This Resource Guide is designed for teachers, school leaders, and district leaders. It contains essential tools and resources to ensure a successful *Ready Mathematics* implementation.
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Endorsed by Experts and Educators

What experts are saying:

All gateways, all grades, all green! EdReports.org is an independent nonprofit that delivers evidence-based reviews of instructional materials. Ready Mathematics met all of EdReports’ criteria at every grade level with a “green” rating and is their highest-rated K–8 program:

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<th>Focus and Coherence</th>
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What educators are saying:

“The level of discourse has skyrocketed. Students are able to explain their thinking so much better. They can tell me all the ‘Why’s.’” —Teacher, CT

“The math conversations our kids have are amazing! They have so many strategies to solve problems and their number sense is getting stronger.” —School Admin, TN

“It is the best product for teaching mathematics that I know of and I am familiar with many.” —Teacher, OR

“The lessons follow a very well-thought-out progression. They are student-friendly and engaging. Resources are well organized and easy for the teacher to find and use.” —Teacher, MS
**Ready Mathematics Basics**

The *Ready Mathematics* program supports instruction, practice, differentiation, and assessment. All resources were designed to work together seamlessly, helping teachers provide rigorous, targeted instruction for every student.

**Ready Instruction Book**

The **Student Instruction Book** engages students and builds confidence and mastery with:
- Lessons that use a research-based, proven-effective instructional model
- Guided and independent practice

**Ready Practice and Problem Solving Book**

More than a typical “workbook,” the robust **Practice and Problem Solving book** can be assigned for use in class, after school, or at home and enriches student learning with:
- Skill Practice
- Extended Performance Tasks
- Games
- Fluency Practice
- Vocabulary Support
- Family Letters

**Ready Teacher Toolbox**

A virtual filing cabinet of instructional resources organized by standard puts differentiated tools at teachers’ fingertips, so they can easily find what they need to teach, assess, review, or reinforce learning.

Teachers have instant access to:
- All K–8 *Ready Mathematics* lessons
- Lesson quizzes
- Unit assessments
- Hands-on student-led activities
- Teacher-led activities
- Interactive tutorial lessons

**i-Ready**

A proven and powerful online program with assessments that can pinpoint student needs and help monitor progress on grade-level standards, reports that inform teachers’ instructional plans, and online lessons that allow students to work independently on lessons that target their unique needs.
Lesson Design

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

### Understand Lessons

*Understand* lessons correspond to the standards that begin with the word “Understand.” These occur at critical points in the instructional sequence to slow down and help students deepen their conceptual understanding of new ideas.

<table>
<thead>
<tr>
<th>Introduction</th>
<th>Guided Instruction</th>
<th>Guided Practice</th>
<th>Independent Practice</th>
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<tbody>
<tr>
<td>Students connect what they have learned to new ideas through teacher-led whole class conversations.</td>
<td>Students explore new ideas and concepts by answering questions and discussing ideas as a class.</td>
<td>Students deepen conceptual understanding and address common misconceptions in pairs and as a class.</td>
<td>Students work on a multistep task independently to reinforce the concepts of the lesson.</td>
</tr>
</tbody>
</table>

### Skills and Strategy Lessons

Skills and Strategy lessons represent the majority of the lessons in *Ready* and focus on helping students persevere in solving problems, discuss solution strategies, and compare multiple representations to reinforce and connect understanding. They balance conceptual understanding, procedural fluency, and application.

<table>
<thead>
<tr>
<th>Introduction</th>
<th>Modeled &amp; Guided Instruction</th>
<th>Guided Practice</th>
<th>Independent Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students access prior knowledge by completing a prerequisite task individually and discussing it in pairs and with the class before connecting this idea to new ideas.</td>
<td>Students solve a single task individually, discuss in pairs, and make connections as a class using a discourse-based routine like Think–Share–Compare.</td>
<td>Students practice the topics of the lesson by solving problems individually, comparing and discussing strategies in pairs, and possibly discussing as a whole class.</td>
<td>Students complete practice problems with items in the formats of state assessment.</td>
</tr>
</tbody>
</table>

### Math in Action Lessons  (Grades 2–5)

Math in Action lessons teach students how to approach and answer complex multistep problems. Students interact with exemplary responses and then apply that thinking to solve complex problems that integrate multiple standards from the unit.

<table>
<thead>
<tr>
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<th>Guided Practice</th>
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</thead>
<tbody>
<tr>
<td>Students analyze a comprehensive solution to a multistep task and answer questions about the approach.</td>
<td>Students are given a familiar multistep task to solve in a different way with guiding prompts.</td>
<td>Students are given a new multistep task to solve with guiding prompts.</td>
<td>Students are given two new multistep tasks to solve without any support prompts.</td>
</tr>
</tbody>
</table>
Structure of a Skills and Strategy Lesson

Since most lessons are Skills and Strategy lessons, understanding the lesson structure and flow is important. Below, find details about each part of the lesson as well as the typical teacher and student actions.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Activates prior knowledge, connecting what students already know with the new skills and concepts they will be learning in the lesson.</td>
<td>Explores ways to solve problems using multiple representations and prompts students to reason and explain their thinking.</td>
<td>Models self-questioning and mathematical habits of mind as students solve problems and discuss their solution strategies.</td>
<td>Provides problems in a variety of assessment formats that integrate and extend concepts and skills.</td>
</tr>
</tbody>
</table>

**Teacher Actions:**
- Allows student think time
- Supports effective partner communication
- Facilitates whole class discourse of student discussions
- Guides students to connect multiple strategies
- Encourages effort
- Recognizes mistakes as opportunities for learning
- Observes student strategies
- Asks questions to guide or correct understanding
- Differentiates instruction as needed in stations or small groups

**Student Actions:**
- Perseveres in thinking about problems and questions
- Actively listens to partners and whole class conversations
- Participates in small group and whole class conversations, politely critiquing the reasoning of others
- Solves problems using multiple strategies or mathematical tools
- Recognizes mistakes as opportunities to learn
- Applies learning to new problems
Connecting Whole Class and Small Group

Assessment System & Reports

i-Ready Assessment System:
- **i-Ready Diagnostic** identifies areas where each student is struggling and automatically generates personalized instructional paths.
- **i-Ready Standards Mastery** provides targeted insight into a student’s mastery of individual grade-level standards.
- **i-Ready Growth Monitoring** shows student growth, making it possible to predict end-of-year performance and growth for each student.

Whole Class Instruction

- **Student Instruction** and **Teacher Resource Books** provide discourse-based instruction that integrates multiple strategies and promotes a growth mindset.
- **Practice and Problem Solving** provides practice for each day of a lesson as well as fluency practice, unit practice, games, and vocabulary support.
- **Online Teacher Toolbox** provides access to all K–8 Ready resources for every teacher, including tutorial videos, center activities, and more.
Instruction with i-Ready

i-Ready Reports:
- The class Diagnostic Results report gives an overview of the instructional needs of the entire class.
- The student Diagnostic Results report shows students’ strengths and needs and guides teachers to targeted resources.
- The Instructional Groupings report automatically groups students based on common needs and provides targeted resources to use with each group.

Small Group & Personalized Instruction

Small Group Instruction:
- Teacher-led small groups can use on-level or prerequisite Teacher Toolbox resources, such as Tools for Instruction, Interactive Tutorials, and activities from the Teacher Resource Book.
- Student-led small groups can utilize on-level or prerequisite center activities and unit games.

Personalized Instruction:
- i-Ready Instruction provides engaging real-world videos to help fill individual student gaps.
- Door 24 Plus iPad® app provides computational and fluency practice games for individuals or partners.
Flexible to Meet Classroom Needs

*Ready Mathematics* resources are designed to work together so teachers can choose the resource that best supports whole class instruction, small group differentiation, assessment, or practice.

### Whole Class Instruction

- Activities from the Teacher Resource Book
  - Step By Step
  - Mathematical Discourse
  - Hands-On Activities
  - Concept Extensions
- Practice pages in the Practice and Problem Solving book
- Interactive Tutorials
  - Use prerequisite lessons on Day 1
  - Use on-level lessons on Day 4 or Day 5

### Small Group Differentiation*

**Teacher-Led Station**
Teacher-led small groups
- Activities in the Teacher Resource Book
- Tools for Instruction
- Interactive Tutorials
- Parts of prerequisite lessons

**Independent Station**
- Individual student work
  - Practice pages in the Student Instruction Book
  - Practice pages and Fluency Practice in the Practice and Problem Solving book
  - *i-Ready* online lessons
  - Door 24 Plus iPad app

**Student-Led Station**
- Student-led small group activities
  - Center Activities
  - Unit Games
  - Door 24 Plus iPad app

### Assessments
- Lesson Quizzes
- Interim Assessments in the Student Instruction Book
- Mid-Unit and Unit Assessments
- *i-Ready* Assessments

### Homework
- Practice pages in the Student Instruction Book
- Lesson Practice, Fluency Practice, and Unit Practice in the Practice and Problem Solving book
- *i-Ready* online lessons

### Family Connection
- Family Letters (available for every lesson in English and Spanish)
- *i-Ready* Family Center
  (i-ReadyCentral.com/FamilyCenter)
Top Teacher Actions
To get the most out of Ready in the classroom, teachers should focus on these Top Teacher Actions to ensure a strong implementation.

**Plan with Purpose**
Prepare all lessons using a backward planning process to identify mathematical learning goals and anticipate student solutions and errors.

**Differentiate with Targeted Resources**
Use formal and informal assessments to identify student needs and provide small group and individual differentiation using the right Ready and i-Ready resources.

**Discuss Multiple Strategies**
Select and sequence multiple solutions and use the range of models in Ready to help students make connections between different strategies, accessing and advancing their learning.

**Facilitate Meaningful Discourse**
Use routines that bring structure to discourse-driven instruction and integrate strategies that encourage student-led conversations.

**Support Productive Struggle**
Help students embrace struggle as a natural part of learning and developing a growth mindset.

**Maximize the Blended Learning Experience**
Set up the systems and routines to get reliable data, engage students, and actively monitor progress on i-Ready.

Search Top Teacher Actions on ReadyCentral.com for a printable version of this resource to monitor and support your goals for classroom instruction.
Routine: Think–Share–Compare

**What Is It?**
The *Ready* Think-Share-Compare Routine helps children achieve greater mathematical proficiency and rigor within a collaborative structure. Children develop greater understanding of mathematical models and strategies using think time, partner talk, individual writing, and whole class discourse.

**When to Use It**
Use the Think-Share-Compare Routine during the Introduction, Modeled Instruction, and Guided Instruction sections of each *Ready* lesson.

**Why It Matters**
There are many ways to approach mathematical thinking and solutions to problems, but when only one way is presented, children may think they “didn’t do it right,” even when their solution process or thinking is accurate. Exposing children to a number of models and approaches helps them:

- Build mathematical confidence.
- Make connections between representations.
- Develop flexible thinking.
- Deepen and extend conceptual understanding.
- Construct viable arguments and politely critique the reasoning of others.
- Stay engaged, focused, and motivated.

**Management Tips**

**Allow time for productive struggle.**
- Have children talk with a partner about their ideas or try another strategy.
- Avoid telling children whether their approach or answers are incorrect. Instead, prompt children:
  - Do you agree with [child’s] answer? Why or why not?

**Create classroom discussion guidelines.**
- Have children listen carefully to their partners.
- Tell children to ask questions if they don’t understand, such as I was confused when you said…
- Guide children to respect others’ ideas and add on to them.

**Prepare for the classroom conversations.**
- Circulate as children work.
- Identify strategies and models to highlight in the classroom discussion.
- Sequence the strategies you want to discuss. You may want to start with a child who has an incorrect answer or solution process to address common misconceptions and promote discussion.
Think-Share-Compare Routine

1. Make Sense of the Problem
   Read and understand the problem or question. Think about the key information.

2. Solve and Support Your Thinking
   Include pictures, models, and/or explanations in your solutions. If you have time, show another way to solve it.

3. Discuss
   Explain your thinking to a partner. Discuss how your strategies are alike and different.

4. Compare
   Compare your strategies with the class, including the strategies in the Ready book.

5. Connect and Reflect
   Complete and discuss the Connect It questions.

6. Apply
   Apply what you have learned to a new problem. Be sure to support your answer.

Talking can help us better understand math.

Read the problem together as a class. Make sure children understand what they are being asked to do. Ask a few children to describe what the problem is about. Have several children explain what the problem is asking them to do and what information they know.

Allow enough time for children to persevere as they think through their solutions. Make sure children are showing the models and strategies they use.

Have partners discuss their strategies. Circulate to hear conversations and select and sequence solutions to discuss with the whole class.

Call on children to share their answers and solution strategies with the class. Ask children if they agree or disagree with a child’s strategy, rather than telling if the strategy is right or wrong. Show a Ready strategy for comparison.

Choose key questions from the Teacher Resource Book to help children make connections and reflect on their learning.

Use practice problems corresponding to the lesson in Practice and Problem Solving to give children an opportunity to apply learning in a new, similar problem.
Routine: Math Talk

What Is It?
Math Talk guidelines help all children participate in communicating about their reasoning and problem solving strategies. Standard practices for communicating verbally and non-verbally enable pairs, small groups, and whole classes to engage in productive math discussions.

When to Use It
Introduce Math Talk hand signals and conversation protocols at the beginning of the year to establish practices that can be used throughout the Ready lessons when children are engaging in whole class, small group, or partner conversations.

Why It Matters
Conducting effective mathematical discussions works well when children know what is expected. Consistent use of these cues reinforces positive behaviors. These practices:
- Set the expectation that participation is valued and ensure that every child has a voice.
- Provide positive modeling for respectful, balanced interactions among children.
- Empower and enable children to talk with each other authentically and independently.
- Allow children to use silent signals to indicate their readiness to share without interfering with other children’s thinking.
- Encourage risk-taking by demonstrating how learning results from mistakes.

Management Tips
To promote good discussion habits, you may wish to:

Create guidelines for talking.
- Have children use hand signals and a louder voice to communicate with the whole class.
- Guide children to look at others and listen carefully when they speak.
- Have partners use “6-inch” voices.
- Have children ask questions if they don’t understand something.
- Encourage children to respect others’ ideas and share their own ideas.
- Tell children it’s okay to make mistakes — when they happen, they help us learn.

Post discussion starters for children.
- Display Discussion Starters found in Step 3 of Lesson 0. Add to the list by creating your own.
- Refer to discussion starters to help children begin talking.
- Discussion starters that fall into these general categories ensure that conversations have variety and balance:
  - Share thinking.
  - Listen to the thinking of others.
  - Ask clarifying questions.
  - Disagree or agree respectfully.
Use the Math Talk display slides to establish norms and hand signals for classroom conversation. Access the Math Talk display slides on Teacher Toolbox under Lesson 0.

**Partner Talk**

- Use a 6-inch voice.
- Look at your partner.
- Listen to your partner.
- Ask questions.
- Mistakes are OK.

Tell children that today they will learn rules for talking with a partner to solve math problems.

**Whole-Class Talk**

- I'm thinking.
- I have an idea.
- I have another idea.
- I agree.
- Use a whole-class voice.
- Ask questions.
- Look at the speaker.
- Mistakes are OK.

Tell children that today they will learn rules for talking in whole-class discussions to solve math problems.
Routine: Hands-On Learning

What Is It?
Hands-On Learning engages children through the use of both concrete objects (mathematical manipulatives and common objects that can represent ideas) and physical interactions (hands and fingers, kinesthetic experiences, use of space, and acting out mathematical situations).

When to Use It
Use Hands-On Learning to engage children in exploration during problem-solving. Make familiar tools available for children to choose strategies while they develop conceptual understanding and reinforce skills during practice. Use manipulatives often so that they are seen as a common element of mathematical learning.

Why It Matters
Using manipulatives and hands-on learning experiences helps children to relate concrete, visual, and abstract ideas in a developmentally appropriate sequence. It helps children:
- Explore different ideas.
- Engage in productive struggle as they solve problems.
- Change their solutions or fix errors easily.
- Make their thinking visual more easily than in writing.
- Establish a model to refer to as they communicate their thinking verbally.

Management Tips
To promote good habits for hands-on learning, you may wish to:

Create guidelines for handling manipulatives.
- Guide children to treat objects as math tools.
- Discuss how the tools connect to mathematical ideas.
- Model and reinforce correct usage and safety.
- Prepare and provide appropriate quantities for the activity.
- Set expectations and routines for storage, distribution, and sharing of materials during use.

Post a list of common tools with their names and pictures.
- Show a picture of the tool along with its name.
- Encourage children to refer to manipulatives by name when sharing their thinking.
- Direct children’s attention to the pictures of manipulatives for ideas when they struggle to begin solving a problem.
- Teach children to draw simple representations of the manipulatives to create their models.
- Refer to SMP 5 (Use appropriate tools strategically) to guide children in making decisions about which tools are appropriate for which problem-solving situations.
100 Questions That Promote Mathematical Discourse

Asking good questions promotes mathematical understanding and invites students to engage in meaningful conversations. Use the questions below to support powerful mathematical discourse during instruction.

Help students work together to make sense of mathematics

1. What strategy did you use?
2. Do you agree?
3. Do you disagree?
4. Would you ask the rest of the class that question?
5. Could you share your method with the class?
6. What part of what he or she said do you understand?
7. Would someone like to share ___?
8. Can you convince the rest of us that your answer makes sense?
9. What do others think about what [student] said?
10. Can someone retell or restate [student]’s explanation?
11. Did you work together? In what way?
12. Would anyone like to add to what was said?
13. Have you discussed this with your group? With others?
14. Did anyone get a different answer?
15. Where would you go for help?
16. Did everybody get a fair chance to talk, use the manipulatives, or be the recorder?
17. How could you help another student without telling them the answer?
18. How would you explain ___ to someone who missed class today?
19. Is this a reasonable answer?
20. Does that make sense?
21. Why do you think that? Why is that true?
22. Can you draw a picture or make a model to show that?
23. How did you reach that conclusion?
24. Does anyone want to revise his or her answer?
25. How were you sure your answer was right?

Help students rely more on themselves to determine whether something is mathematically correct

Search Discourse Questions on ReadyCentral.com for a printable version of the 100 Questions.
Help students learn to reason mathematically

26. How did you begin to think about this problem?
27. What is another way you could solve this problem?
28. How could you prove ______?
29. Can you explain how your answer is different from or the same as [student]'s answer?
30. Let’s break the problem into parts. What would the parts be?
31. Can you explain this part more specifically?
32. Does that always work?
33. Can you think of a case where that wouldn’t work?
34. How did you organize your information? Your thinking?

Help students evaluate their own processes and engage in productive peer interaction

35. What do you need to do next?
36. What have you accomplished?
37. What are your strengths and weaknesses?
38. Was your group participation appropriate and helpful?

39. What is this problem about? What can you tell me about it?
40. Do you need to define or set limits for the problem?
41. How would you interpret that?
42. Could you reword that in simpler terms?
43. Is there something that can be eliminated or that is missing?
44. Could you explain what the problem is asking?
45. What assumptions do you have to make?
46. What do you know about this part?
47. Which words were most important? Why?

Help students with problem comprehension

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100 Questions That Promote Mathematical Discourse, continued

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Help students learn to conjecture, invent, and solve problems

48. What would happen if ___?
49. Do you see a pattern?
50. What are some possibilities here?
51. Where could you find the information you need?
52. How would you check your steps or your answer?
53. What did not work?
54. How is your solution method the same as or different from [student]’s method?
55. Other than retracing your steps, how can you determine if your answers are appropriate?
56. How did you organize the information? Do you have a record?
57. How could you solve this using tables, lists, pictures, diagrams, etc.?
58. What have you tried? What steps did you take?
59. How would it look if you used this model or these materials?
60. How would you draw a diagram or make a sketch to solve the problem?
61. Is there another possible answer? If so, explain.
62. Is there another way to solve the problem?
63. Is there another model you could use to solve the problem?
64. Is there anything you’ve overlooked?
65. How did you think about the problem?
66. What was your estimate or prediction?
67. How confident are you in your answer?
68. What else would you like to know?
69. What do you think comes next?
70. Is the solution reasonable, considering the context?
71. Did you have a system? Explain it.
72. Did you have a strategy? Explain it.
73. Did you have a design? Explain it.
Help students learn to connect mathematics, its ideas, and its application

74 What is the relationship between ___ and ___?
75 Have we ever solved a problem like this before?
76 What uses of mathematics did you find in the newspaper last night?
77 What is the same?
78 What is different?
79 Did you use skills or build on concepts that were not necessarily mathematical?
80 Which skills or concepts did you use?
81 What ideas have we explored before that were useful in solving this problem?
82 Is there a pattern?
83 Where else would this strategy be useful?
84 How does this relate to ___?
85 Is there a general rule?
86 Is there a real-life situation where this could be used?
87 How would your method work with other problems?
88 What other problem does this seem to lead to?
89 Have you tried making a guess?
90 What else have you tried?
91 Would another method work as well or better?
92 Is there another way to draw, explain, or say that?
93 Give me another related problem. Is there an easier problem?
94 How would you explain what you know right now?
95 What was one thing you learned (or two, or more)?
96 Did you notice any patterns? If so, describe them.
97 What mathematics topics were used in this investigation?
98 What were the mathematical ideas in this problem?
99 What is mathematically different about these two situations?
100 What are the variables in this problem? What stays constant?

Help students persevere

Help students focus on the mathematics from activities
Support Student-Led Discourse with the Ready Mathematics Discourse Cards!

These questions and sentence starters provide a way to engage all students in meaningful mathematical conversations. These cards will help students initiate, deepen, and extend conversations with partners, small groups, or the whole class.

- Each card has two prompts on it, one on the front and one on the back!
- With each question, be sure to have students explain their reasoning in their response.

Some possible uses:
- Post the cards around the room and refer to them when solving problems as a class.
- Give each student a card to use during the “share” portion of the Ready Think–Share–Compare Routine or any other discourse-based problem-solving routine.
- Choose a few cards to focus on each week, based on the content of your lesson.

For information on how to order additional sets of the Ready Mathematics Discourse Cards, contact your Ready Mathematics Account Manager.

Tell us how you use the cards in your classroom at ReadyMathematics.com/Myldea.
Support Student-Led Discourse with the Ready Mathematics Posters!

Enhance mathematical discourse in your classroom with Math Talk and Routine posters!

Let’s Talk Math
20 Power Sentence Starters & Questions

- How would you draw a picture to explain your solution?
- What strategy did you use?
- What models can you use to show your thinking?
- How do you know you’re right?
- Can you explain this to me?
- Can someone restate what was said?
- How else can you solve this problem?

Think-Share-Compare
(Grades K-8)

1. Make Sense of the Problem
   - Read and understand the problem or question.
   - Think about the key information.

2. Solve & Support Your Thinking
   - Include pictures, models, and explanations in your solutions.
   - If you have time, show another way to solve it.

3. Discuss
   - Explain your thinking to a partner.
   - Discuss how your strategies are alike and different.

4. Compare
   - Compare your strategies with the class, including the strategies in the Ready book.

5. Connect & Reflect
   - Complete and discuss the Connect It questions.

Pensar-Compartir-Comparar
(Spanish)

Available in English and Spanish!

Ready Central Resource Connection
Search Posters on ReadyCentral.com to download printable versions of the Math Routines and Math Talk Posters.
### Top Leader Actions

When using a sophisticated program like *Ready*, leaders may ask, “Where do I start?” or “What should I focus on?” We have learned from working with thousands of leaders that focusing on these key actions helps them unlock *Ready*’s potential and meet students’ needs.

| Set the Tone | Determine a clear purpose for the program, gain buy-in among all stakeholders, attend professional development, and have ongoing communication that fosters a culture of growth and shared accountability. |
| Select an Area of Focus | Identify an area of focus for each year that is mindful of what leaders and teachers can realistically take on and helps keep everyone aligned to the same goal. |
| Develop Instructional Practice | Provide opportunities for teachers to receive relevant professional development, enable ongoing support with focused coaching and observations, and ensure teachers have time for planning and collaborating. |
| Manage Pacing | Proactively plan for, monitor, and adjust pacing to ensure consistency with district calendars and goals. |
| Use Data with Purpose | Use data to help guide instructional decisions and resource allocation, and promote a culture of data among school leaders, teachers, and students. |
| Establish Schedules & Structures | Set up the calendars, schedules, infrastructure, and ongoing monitoring that will adequately support the program. |

When using a sophisticated program like *Ready*, leaders may ask, “Where do I start?” or “What should I focus on?” We have learned from working with thousands of leaders that focusing on these key actions helps them unlock *Ready*’s potential and meet students’ needs.
**Ready Mathematics Look-Fors**

The indicators under “Look-Fors” describe evidence of Top Teacher Actions. This tool can be used to support lesson planning and observation.

<table>
<thead>
<tr>
<th>Top Teacher Actions</th>
<th>Look-Fors</th>
</tr>
</thead>
</table>
| **Plan with Purpose**                   | • Prepares questions to promote the goals of the lesson.  
• Understands and anticipates many different solution strategies that students may use and thinks about how to sequence those strategies for classroom discussions.  
• Recognizes and addresses misconceptions and errors. |
| **Support Productive Struggle**         | • Allows students a long enough time to think before they share their solutions or answers with partners or the class.  
• Does not ask a question and accept an answer from the first student to raise his or her hand.  
• Asks students questions to encourage and support them if they get “stuck” rather than telling them what to do. |
| **Facilitate Meaningful Discourse**     | • Poses purposeful questions that engage all students in doing the majority of thinking and talking.  
• Asks students to explain and critique their solution strategies and responses to questions as well as those of their peers.  
• Frequently has students engage in partner or small group conversations before discussing with the class. |
| **Discuss Multiple Strategies**         | • Encourages students to solve problems in more than one way and become flexible with multiple models and strategies.  
• Circulates during independent think time and partner discussions to select and sequence multiple solutions to share during whole class discussion that advance the lesson’s goals.  
• Compares and connects students’ solution strategies to one another and to those shown in Ready instruction. |
| **Differentiate with Targeted Resources (as needed)** | • Uses Quick Check to inform on-level lesson differentiation and remediates with activities in the Teacher Resource Book.  
• Uses i-Ready reports and the Teacher Toolbox to provide instruction and practice targeted to students’ specific needs.  
• Provides opportunities for teacher-led small group work, student-led small groups, i-Ready Instruction time, and independent time, as appropriate. |
| **Maximize the Blended Learning Experience** | • Establishes and sticks to systems and routines to consistently use i-Ready weekly.  
• Gets good data by preparing students for the Diagnostic, setting class and individual goals, and monitoring students as they take the Diagnostic.  
• Actively monitors progress on i-Ready by looking at class and individual usage and percent of lessons passed. |
Leader Timeline for Success

Leaders of successful Ready Mathematics and i-Ready implementations clearly identify their top “To-Dos.” Use this timeline along with the teacher timelines on pp. 26–27 to develop your own action plan and goals.

<table>
<thead>
<tr>
<th>All Leaders</th>
</tr>
</thead>
</table>

**Ready Mathematics “To-Dos”**

- Communicate my vision and expectations for Ready Mathematics with teachers:
  - Gain buy-in for the program among teachers by communicating the benefits to teaching and learning.
  - Encourage all teachers to get to know program components with the Introducing Ready Mathematics digital course at ReadyCentral.com/Intro.
  - Guide teachers to use the Lessons for the First Five Days and establish the instructional routines in their classrooms.
- Register for Ready Teacher Toolbox.
- Schedule PD and remind teachers of dates.
- Take stock and make sure teachers have the materials they need.
- Become familiar with key teacher and leader resources and with the program itself.

**Preparation for school**

- Actively support teachers to become comfortable using Ready Mathematics:
  - Provide guidance as they establish instructional routines to encourage mathematical discourse in their classrooms.
  - Set the expectation that they should review and plan the entire weekly lesson using the Teacher Resource Book.
  - Clarify the classroom practices to use (which will also be the focus of observations).
- Create opportunities for classroom observation and purposeful feedback in my weekly schedule.
- Create common planning time in teachers’ schedules to prepare instruction and share ideas.
- Continue to deepen my knowledge of Ready Mathematics by reviewing the Teacher Resource Book and visiting Ready Teacher Toolbox and Ready Central.

**First few weeks of school**

- Continue to actively support teachers in implementing Ready Mathematics with fidelity:
  - Provide guidance as they establish instructional routines to encourage mathematical discourse in their classrooms.
  - Set the expectation that they should review and plan the entire weekly lesson using the Teacher Resource Book.
  - Clarify the classroom practices to use (which will also be the focus of observations).
- Observe teachers’ classroom instruction and provide purposeful feedback using the Look-Fors as a guide.
- Review yearly and weekly pacing guidance to help teachers stay on track with the curriculum based on key dates.
- As time allows, guide teachers to take advantage of all the tools available to support differentiated instruction and extend whole class learning (i.e., Teacher Toolbox, Practice & Problem Solving book).

**Ongoing throughout the school year**

- Prepare for the Diagnostic.
- Review the data from the initial Diagnostic and share results with teachers.
- Enable Online Instruction and provide guidance to teachers on how to incorporate it into their practice.
- Prepare for subsequent Diagnostics and review my data.
Teacher Timelines for Success

Having clear priorities and action steps is key to fostering a strong new or ongoing implementation of *Ready Mathematics* and *i-Ready*. These teacher timelines provide outlines of top teacher “To-Dos” for each year of implementation.

### New Users

**Priorities:**
- Use the Think–Share–Compare Routine during instruction.
- If using *i-Ready*, get good data from the *i-Ready Diagnostic*.

<table>
<thead>
<tr>
<th>Before students arrive</th>
<th>Ready Mathematics “To-Dos”</th>
<th><em>i</em>-Ready “To-Dos”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register for the Ready Teacher Toolbox.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take stock of materials and resources.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Get to know program components with the <em>Introducing Ready Mathematics</em> digital course (see p. 31 for details).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review Lesson 0 and the first few lessons of Unit 1 to prepare for the school year.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use the Beginning-of-Year <em>i</em>-Ready Checklist to prepare yourself and your students.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First few weeks of school</th>
<th>Ready Mathematics “To-Dos”</th>
<th><em>i</em>-Ready “To-Dos”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use Lesson 0 to launch the Think–Share–Compare Routine and transition students into the first unit of instruction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create a classroom environment that fosters mathematical discourse (see pp. 14–22 for math talk and discourse resources).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan instruction and share ideas with colleagues.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use the Administering the Diagnostic Checklist to prepare students for the Diagnostic and to get good Diagnostic data.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use the Immediately after Each Diagnostic Checklist to analyze Diagnostic data and plan next steps.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ongoing throughout the school year</th>
<th>Ready Mathematics “To-Dos”</th>
<th><em>i</em>-Ready “To-Dos”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the Think–Share–Compare Routine and Classroom Display Slides to facilitate discourse-driven instruction.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plan with the Teacher Resource Book to ensure activities, questions, and models are included at appropriate times during the lesson.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review weekly and yearly pacing guidance to ensure key concepts are taught before state assessments, but don’t rush through lessons or classroom conversations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stick to <em>Ready</em> resources, avoiding the temptation to supplement with other materials.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use the Routines between Diagnostics Checklist to monitor implementation health and continuously use data.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Practicing and Advanced Users

Priorities:
- Refine mathematics instructional practice through collaboration, coaching, and feedback.
- If using i-Ready,
  - Differentiate instruction with data
  - Integrate i-Ready Online Instruction and Standards Mastery into practice

<table>
<thead>
<tr>
<th>Ready Mathematics “To-Dos”</th>
<th>i-Ready “To-Dos”</th>
</tr>
</thead>
<tbody>
<tr>
<td>○ If needed, refresh yourself on program components with the Introducing Ready Mathematics digital course (see p. 31 for details).</td>
<td>○ Use the Beginning-of-Year i-Ready Checklist to prepare yourself and your students. Review last year’s i-Ready data for your class to determine where students are starting this year.</td>
</tr>
<tr>
<td>○ Use the Ready Mathematics Look-Fors to reflect on the previous year’s successes and challenges and select an area to refine your instructional practice.</td>
<td>○ Use the Administering the Diagnostic Checklist to prepare students for the Diagnostic and to get good Diagnostic data. ○ Use the Immediately after Each Diagnostic Checklist to analyze Diagnostic data and plan next steps.</td>
</tr>
<tr>
<td>○ Foster ownership of mathematical learning by monitoring the amount of teacher talk compared to student talk. Ensure students are doing the majority of the explaining and demonstrating of the mathematics during instructional time.</td>
<td>○ Use the Routines between Diagnostics Checklist to monitor implementation health and continuously use data.</td>
</tr>
<tr>
<td>○ Support productive struggle by asking questions, rather than telling or rescuing students when they encounter a challenge or stuck point (see pp. 17–20 for 100 Discourse Questions).</td>
<td>○ Provide students with opportunities to engage in Online Instruction and monitor progress.</td>
</tr>
<tr>
<td>○ Identify what students know and can do based on classroom conversations and work samples.</td>
<td>○ Use the data points from the Diagnostic, Online Instruction, and Standards Mastery to have conversations with stakeholders about student progress and inform instruction.</td>
</tr>
<tr>
<td>○ Strategically select and sequence student strategies when facilitating whole class conversations.</td>
<td>○ Conduct data chats with students to invest them in goal setting.</td>
</tr>
<tr>
<td>○ Seek opportunities for collaboration, coaching, and feedback as you use the Ready Mathematics Look-Fors to refine your instructional practice.</td>
<td>○ Implement Ready Teacher Toolbox resources for differentiated activities and groups.</td>
</tr>
<tr>
<td>○ Use formal and informal assessment data from Ready and i-Ready to form flexible groups for differentiated instruction.</td>
<td>○ Use the data points from the Diagnostic, Online Instruction, and Standards Mastery to have conversations with stakeholders about student progress and inform instruction.</td>
</tr>
<tr>
<td>○ Implement Ready Teacher Toolbox resources for differentiated activities and groups.</td>
<td>○ Conduct data chats with students to invest them in goal setting.</td>
</tr>
</tbody>
</table>

Priorities:
- Refine mathematics instructional practice through collaboration, coaching, and feedback.
- If using i-Ready,
  - Differentiate instruction with data
  - Integrate i-Ready Online Instruction and Standards Mastery into practice

Visit the Using i-Ready with Ready section on ReadyCentral.com to navigate to i-Ready tools and resources, including the i-Ready checklists referenced on these pages.

Ready Mathematics Resource Guide
Setting Up for Success
### Lesson 16

**Locate in:**
- Teacher Resource Book
- Teacher Toolbox (Found within Lesson 0)

**For Planning**

<table>
<thead>
<tr>
<th>Lesson Guidance</th>
<th>Ready Instructional Routines</th>
<th>100 Questions That Promote Mathematical Discourse</th>
<th>Lesson Preparation Guides</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Lesson Guidance Image" /></td>
<td><img src="image2" alt="Ready Instructional Routines Image" /></td>
<td><img src="image3" alt="100 Questions That Promote Mathematical Discourse Image" /></td>
<td><img src="image4" alt="Lesson Preparation Guides Image" /></td>
<td><img src="image5" alt="Additional Resources Image" /></td>
</tr>
</tbody>
</table>

Each lesson provides an overview, pacing guide, step-by-step guidance to facilitate instruction, mathematical discourse questions, hands-on activities, and concept extensions.

**For Teaching**

<table>
<thead>
<tr>
<th>Lesson 0: Lessons for the First Five Days</th>
<th>Classroom Display Slides and Templates</th>
<th>Practice Pages</th>
<th>Additional Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image6" alt="Lesson 0: Lessons for the First Five Days Image" /></td>
<td><img src="image7" alt="Classroom Display Slides and Templates Image" /></td>
<td><img src="image8" alt="Practice Pages Image" /></td>
<td><img src="image9" alt="Additional Resources Image" /></td>
</tr>
</tbody>
</table>

A set of lessons to use during the first five days of school to establish Ready instructional routines and review prerequisite skills.

**For Assessment**

<table>
<thead>
<tr>
<th>Quick Check &amp; Remediation</th>
<th>Lesson Quizzes &amp; Unit Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image10" alt="Quick Check &amp; Remediation Image" /></td>
<td><img src="image11" alt="Lesson Quizzes &amp; Unit Assessments Image" /></td>
</tr>
</tbody>
</table>

*“Exit ticket” questions with suggestions for remediation targeted to specific answers and differentiated activities.*
Important Things to Know

Here are some important things to know when planning and implementing *Ready Mathematics*.

**Lesson Pacing:**
*Lessons are designed to be completed in one week, not one day.*

*Ready Mathematics* lessons go more in depth on topics than many programs in the past, which is why each lesson includes about five days of instruction. Lessons are divided into multiple parts, each of which takes one day of instruction to cover. The Weekly Pacing Guides at the beginning of each lesson are designed to help teachers plan activities during a week of a lesson.

**Exposure to multiple models:**
*Ready Mathematics shows students multiple representations of solving problems within the same lesson.*

Throughout *Ready Mathematics* instruction and practice, students become familiar with a number of models and approaches and learn when it is appropriate to use each. This exposure to multiple representations helps students make connections, develops flexible thinking, and builds confidence.

**A different kind of student book:**
*The Student Instruction Book is designed to be an interactive work text, not a workbook.*

The *Ready* Student Instruction Book is designed to be used by students to record their learning and is not intended to be simply filled in and checked. The work text provides a place for students to mark up the models presented, record their thinking and responses, and reflect on their learning to ensure students are actively engaged.

**Focused, intentional practice:**
*Practice in Ready Mathematics is focused and intentional.*

The volume of practice in *Ready Mathematics* can seem less than in other books, but it actually gives students the opportunity to work on the problem solving, critical thinking, and higher depth of knowledge questions, as highlighted in the standards, while still providing computation and fluency practice. This approach helps students practice what they have learned while avoiding “busy work” that doesn’t truly help strengthen their understanding.

**Discourse-based instruction:**
*Ready Mathematics is designed to engage students in rigorous mathematical discussions.*

Guiding students through discussions to exchange ideas and share their understanding and strategies is critical to success with *Ready Mathematics*. Both the student and teacher books are specifically designed to help you facilitate these rich mathematical conversations that make students feel empowered to actively participate in their learning and deepen their mathematical understanding.

**Easy access to resources:**
*The Ready Teacher Toolbox is not just an electronic version of the book—it is a virtual filing cabinet of hundreds of additional teaching tools.*

In addition to providing digital versions of the print materials for classroom presentation, the Online Teacher Toolbox provides every teacher with access to ALL the resources for EVERY grade, including whole class and small group resources for differentiation.
Accessing the Teacher Toolbox

The Ready Teacher Toolbox has an extensive collection of additional resources that can be used for whole class instruction, small group differentiation, and assessment. Educators have instant access to resources such as slides to facilitate the Think–Share–Compare Routine, leveled center activities, and a variety of assessments to gauge student learning.

Register and Log in:

2. Create an account with your information in three simple steps and click Finish.
   
   Note: When prompted for a zip code, make sure you enter your school’s zip code.
3. IMPORTANT: Check your email and activate your account by clicking on the link.
4. Then log in using your email address and the password you created above and click Log In.

Reach out to your school leader and/or district administrator if you have any questions.

Organized by grade level and lesson

Resource Selector Tool

For information about how to locate resources on Teacher Toolbox based on your instructional needs, download the Resource Selector Tool from Teacher Toolbox.
For Additional Support

For a refresher on the program components and the Think–Share–Compare Routine, view the Introducing Ready Mathematics digital course at ReadyCentral.com/Intro!
Contact Information

24/7 Support at ReadyCentral.com!

*Ready Central* is the destination for everything teachers, site leaders, and district leaders need to implement Ready successfully. Packed with helpful resources, this new site provides 24/7 access to:

- Quick-start training videos
- Email templates
- “How-to” guides
- Planning tools

Customer Service:
(800) 225-0248
(M–Th 8:30 a.m.–6 p.m.
and Fri 8:30 a.m.–5 p.m.)

Educational Consultant:
Name:
Phone:
Email:

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