Differentiation Resources and Strategies for All Learners

Meeting the needs of all learners is achievable with the built-in differentiated supports embedded in *i-Ready Classroom Mathematics* lessons.

During the Lesson

i-Ready Classroom Mathematics provides differentiated support to all learners through the Try–Discuss–Connect routine by engaging them in think time, partner talk time, and whole class conversations about multiple strategies and approaches to mathematics. In addition to the Try–Discuss–Connect routine, there are even more opportunities in the Teacher's Guide to support you with adjusting instruction on the spot.

During Explore and Develop Sessions

What?		How?
Common Misconception	**Common Misconception** Look for students who are not comfortable with visualizing how the cake is cut. As students present solutions, have them specify how they think the cake is cut.	**Observe how students approach a problem and discuss it with a partner.** Use this information to provide support before or during the whole class discussion.
Support Whole Class Discussion	**Support Whole Class Discussion** Prompt students to note the relationship between the numbers in each model and the numbers in the problem. **Ask** *How do [student name]'s and [student name]'s models show which part(s) of the cake have chocolate frosting?* **Listen for** One half, or two fourths, of the cake should be shaded or somehow marked to indicate chocolate frosting.	**Prompt students with the Ask/*Listen for* questions** to encourage them to explain or evaluate the strategies or models presented by their classmates or in their Student Worktext.
Hands-On Activity	**Hands-On Activity** **Explore different area models showing fourths and eighths.** **If . . .** *students struggle with seeing how different models can model the same fractions,* **Then . . .** *use this activity to let them explore different ways to divide a shape into equal parts.*	**Use after the Connect It questions to provide on-the-spot support** before students work on their own to solve the Apply It problems.
Deepen Understanding	**Deepen Understanding** **Area Models of Equivalent Fractions** **SMP4** Reason quantitatively. When discussing the area models, prompt students to think about how they can divide each part into smaller equal parts to find other equivalent fractions.	**Use the Deepen Understanding activity to engage students in deepening conceptual understanding** of the models and representations presented in their Student Worktexts.

At the Beginning of the Refine Session

What?	How?
Check for Understanding and Error Alert	**Use the Check for Understanding and Error Alert to provide quick remediation based on student answers.**

Check for Understanding

Materials For each student: Activity Sheet
Number Lines

Why Confirm understanding of finding equivalent fractions.

Error Alert

If the error is . . .	*Students may . . .*	*To support understanding . . .*
$\frac{6}{20}$	have added both the numerators and the denominators.	Remind students that the denominator tells the kind of parts you are adding. Explain that just as 4 apples + 2 apples = 6 apples, 4 tenths + 2 tenths = 6 tenths.
$\frac{3}{10}$	have added numerators, added denominators, and then written an equivalent fraction with a denominator of 10.	Remind students that the denominator tells the kind of parts you are adding. Explain that just as 4 apples + 2 apples = 6 apples, 4 tenths + 2 tenths = 6 tenths.
$\frac{2}{10}$	have subtracted the fractions.	Remind students to read the problem carefully to be sure they are using the correct operation.
$\frac{1}{5}$	have subtracted the fractions and written an equivalent fraction.	Remind students to read the problem carefully to be sure they are using the correct operation.

During the Refine Session

What?	How?
Differentiated Instruction	**Use the Differentiated Instruction activities and resources to group students for additional instruction** before administering the Lesson Quiz or Comprehension Check.

Differentiated Instruction

RETEACH

Hands-On Activity
Use fraction bars to add.

Students struggling with concepts that fractions written as numbers or shown as visual models represent a part or multiple parts of a whole

Will benefit from additional work with concrete representations of fraction addition and subtraction

Materials For each student: markers, Activity Sheet *Fraction Bars* (2 bars for fourths, 2 bars for thirds, 2 bars for sixths, 2 bars for eighths)

- Distribute fourths fraction bars and markers. Tell students to color $\frac{1}{4}$ of the fraction bar. Then have them color another $\frac{1}{4}$ of the fraction bar.
- Write $\frac{1}{4} + \frac{1}{4}$ on the board. Have students use their fraction bars to show that the sum is $\frac{2}{4}$.
- Then have students color $\frac{3}{4}$ of another fourths fraction bar and cross out $\frac{2}{4}$. Write $\frac{3}{4} - \frac{2}{4}$ and have students show that the difference is $\frac{1}{4}$.
- Repeat for other fractions with denominators such as thirds, sixths, and eighths.

EXTEND

Challenge Activity
Write a problem for a given sum.

Students who achieved proficiency

Will benefit from deepening understanding of fraction addition and subtraction

- Tell students that the sum of two fractions is $\frac{2}{5}$. However, the original fractions did not have denominators of 5.
- Challenge students to write a fraction addition problem using denominators other than 5 that has a sum of $\frac{2}{5}$. [Possible answer: $\frac{3}{10} + \frac{1}{10}$]

After the Lesson

Use the data from the Lesson Quiz or Comprehension Check to provide additional small group support with the Differentiated Instruction activities found on the Teacher Toolbox.

Differentiated Instruction Teacher Toolbox

RETEACH

Tools for Instruction

Students who require additional support for prerequisite or on-level skills

Will benefit from activities that provide targeted skills instruction

- Grade 4, Lesson 13

REINFORCE

Math Center Activities

Students who require additional practice to reinforce concepts and skills and deepen understanding

Will benefit from small group collaborative games and activities (available in three versions—on-level, below-level, and above-level)

- Grade 4, Lesson 13

EXTEND

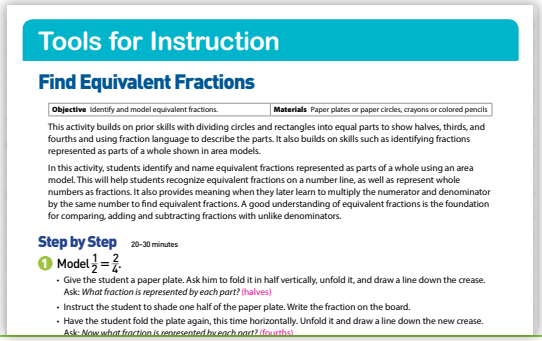
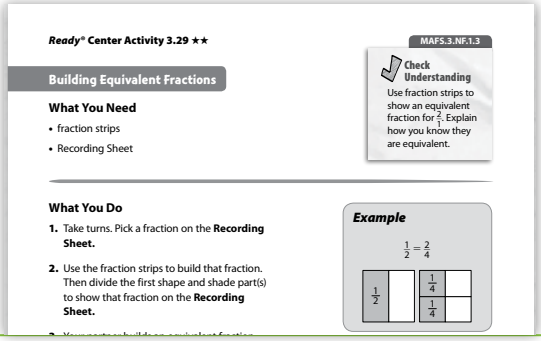
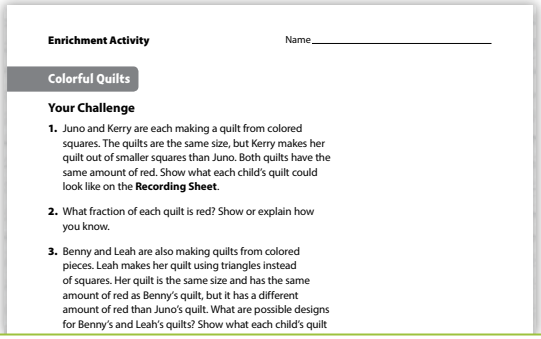
Enrichment Activities

Students who have achieved proficiency with concepts and skills and are ready for additional challenges

Will benefit from group collaborative games and activities that extend understanding

- Grade 4, Lesson 13

After the Lesson

What?		How?
Reteach: Tools for Instruction		Use the Tools for Instruction as part of a teacher-led small group for students who need reteaching after the lesson.
Reinforce: Math Center Activities		Have students partner up to work on the Math Center Activities while other students are in a teacher-led group or working independently. (Three different levels available!)
Extend: Enrichment Activities		Students can work on Enrichment Activities independently or with a partner.

Some teachers like to use the differentiation resources in station rotations. Here are some recommendations of resources you can use for independent, partner, and teacher-led stations.

Teacher-Led Station

Current or Prerequisite Lessons:

- Teacher's Guide Activities
- Tools for Instruction
- Center Activities
- Interactive Tutorials

Partner Station

- Center Activities (Current or Prerequisite Lessons)
- Enrichment Activities
- Unit Games *(On-level to review, prerequisite to fill gaps)*
- Grade Level Games (K–2)

Independent Station

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