Ready Classroom Mathematics

Preparing for a Lesson

Use this template to prepare for your *Ready Classroom Mathematics* lessons.

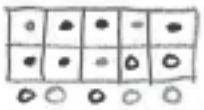
Thinking Through a Lesson

Lesson Title: Grade 1, Lesson 12: Make a Ten to Add

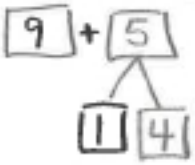
Review the *Unit Math Background* and the *Lesson Overview* pages to understand student strategies and key concepts for the lesson.

Then, do the math for the *Lesson Quiz* to make sense of the ways students will demonstrate understanding of the outcomes for the lesson. You may want to consider using some of the strategies from the pages you reviewed. Record multiple strategies, models, notes, and ideas in the space provided.

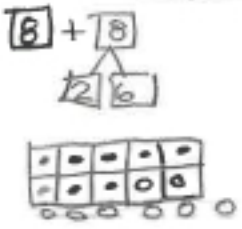
1. 8+7=?
   8+2=10
   10+5=15
   8+7=15



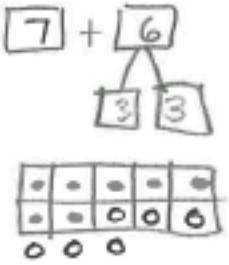
2. 9+5=?
   9+1=10
   10+4=14
   9+5=14



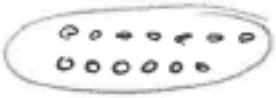
3. 8+8=?
   8+2=10
   10+6=16
   8+8=16



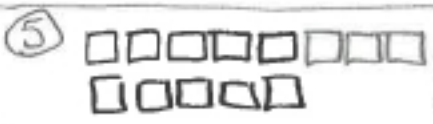
4. 7+6=?
   7+3=10
   10+3=13
   7+6=13



Count all:



Count on from 7:
8, 9, 10, 11, 12, 13



8 red cups
5 blue cups=
13 cups in all

8+2=10
10+3=13

What are the students going to know as a result of the lesson?

- Know number partners for ten to make easier sums
- Teen numbers can be thought of as "ten and some more"

What are students going to do as a result of the lesson?

- Use the "make a ten" strategy to add within 20
- Decompose one addend to make a ten
- Use ten frames and number bonds to show the decomposition of one addend

Tip: Be sure to consider the academic vocabulary and manipulatives students will need for the lesson.

Thinking Through Each Session

Session	Review	Strategies	Questions
	Read the *Purpose* of each session. How does the *Purpose* support the goal of the lesson?	Look at *Possible Student Work* and *Select and Sequence Student Solutions* to determine which strategies to highlight with students. How do these strategies help students make sense of the math?	Review the *Discuss It* prompts. Identify which questions you will ask to support partner and whole group discussion. Review the *Ask/Listen for* prompts. Identify which questions will help students make connections between strategies.
1	Students act out a scenario to make a ten, then model a problem with counters.	- Count all to find the sum of 13 - Count on from 9 and add on 4 to find 13 - Decompose 4 into 3 + 1. Add 1 to 9 to make 10, then add 3 more to make 13.	- What did you do with your counters to make a ten to add? How did that help you find how many children there are in all? -How did making a ten help you figure out the total of 9 + 4?
2	Students explore using a ten frame to make a ten in order to make sense of how the strategy works.	- Count all to find the sum of 13 - Count on from 8 and add on 5 to find 13 - Decompose 5 into 3 + 2. Add 2 to 8 to make 10, then add 3 more to make 13.	- How does your model show finding a total for 8 + 5? - What part of the problem do the red (then yellow) counters show? How do you know? - How can using a ten frame help you add?
3	Students use the number bond strategy to decompose one addend to make a ten.	- Count all to find the sum of 11 - Count on from 9 and add on 2 to find 11 - Decompose 2 into 1 + 1. Add 1 to 9 to make 10, then add 1 more to make 11.	- Why are 9 and 1 circled in this model? - The numbers 1 and 1 are below the 2 in the number bond. Is this how you got the total 11?
4	Students practice making a ten to add within 20.	- Show with a number bond or ten frame	- How does the number bond break apart 6? - How could you figure out that you need to add 4 to 10?
5	Students practice making a ten to add within 20.	- Show with a number bond or ten frame	- How could you use a ten frame to solve this? - How could you use a number bond to solve this?

Thinking Through Differentiation and Practice

Review *Reflect, Apply It,* and *Close: Exit Ticket.* Think about how and when you will use these to check for student understanding.	What resources will you assign for homework, additional practice, or fluency support/practice?	When and with what resources will you reteach, reinforce, or extend students' understandings?
Session 1: Use Close: Exit Ticket pg. 256 - Bus Problem 9 + 7= 16. Any strategy is acceptable (count all, count on, etc) but note which students make a ten and which do not. _____ Session 2: Use Close: Exit Ticket pg. 262 - Find 7 + 5 = 12. Solution: 10 + 2 = 12. Listen for "both equations have the same sum". _____ Session 3: Use Close: Exit Ticket pg. 268- Find 6 + 7= 13. Solution: 10 + 3 = 13. Listen for "both equations have the same sum". _____ Session 4: Use Check for Understanding- Solve 8 + 7 = ? by making a ten. Solution: 8 + 2 = 10, then 10 + 5 = 15. Use error alert table on pg. 272 to guide remediation.	Session 1: Additional Practice pgs. 257-258 _____ Session 2: Additional Practice pgs. 257-258 and Fluency Practice- Practice Facts Within 10 _____ Session 3: Additional Practice pgs. 257-258 _____ Session 4: Additional Practice pgs. 257-258	Differentiated Instruction after Session 5: Refine pgs. 275-276 - Reteach: Hands on Activity- Make a ten with connecting cubes - Extend: Challenge Activity- Write and solve addition word problems _____ Differentiated Instruction after the Lesson Quiz (Resources on Toolbox) -Reteach: Tool for Instruction- Make a Ten to Add Within 20 -Reinforce: Math Center Activity- Make a Ten to Add -Extend: Enrichment Activity- Can You Prove It?

Ready Classroom Mathematics

Preparing for a Lesson

Use this template to prepare for your *Ready Classroom Mathematics* lessons.

Thinking Through a Lesson

Lesson Title: Grade 4, Lesson 19: Understand Fraction Addition & Subtraction

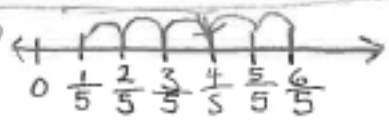
Review the *Unit Math Background* and the *Lesson Overview* pages to understand student strategies and key concepts for the lesson.

Then, do the math for the *Lesson Quiz* to make sense of the ways students will demonstrate understanding of the outcomes for the lesson. You may want to consider using some of the strategies from the pages you reviewed. Record multiple strategies, models, notes, and ideas in the space provided.

① $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$

② $\frac{1}{6}, \frac{2}{6}, \frac{3}{6}, \frac{4}{6}, \frac{5}{6}, \frac{6}{6}, \frac{7}{6}$

③

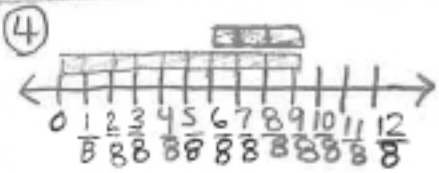


Ⓐ $\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$

Ⓒ $\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} = \frac{4}{5}$

Ⓓ $\frac{6}{5} - \frac{2}{5} = \frac{4}{5}$

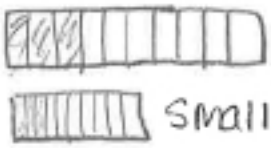
④



$\frac{9}{8} - \frac{3}{8}$

⑤ $\frac{3}{10} + \frac{3}{10} = \frac{6}{10}$

Large loaf small loaf



The equation doesn't match the situation because the wholes aren't the same.

What are the students going to know as a result of the lesson?

- Recognize a fraction as a sum of unit fractions
- Recognize the relationship between fraction models (area model or number line) and fraction equations
- Recognize the relationship between whole number addition/subtraction and fraction addition/subtraction.
- Parts (numerator) that are added/subtracted must refer to the same size whole (denominator).

What are students going to do as a result of the lesson?

- Count on with unit fractions like you count with whole numbers to show adding.
- Use area models, number lines, and equations to show fraction addition and subtraction (with like denominators).
- Write whole numbers as fractions

Tip: Be sure to consider the academic vocabulary and manipulatives students will need for the lesson.

Thinking Through Each Session

Session	Review	Strategies	Questions
	Read the *Purpose* of each session. How does the *Purpose* support the goal of the lesson?	Look at *Possible Student Work* and *Select and Sequence Student Solutions* to determine which strategies to highlight with students. How do these strategies help students make sense of the math?	Review the *Discuss It* prompts. Identify which questions you will ask to support partner and whole group discussion. Review the *Ask/Listen for* prompts. Identify which questions will help students make connections between strategies.
1	Students explore the idea that adding and subtracting fractions is like adding and subtracting whole numbers, using a number line model.	Students may show "jumps" on the number line or draw fraction bars to represent the addition or subtraction of the fractions. They may count up to show addition or count back to show subtraction.	- How is adding fractions like adding whole numbers? How is it different? (ask this question for subtraction model too)
2	Students use number lines and area models to show fraction addition/ subtraction and compare how the models are alike and different.	Students are provided with number lines and area models to label and show addition or subtraction. On number lines- may show jumps or bars. On area models, may shade in parts and cross out shaded parts to indicate subtraction.	- What information did you use to help you label your number line? - Where does your number line show each part of the problem? - Where does the area model show 1/8, 2/8? How many parts did you decide to shade? How did you show the parts you subtracted?
3	Students demonstrate understanding of fraction addition and subtraction by solving problems using number lines or area models and consider the importance of attending to the size of the whole when adding/subtracting.	-Area models -Number lines -Count up with unit fractions	- How are the models the same? How are they different? - Are both fractions the same size? Why not? - Why does it not make sense to add these two fractions?
4			
5			

Thinking Through Differentiation and Practice

Review *Reflect, Apply It,* and *Close: Exit Ticket.* Think about how and when you will use these to check for student understanding.	What resources will you assign for homework, additional practice, or fluency support/practice?	When and with what resources will you reteach, reinforce, or extend students' understandings?
Session 1: Use Close: Exit Ticket pg. 404 Reflect Question #5 Look for students who need additional support with locating fractions on a number line. Have them build a number line using fraction bars. _____ Session 2: Use Close: Exit Ticket pg. 408 # 6, If students are unclear that fractions are composed of unit fractions have them use fraction bars to show unit fractions. _____ Session 3: Use Close: Exit Ticket pg. 412 #5 Look for students who find a sum greater or less than 5/8 and have them check their thinking with fraction bars.	Session 1: Additional Practice pgs. 405-406 _____ Session 2: Additional Practice pgs. 409-410	Differentiated Instruction after the Lesson Quiz (Resources on Toolbox) -Reteach: Tool for Instruction- Understand Fraction Addition and Subtraction -Reinforce: Math Center Activity- Match It! -Extend: Enrichment Activity- Relay Race