographical and cultural settings in the United States, and the topics match interests of students-- volunteer activities, social media, sports, music and art, and STEM, for example. In the *Teacher's Guide*, Connect to Culture supports teachers in bringing forward students' experiences with problem contexts and provides background information for contexts that may be unfamiliar.

8. Ensure the diversity of the student population is represented within the broader learning environment.

Through a balanced representation of cultures and groups in multiple settings, occupations, careers, and lifestyles, our proposed programs support equal opportunity without regard for age, color, gender, disability, national origin, race, or religion. The portrayal of individuals and situations are free of biases/stereotypes and in many cases promote an understanding/appreciation of the contributions made by diverse cultures and heritage.

LESSON 16 | SESSION 4 ■■■■□

Develop Using Unit Rates to Convert Measurements

► Read and try to solve the problem below.

A band marches in the African American Day Parade in New York City. The band marches 800 meters every 15 minutes. At this rate, how many kilometers does the band march in 1 hour?



LESSON 18 | SESSION 1 ■□□□

Explore Solving Multi-Step Equations

Previously, you learned how to reason about equations to find unknown values. In this lesson, you will learn about solving equations algebraically.

► Use what you know to try to solve the problem below.

Adela, Rachel, and Santo take pictures at a Purim celebration.

- Adela takes 7 more pictures than Rachel.
- Santo takes 4 times as many pictures as Adela.
- Santo takes 48 pictures.

How many pictures does Rachel take?

TRY IT Math Toolkit algebra tiles, grid paper, number lines, sticky notes



Within the Interactive Tutorials, the characters shown below represent some of those that appear in the Interactive Tutorial digital lessons. These characters are used so that gender, race, age, and other discriminating factors are not present. The human characters appear in the tutorials and represent diverse gender, race, and age. These characters also appear on the Math Discourse Cards used.



<p>Make Sense of Problems and Persevere</p> <p>Did anyone get a different answer?</p>	<p>Reason, Explain, and Critique</p> <p>Does your partner's strategy make sense?</p>
<p>Reflect and Connect</p> <p>What is different about your strategy and your partner's?</p>	<p>Sentence Starters</p> <p>One thing I like about my strategy is...</p>