Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Add 'Em Up
Focus:	Fractions

Materials:	
White boards	Activities at end of lesson plan
Crayolas	Vocabulary Notebooks
Deck of cards	Socks (use as erasers)

Opening
State the objective Today we are going to practice using our math vocabulary and skills with fractions.
Gain prior knowledge by asking students the following questions Fractions are a key part of being prepared to understand algebra. What do you know about fractions? When would you use your knowledge of fractions in the real world? What is an improper fraction? What is a mixed number? What are equivalent fractions? What do you know about addition fractions? Do you think it would be easier to add fractions if you wrote the problems horizontally or vertically? What makes you think that?

Content (the "Meat")	
Problem of the Day Joni had $25.00. She spent $15.89 on a new CD. Does she have enough money left to purchase a book for $8.99. Tell how you know.	***Activity → Teachable Moment(s) *throughout*** During the lesson check in with students repeatedly. Check in about what is happening and what they are thinking. Take advantage of any teachable moments. Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking. When possible, engage students in "teaching to learn".
Fact Practice **Multiplication War** • Divide students into pairs. Give each pair a deck of cards without face cards and jokers. • Shuffle the deck and divide the cards evenly between the two players • On go, the players turn over the cards at the same time • Students multiply the 2 numbers that have been turned up • First person to give the answer either wins the cards because the answer is correct, or has to turn over 2 cards because he/she gave the wrong answer • At the end of round, students may reshuffle the pile of cards that they have • Play can continue until one player has all cards or time has called	

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: like denominators

Description: A fraction has two numbers, a numerator, the number on top, and the denominator, the number on the bottom. When you add fractions you must have the same denominator on the bottom in both fractions. Otherwise it is like adding apples and oranges. If the fractions don't have the same denominator, you will have to find equivalent fractions with the same denominator.

Review the entry in your Vocabulary Notebook for the word **denominator** with a friend**.** Make a new entry for the term like denominators.

Vocabulary Notebook Sample:

New Word	**My Description**
like denominators	Like denominators are two or more fractions that have the same bottom number
Personal Connection	**Drawing**
$\frac{1}{8.}$ and $\frac{3}{4}$ do not have like denominators.	

It is important to review academic math vocabulary often throughout the day

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity
Fractions

Addition of Fractions

When adding fractions the denominators **MUST** be the same. If this is not the case it is like adding apples and oranges, two items that are not the same so they cannot be added.

In the problems today, the denominators **ARE** the same to focus students on the process of adding and then simplifying the fraction as necessary.

Simplifying the fraction means reducing the fraction until it is the most "understandable".

For example ½ is easier to understand than $\frac{7}{14}$. You may also find that after addition you have more than 1 whole. For example, if you have ordered 4 different pizzas, each of them divided into 8 pieces, if at the end of the meal you have 3 pieces of one pizza, 2 of another, 4 of the third and 1 of the fourth, you have a total of 10 pieces, which you could combine into 1 pizza plus 2 additional pieces so you would have 1 ¼ pizzas.

Write several problems on the board adding fractions with like denominators **AND** reducing to the simplest form.

Add 'Em Up

Directions:

1. Divide students into pairs.
2. Give each pair an Add 'Em Up game board, deck of Add 'Em Up game cards, white boards, and markers (this can be different colors of construction paper)

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is" center.

3. Shuffle the cards and put them face down next to the game board. 4. Player 1 draws a card and completes the problem on the card (using the white board as necessary). 5. Player 1 finds answer on the game board and marks with a marker. 6. Player 2 continues in the same way. 7. Game is over when all spaces on the game board are covered.	

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three what questions:

What was your key learning for the day?

What opportunities might you have to do this same thing in the "real world"?

What advice would you give to a "new" player getting ready to play this game so he/she could get all the blocks are completed?

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Addition ‘Em Up Game Cards

$\frac{2}{7} + \frac{3}{7}$	$\frac{7}{12} + \frac{7}{12}$	$\frac{1}{5} + \frac{2}{5}$	$\frac{2}{3} + \frac{2}{3}$	$\frac{5}{6} + \frac{5}{6}$
$\frac{11}{14} + \frac{9}{14}$	$\frac{7}{8} + \frac{5}{8}$	$\frac{3}{4} + \frac{3}{4}$	$\frac{11}{12} + \frac{5}{12}$	$\frac{8}{9} + \frac{4}{9}$
$\frac{7}{8} + \frac{3}{8}$	$\frac{8}{9} + \frac{5}{9}$	$\frac{3}{10} + \frac{7}{10}$	$\frac{11}{12} + \frac{7}{12}$	$\frac{14}{15} + \frac{4}{15}$

Addition 'Em Up Game Board

	$1\frac{1}{3}$	1	$1\frac{3}{7}$	$\frac{5}{7}$
				$1\frac{4}{9}$
$1\frac{1}{2}$	$1\frac{1}{3}$	$1\frac{1}{5}$	$1\frac{1}{2}$	$1\frac{1}{4}$
$1\frac{1}{3}$				
$1\frac{1}{2}$	$1\frac{1}{16}$	$1\frac{2}{3}$	$\frac{3}{5}$	

Consult 4 Kids Lesson Plans .

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Subtract 'Em
Focus:	Fractions

Materials:

White boards	Decks of cards
Crayolas	Vocabulary Notebooks
Socks (for erasers)	Activity at end of lesson plan

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with fractions.

Gain prior knowledge by asking students the following questions

Fractions are a key part of being prepared to understand algebra. Write a fraction on a piece of paper or a white board. Share with a friend the information about the fraction, including the numerator and the denominator. What do you know about the addition of fractions? What do you know about the subtraction of fractions? Since addition and subtraction are reciprocal actions, what do you think about the addition of fractions would also be true for the subtraction of fractions?

Content (the "Meat")

Problem of the Day

Look at the bill for lunch. If your mom pays the bill with a $100.00 bill, how much change will she get?

Taco Salad	$5.99
Open Burrito	$5.99
Soda	$1.75
Milkshake	$3.50
Cheeseburger	$6.99
French Fries	$2.99
Pastrami Sandwich	$7.99

Fact Practice

Foreheader

1. Divide students into trios. Give each trio a deck of cards without face cards and jokers.
2. Shuffle the deck and give all of the cards to the referee who will be "judging" the contest
3. On go, players are each handed a card by the referee and **WITHOUT** looking, put the card face out on his/her forehead
4. The referee multiplies the two numbers together and states the answer

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in "teaching to learn".

5. Each player looks at the other person's exposed number and names his/her own number
6. Person who wins (accuracy and time), collects both cards
7. Play continues until all cards are gone.
8. Players can repeat play (if there is another time) with each other so each has an opportunity to be both a player and referee

Math Vocabulary

Word for today: like denominators

Description: Denominator is a term we use to describe the number of pieces that there are in the whole. Denominators in subtraction, just like in addition, must be the same or you can't subtract. The process is the same as in addition. When you are ready to work the problem, you subtract instead of adding.

Review entry in your notebook for the term: **denominator.** Review with a friend and review the entry for Like denominators as well. Add information about the subtraction of fractions as well

Vocabulary Notebook Sample:

New Word	**My Description**
like denominators	When the bottom number of two or more fractions is alike, the denominators are alike.
Personal Connection	**Drawing**
¼ and ¾ have like denominators.	→ $\frac{3}{8}$ $\frac{5}{8}$

It is important to review academic math vocabulary often throughout the day

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation)

Vocabulary Notebooks can be made from ½ of a composition book.

Activity
Fractions

Subtraction of Fractions

When subtracting fractions the denominators **MUST** be the same. If this is not the case it is like subtracting apples from oranges, two items that are not the same so they cannot be subtracted.

In the problems today, the denominators **ARE** the same to focus students on the process of subtracting and then simplifying the fraction as necessary.

Simplifying the fraction means reducing the fraction until it is the most "understandable". For example ½ is easier to understand than $\frac{7}{14}$. You may also find that after subtraction, you have more than 1 whole. For example, if you have ordered 4 different pizzas, each of them divided into 8 pieces, if at the end of the meal you have 3 pieces of one pizza, 2 of another, 4 of the third and 1 of the fourth, you have a total of 10 pieces, which you could combine into 1 pizza plus 2 additional pieces so you would have 1 ¼ pizzas. So to find out how much pizza was eaten we would want to subtract 1 ¼ pizzas from 4 whole pizzas to discover the 2 ¾ pizzas were eaten.

Write several problems on the board subtracting fractions with like denominators **AND** reducing to the simplest form.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

Subtract 'Em **Directions:** 1. Divide students into pairs. 2. Give each pair an Subtract 'Em game board, deck of Subtract 'Em game cards, white boards, and markers (this can be different colors of construction paper) 3. Shuffle the cards and put them face down next to the game board. 4. Player 1 draws a card and completes the problem on the card (using the white board as necessary). 5. Player 1 finds answer on the game board and marks with a marker. 6. Player 2 continues in the same way. 7. Game is over when all spaces on the game board are covered.	

Closing

Review

Say:

- Please recap what we did today.
- Did we achieve our objectives?

Debrief

Three Whats

Ask the following three what questions:

What was your key learning for the day?

What opportunities might you have to do this same thing in the "real world"?

What advice would you give to a "new" student getting ready to do this activity.

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Subtract ‘Em Game Cards

$\frac{5}{7} - \frac{3}{7}$	$\frac{9}{12} - \frac{7}{12}$	$\frac{3}{5} - \frac{2}{5}$	$\frac{2}{3} - \frac{1}{3}$	$\frac{9}{6} - \frac{5}{6}$
$\frac{11}{14} - \frac{9}{14}$	$\frac{7}{8} - \frac{5}{8}$	$\frac{7}{4} - \frac{3}{4}$	$\frac{11}{12} - \frac{5}{12}$	$\frac{8}{9} - \frac{4}{9}$
$\frac{7}{8} - \frac{3}{8}$	$\frac{8}{9} - \frac{5}{9}$	$\frac{9}{10} - \frac{3}{10}$	$\frac{11}{12} - \frac{7}{12}$	$\frac{14}{15} - \frac{4}{15}$

Subtract ‘Em

	$\frac{2}{7}$	1	$\frac{1}{7}$	$\frac{5}{8}$
				$\frac{1}{6}$
$\frac{1}{4}$	$\frac{4}{9}$	$\frac{1}{5}$	$\frac{3}{5}$	$\frac{1}{3}$
$\frac{5}{12}$				
$\frac{1}{2}$	$\frac{4}{9}$	$\frac{2}{3}$	$\frac{2}{3}$	

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Unlike Addition
Focus:	Fractions

Materials:	
White boards	Vocabulary Notebooks
Crayolas	Socks (for erasers)
Dice	Activity at the end of the lesson plan

Opening

State the objective

Today we are going to practice using our math vocabulary and skills working with fractions.

Gain prior knowledge by asking students the following questions

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? When would you use your knowledge of fractions in the real world? What does it mean to have like denominators? What is the process for finding like denominators? Write a "recipe" for finding equivalent fractions and like denominators for fractions with different denominators.

Content (the "Meat")

Problem of the Day

Your family is going to Lego Land. You and your two brothers are each taking a friend, and both mom and dad are going. Adult tickets cost $22.50 each, and student tickets are $18.75 each. What will be the total cost of admission?

Fact Practice

Spokes on a Wheel

1. Divide students into pairs
2. On a white board, student draws a small circle with 9 spokes coming out of it (should look like a bicycle tire)
3. Have students choose to put a 6, 7 or 8 in the center circle
4. Student rolls two dice and adds the pips (dots)
5. Taking this total, student writes a math problem on one of the spokes (eg. 7 is in the circle and students rolls a 3 and 5 which totals 8. The spoke equation would look like 7 x 8 = 56
6. Process continues until all spokes have an equation

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: equivalent fractions

Description: Equivalent fractions is a math term that describes two fractions that have the same value even though they are not represented with the same fraction. For example, if you have ½ of a pizza, you could also have $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$, or $\frac{5}{10}$. These are all equivalent fractions. No matter how you write it, you have ½ of all that there is.

Students review Vocabulary Notebook, add information as necessary.

Vocabulary Notebook Sample:

New Word	My Description
equivalent fractions	½ and $\frac{100}{200}$ are equivalent fractions
Personal Connection	**Drawing**
My sister and I had equivalent fractional parts of the pizza.	$\frac{4}{8} = \frac{2}{4} = \frac{1}{2}$

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity
Comparing Fractions

Addition of Fractions

Often times when we are ready to add or subtract fractions the denominators are not alike. When that is the case, the first thing that needs to occur is that you find the common denominator for the fractions. The easiest way to do this, of course, is to multiply the two denominators together and use that number. While that will **ALWAYS** work, it may not be the lowest possible common denominator. To find the lowest common denominator you must ask yourself several questions:

Are both of the denominators prime numbers? If "yes", then multiply together. If "no", ask: Will the smallest denominator go into the larger denominator evenly? If "yes", begin here and translate the fraction with the smaller denominator into a fraction with the other denominator. If "no", then ask: What number will both of these divide into evenly (other than the product of multiplying them together.)

Once both fractions are translated into fractions with common denominators, you are ready to add or subtract. Remember to simplify your answer.

Unlike Addition

Directions:

1. Divide students into pairs.
2. Give each pair an Unlike Addition game board, deck of Unlike Addition game cards, white boards, and markers (this can be different colors of construction paper)
3. Shuffle the cards and put them face down next to the game board.
4. Player 1 draws a card and completes the problem on the card (using the white board as necessary).
5. Player 1 finds answer on the game board and marks with a marker.
6. Player 2 continues in the same way.
7. Game is over when all spaces on the game board are covered.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" student getting ready to do this activity.

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Unlike Addition Game Cards

$\frac{2}{5} + \frac{1}{3}$	$\frac{5}{8} + \frac{3}{4}$	$\frac{2}{3} + \frac{5}{6}$	$\frac{3}{4} + \frac{1}{3}$	$\frac{1}{3} + \frac{5}{6}$
$\frac{4}{5} + \frac{9}{10}$	$\frac{1}{2} + \frac{1}{7}$	$\frac{2}{7} + \frac{3}{14}$	$\frac{9}{10} + \frac{1}{2}$	$\frac{5}{9} + \frac{2}{3}$
$\frac{5}{6} + \frac{7}{12}$	$\frac{2}{5} + \frac{7}{10}$	$\frac{3}{10} + \frac{7}{15}$	$\frac{5}{12} + \frac{7}{18}$	$\frac{2}{5} + \frac{4}{15}$

Unlike Addition Game Board

	$1\frac{3}{8}$	$1\frac{1}{2}$	$1\frac{1}{12}$	$\frac{11}{15}$
				$1\frac{1}{6}$
$1\frac{5}{12}$	$1\frac{2}{9}$	$1\frac{2}{5}$	$\frac{9}{14}$	$1\frac{7}{10}$
$1\frac{1}{10}$				
$\frac{23}{30}$	$\frac{29}{36}$	$\frac{2}{3}$	$\frac{1}{2}$	

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Unlike Subtraction
Focus:	Fractions

Materials:

White boards — Vocabulary Notebooks

Crayolas — Dice

Activity at the end of the lesson plan — Socks (use for erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with fractions.

Gain prior knowledge by asking students the following questions

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? When would you use your knowledge of fractions in the real world? What does it mean that in order to subtract the fractions need to have like denominators? What does it mean to have equivalent fractions? Would you rather have $\frac{3}{5}$ or $\frac{1}{2}$ of a pizza?

Content (the "Meat")

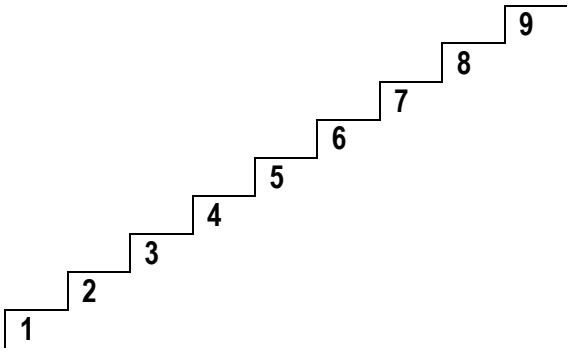
Problem of the Day

At the game store, a Monopoly games costs $9.95. Jill also bought a Sorry game. The total bill was $24.16. How much did the Sorry game cost? How do you know?

Fact Practice

Multiplication Ladder

1. Give each student a white board (include marker or crayola)
2. Student should draw a ladder like the one below



3. Have student roll 2 dice, total the pips and then multiply that number times each of the numbers in the ladder, writing the total to the right of the number

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Math Vocabulary

It is important to review

Consult 4 Kids Lesson Plans

Word for today: reduce

Description: Reduce is the term we use to discuss how to make fractions more manageable. If you have a fraction that is $\frac{150}{300}$, even though the numerator and the denominator are large, the fact is that you still have ½ of the whole thing. Understanding how much you have is easier when the fraction has been reduced to its lowest form. To reduce a fraction you do the same to both the numerator and the denominator which allows the relationship to stay in proportion.

Look in your notebook at your entry for the term "reduce". Add any information that you believe makes more sense.

Vocabulary Notebook Sample:

New Word	**My Description**
reduce	a fraction like $\frac{75}{100}$ is easier to understand when reduced to $\frac{3}{4}$.
Personal Connection	**Drawing**
If I eat 4 of the eight pieces of pizza, then I have eaten ½ of it.	$\frac{4}{8}$ can be reduced to

academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity

Subtraction of Fractions

Often times when we are ready to add or subtract fractions the denominators are not alike. When that is the case, the first thing that needs to occur is that you find the common denominator for the fractions. The easiest way to do this, of course, is to multiply the two denominators together and use that number. While that will **ALWAYS** work, it may not be the lowest possible common denominator. To find the lowest common denominator you must ask yourself several questions:

Are both of the denominators prime numbers? If "yes", then multiply together. If "no", ask: Will the smallest denominator go into the larger denominator evenly? If "yes", begin here and translate the fraction with the smaller denominator into a fraction with the other denominator. If "no", then ask: What number will both of these divide into evenly (other than the product of multiplying them together.)

Once both fractions are translated into fractions with common denominators, you are ready to add or subtract. Remember to simplify your answer.

Unlike Subtraction

Directions:

1. Divide students into pairs.
2. Give each pair an Unlike Subtraction game board, deck of Unlike Subtraction game cards, white boards, and markers (this can be different colors of construction paper)
3. Shuffle the cards and put them face down next to the game board.
4. Player 1 draws a card and completes the problem on the card (using the white

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

board as necessary). 5. Player 1 finds answer on the game board and marks with a marker. 6. Player 2 continues in the same way. 7. Game is over when all spaces on the game board are covered.	

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" student getting ready to do this activity.

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Unlike Subtraction

$\frac{1}{2} - \frac{1}{3}$	$\frac{5}{8} - \frac{3}{16}$	$\frac{2}{3} - \frac{5}{9}$	$\frac{11}{12} - \frac{3}{8}$	$\frac{9}{10} - \frac{3}{20}$
$\frac{5}{12} - \frac{1}{3}$	$\frac{1}{2} - \frac{1}{4}$	$\frac{4}{5} - \frac{3}{10}$	$\frac{9}{10} - \frac{1}{15}$	$\frac{2}{5} - \frac{3}{10}$
$\frac{2}{5} - \frac{1}{4}$	$\frac{5}{6} - \frac{5}{18}$	$\frac{7}{8} - \frac{1}{2}$	$\frac{11}{12} - \frac{1}{4}$	$\frac{13}{21} - \frac{2}{7}$

Unlike Subtraction

	$\frac{5}{9}$	$\frac{1}{6}$	$\frac{7}{16}$	$\frac{1}{9}$
				$\frac{13}{24}$
$\frac{5}{6}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{12}$	$\frac{3}{4}$
$\frac{1}{10}$				
$\frac{3}{20}$	$\frac{3}{8}$	$\frac{2}{3}$	$\frac{1}{3}$	

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Addition of Mixed Numbers
Focus:	Fractions

Materials:

White boards
Crayolas
Activities at the end of this lesson plan
Vocabulary Notebooks
Cards
Socks (use as erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with fractions.

Gain prior knowledge by asking students the following questions

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? When would you use your knowledge of fractions in the real world? What is meant by a mixed number? If you wanted to change a mixed number into a fraction, what type of a fraction would it become? Why would you want to work with a mixed fraction?

Content (the "Meat")

Problem of the Day

Jorge and 6 of his friends are going to split the lunch bill. The total bill was $27.90. How much will each person pay?

Fact Practice

Target

1. Divide students into trios
2. Each trio needs a deck of cards without face cards and jokers
3. Place the cards face up in a TicTac Toe Grid
4. Turn up a 10th card which will be to the side and becomes the target number (aces count as 1)
5. Each player makes an equation with some or all of the numbers in the grid to equal the target number. Students may add, subtract, multiply or divide
6. Each card may be used only one time in the equation
7. As the cards are being picked up, the player must say the equation aloud—for example if the target card is 10, then I could say 5 x 2 = 10, and pick up the 5 and the 2.
8. After one player finishes his/her turn, then the cards taken are replaced by cards from the remaining deck
9. Player with the most cards at the end of the game win

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: mixed number

Description: Mixed number is a mathematical term that refers to the combination of a whole number and a fraction to describe a value. For example, 3 ½ is a mixed number. It tells you that there are 3 whole items and ½ of a fourth item.

Students should review their Vocabulary Notebook and have an accurate and informative entry for the term "mixed number".

Vocabulary Notebook Sample:

New Word	My Description
mixed number	A whole number and a fraction as one number
Personal Connection	**Drawing**
My little brother is 7 ½ years old.	

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity

Fractions

Addition of Mixed Numbers

A mixed number is a whole number and a fraction together, for example $1\frac{1}{2}$. This number represents one whole something (say a pizza) and ½ of another pizza. You can add mixed numbers with fractions that have common denominators as well as those which do not provided you translate the unlike fractions into a fraction with common denominators. We are going to begin by adding mixed numbers with a common denominator. When you simplify addition sums of mixed numbers, you may need to add in a whole item if the two fractions total more than one. For example if you have 2 ½ pizzas and your neighbor brings over ¾ of another pizza, when you put the pizza together in a box, you will end up with 3 ¼ pizzas. Draw the problem out and you will see why this answer is real.

Mixed Results—Addition

Directions:

1. Divide students into pairs.
2. Give each pair a set of Mixed Results Cards and a white board.
3. Shuffle the cards together and place in a 4 x 4 grid, face down.
4. Player 1 turns over two cards, looking for a match. An addition problem and an answer will create the match.
5. When a card is taken, replace the removed card with more cards.
6. Player 2 then continues to play.
7. Play is over when all cards have been paired.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" student getting ready to do this activity.

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Consult 4 Kids Lesson Plans

Mixed Results—Addition Numbers (cut cards apart)

$4\frac{3}{8}$ $+2\frac{1}{8}$	$3\frac{2}{5}$ $+3\frac{1}{5}$	$4\frac{3}{7}$ $+2\frac{2}{7}$	$2\frac{1}{3}$ $+2\frac{1}{3}$	$5\frac{3}{6}$ $+2\frac{5}{6}$
$5\frac{1}{10}$ $+2\frac{9}{10}$	$3\frac{3}{7}$ $+2\frac{1}{7}$	$6\frac{2}{14}$ $+1\frac{3}{14}$	$2\frac{1}{2}$ $+3\frac{1}{2}$	$4\frac{5}{9}$ $+2\frac{2}{9}$
$2\frac{7}{12}$ $+3\frac{7}{12}$	$5\frac{9}{10}$ $+4\frac{7}{10}$	$2\frac{7}{15}$ $+1\frac{11}{15}$	$4\frac{1}{3}$ $+3\frac{2}{3}$	$2\frac{7}{15}$ $+2\frac{4}{15}$
$6\frac{1}{2}$	$6\frac{5}{7}$	$4\frac{2}{3}$	$8\frac{1}{3}$	8
$5\frac{4}{7}$	$7\frac{5}{14}$	6	$6\frac{7}{9}$	$6\frac{1}{6}$
$10\frac{3}{5}$	$4\frac{1}{5}$	8	$4\frac{11}{15}$	$6\frac{3}{5}$

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Subtraction of Mixed Numbers
Focus:	Fractions

Materials:

White boards	Vocabulary Notebooks	Activity at the end of the lesson plan
Crayolas	two, 12-sided dice for each pair	
Product Hunt Work Sheet	Sock (for erasers)	

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with fractions.

Gain prior knowledge by asking students the following questions

Fractions are a key part of being prepared to understand algebra. What do you know about fractions? When would you use your knowledge of fractions in the real world? What are the steps are that you must complete to subtract fractions? What is a mixed number? In order to subtract, what will you do with the mixed number?

Content (the "Meat")

Problem of the Day

Joe practiced running the 100-yard dash every morning. He charted the time in the table below. What is his mean time? What was the range for his times? Explain how you know.

Day	Seconds
Monday	15.5
Tuesday	14
Wednesday	12.5
Thursday	14
Friday	12.5

Fact Practice

Product Hunt

1. Divide students into pairs
2. Each pair needs a Product Hunt sheet (attached to this lesson plans)
3. Player rolls two, 12-sided dice.
4. Player multiplies the two numbers.
5. If the product is not yet covered, then player may cover the product.

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

6. Next player repeats steps 1-3.
7. Winner is determined by who has the most numbers covered.

Math Vocabulary

Word for Today: simplify

Description: Simplify is a math term that refers to writing a fraction or an equation in its easiest to understand form. When you look at a fraction, while $\frac{75}{150}$ is the same as ½ , it is just easier to get your head around the concept of ½ . When the fraction is written as ½ it has been simplified.

Create an entry of the term composite in the vocabulary notebook.

Vocabulary Notebook Sample:

New Word	**My Description**
simplify	Write things in is easiest to understand form.
Personal Connection	**Drawing**
My brother says he is 7 ¾ year old, I say he is almost 8.	$\frac{9}{18}$ is $\frac{1}{2}$

It is important to review academic math vocabulary often throughout the day

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity

Fractions

Subtraction of Mixed Numbers

A mixed number is a whole number and a fraction together, for example $1\frac{1}{2}$. This number represents one whole something (say a pizza) and ½ of another pizza. You can add mixed numbers with fractions that have common denominators as well as those which do not provided you translate the unlike fractions into a fraction with common denominators. We are going to subtract mixed numbers with a common denominator. When you simplify the differences of mixed numbers, you will want to be sure that you have the correct fraction and whole numbers. For example if you have 2 ½ pizzas and your neighbor comes over and eats ¼ of a pizza, when you put the pizza together in a box, you will now have 2 ¼ pizzas. Draw the problem out and you will see why this answer is real.

Mixed Results—Subtraction

Directions:

1. Divide students into pairs.
2. Give each pair a set of Mixed Results Cards and a white board.
3. Shuffle the cards together and place in a 4 x 4 grid, face down.
4. Player 1 turns over two cards, looking for a match. An addition problem and an answer will create the match.
5. When a card is taken, replace the removed card with more cards.
6. Player 2 then continues to play.
7. Play is over when all cards have been paired.

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" student getting ready to do this activity.

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Product Hunt

48	20	81	3	45	27
1	24	108	77	7	40
120	72	96	8	18	60
14	144	70	22	15	11
33	35	66	132	63	16
12	30	28	110	100	49
6	36	21	121	90	2
84	5	44	25	99	10
32	9	56	88	4	11
24	50	55	54	42	80

Consult 4 Kids Lesson Plans

Mixed Results—Subtraction

$4\frac{3}{8}$ $-2\frac{1}{8}$	$3\frac{2}{5}$ $-2\frac{1}{5}$	$4\frac{3}{7}$ $-2\frac{2}{7}$	$5\frac{2}{3}$ $-2\frac{1}{3}$	$5\frac{5}{6}$ $-2\frac{1}{6}$
$5\frac{9}{10}$ $-2\frac{3}{10}$	$3\frac{3}{7}$ $-2\frac{1}{7}$	$6\frac{9}{14}$ $-1\frac{3}{14}$	$3\frac{3}{4}$ $-1\frac{1}{4}$	$4\frac{5}{9}$ $-2\frac{2}{9}$
$3\frac{11}{12}$ $-1\frac{7}{12}$	$5\frac{9}{10}$ $-4\frac{7}{10}$	$2\frac{11}{15}$ $-1\frac{9}{15}$	$4\frac{2}{3}$ $-3\frac{1}{3}$	$9\frac{7}{15}$ $-2\frac{4}{15}$
$2\frac{1}{4}$	$1\frac{1}{5}$	$2\frac{1}{7}$	$3\frac{1}{3}$	$3\frac{2}{3}$
$3\frac{3}{5}$	$1\frac{3}{7}$	$5\frac{3}{7}$	$2\frac{1}{2}$	$2\frac{1}{3}$
$2\frac{5}{12}$	$1\frac{1}{5}$	$1\frac{2}{15}$	$1\frac{1}{3}$	$7\frac{1}{5}$

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Addition, Unlike Denominators
Focus:	Fractions

Materials:

White boards
Vocabulary Notebooks
Crayolas
Decks of cards
Activity at the end of the lesson plan
Socks (use as erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills in working with fractions.

Gain prior knowledge by asking students the following questions

What do you know about common denominators? Getting two fractions with different denominators to have the same denominator is a process. There are steps that you need to go through to be sure that you have found now only a common denominator but the lowest common denominator. What is a mixed number? What does it mean to simplify a fraction? When would you do this?

Content (the "Meat")

Problem of the Day

The food ad for Jake's advertised lemons at 8 for $2.99. Green Frog's ad advertised buy 3 lemons and get 1 free. The price at the second store is $.50 for each lemon. Which place is offering the better deal? How do you know?

Fact Practice

Draw!

1. Divide students into pairs and give each pair a deck of cards
2. Remove the face cards and jokers from the deck of cards.
3. Shuffle the deck.
4. Decide who will go first.
5. First player draws two cards.
6. Student multiplies the cards.
7. Student writes his/her problem on the white board, writing a complete number sentence.
8. Students take turns drawing and creating problems.

Math Vocabulary

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

It is important to review academic math vocabulary

Word for Today: common denominator

Description: A common denominator is a term that we use to describe what occurs when two or more fractions have the same denominator. If the denominators are not the same, or they are not common, you cannot add or subtract fractions. You can find a common denominator by trying different multiples of the fractions. For example, you cannot add ½ and 1/3 until you have a common denominator (in this case 6) and you would have fractions of $\frac{3}{6}$ and $\frac{2}{6}$

Review the term common denominator in your vocabulary notebook. In order to add fractions, you must begin with common denominators.

Vocabulary Notebook Sample:

New Word	My Description
common denominator	Two or more whole things that have been divided into the same number of parts
Personal Connection	**Drawing**
When we divide sandwiches we want to divide each one in thirds, so the common denominator is 3.	→ $\frac{3}{6}$ and $\frac{2}{6}$

often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity

Fractions

Addition of Mixed Numbers—Unlike Denominators

Addition of mixed numbers with unlike denominators begins just like simply addition fractions. You must first determine the common denominator for the fractions. You then translate the fractions into fractions with like denominators and add the fractions. You simplify the fraction and then if there is a whole number, you will add it to the other whole number addends.

The challenge of fractions is not the addition of the numerators, it is in the preparation of the fractions for addition and then the simplification of those fractions prior to adding the whole numbers.

Do several problems with the students on the board, talking through each of the steps before giving them the Addition of Unlike Mixed Card.

Addition of Unlike Mixed

Directions:

1. Divide students into pairs.
2. Give each pair an Addition of Unlike Mixed problems and white boards.
3. Working together, pairs complete each of the problems.
4. When the problems are completed, pair should take the letter of the problem and plug the letters into the riddle card.
5. If the problems were completed correctly, the answer to the riddle will be obvious. (Not all letters may be used in the answer).

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" student getting ready to do this activity.

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Consult 4 Kids Lesson Plans

Addition of Unlike Mixed

H	S	T	E	N
$4\frac{1}{3} + 3\frac{1}{2}$	$7\frac{5}{9} + 4\frac{2}{3}$	$2\frac{5}{9} + 7\frac{5}{6}$	$3\frac{1}{2} + 5\frac{5}{6}$	$6\frac{2}{3} + 2\frac{5}{8}$
B	**P**	**I**	**G**	**F**
$4\frac{3}{5} + 2\frac{2}{3}$	$1\frac{3}{4} + 9\frac{3}{10}$	$5\frac{5}{6} + 2\frac{1}{3}$	$4\frac{1}{2} + 7\frac{4}{5}$	$3\frac{3}{7} + 6\frac{3}{14}$
C	**J**	**A**	**W**	**M**
$7\frac{5}{8} + 3\frac{1}{2}$	$4\frac{7}{12} + 9\frac{2}{3}$	$3\frac{8}{9} + 2\frac{2}{3}$	$5\frac{3}{4} + 3\frac{5}{6}$	$5\frac{1}{6} + 4\frac{3}{4}$
U	**D**	**R**	**O**	**L**
$3\frac{5}{9} + 2\frac{13}{18}$	$6\frac{1}{2} + 3\frac{2}{5}$	$6\frac{3}{4} + 2\frac{5}{8}$	$2\frac{2}{3} + 6\frac{1}{4}$	$6\frac{3}{4} + 3\frac{1}{2}$

Riddle for Day #7

$6\frac{5}{9}$	$7\frac{4}{15}$	$9\frac{3}{8}$	$6\frac{5}{9}$	$7\frac{5}{6}$	$6\frac{5}{9}$	$9\frac{11}{12}$

$10\frac{1}{4}$	$8\frac{1}{6}$	$9\frac{7}{24}$	$11\frac{1}{8}$	$8\frac{11}{12}$	$10\frac{1}{4}$	$9\frac{7}{24}$

Remove the answer from the Riddle.
16TH President of the United States: Abraham Lincoln

Consult 4 Kids Lesson Plans

Component:	Math
Grade Level:	4th & 5th Grade
Lesson Title:	Addition, Unlike Denominators 2
Focus:	Fractions

Materials:

White boards Vocabulary Notebooks

Crayolas Double 9 Dominoes

Activity at the end of the lesson plan Socks (use for erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills with fractions.

Gain prior knowledge by asking students the following questions

What do you know about common denominators? When do you need to use common denominators? How can you find a common denominator? Do you know what a Z Pattern is? What are the steps to adding mixed numbers with unlike denominators.

Content (the "Meat")

Problem of the Day

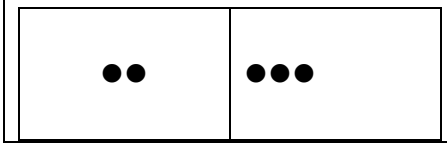
There is a sale on sports pencils, 7 at $1.19. If you need to purchase 35 pencils, how much will it cost you? Explain your answer.

Fact Practice

Spots and Dots

There is a master of Double 9 Dominos attached to this lesson plan. You will need 1 full set for each pair of students in your class. It is recommended that you duplicate on card stock and if possible, laminate for use again in the future.

Players sit across from each other.
Dominoes are between them, face (or spots) down.
Each student draws a domino and writes the multiplication problem on their white board, multiplying the numbers represented by the spots Example: Domino drawn is



Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Multiplication: 2 x 3 = 6

Math Vocabulary

Word for Today: Z pattern

Description: A Z pattern is a way to change fractions quickly into an equivalent fraction once you have found the common denominator. For example: if you need to change ½ into 6th s, you could use the Z pattern. You would begin by writing the two fractions this way:

$$\frac{1}{2} = \frac{\quad}{6}$$

Step one is to ask yourself how many times 2 will go into 6 (answer is 3), and then Z up to the numerator of 1, multiplying it by the 3 you found when you divided 2 into 6, finding the answer of 3 and writing it in the space above of the 6.

Review your entry for the descriptive term "Z pattern".

Vocabulary Notebook Sample:

New Word	**My Description**
Z pattern	Looks like a Z or the mirror image of the Z—tells you to zig zag
Personal Connection	**Drawing**
A Z pattern makes finding equal fractions easy.	$\frac{2}{3} \rightarrow \frac{4}{6}$

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity
Fractions

Addition of Mixed Numbers—Unlike Denominators

Addition of mixed numbers with unlike denominators begins just like simply addition fractions. You must first determine the common denominator for the fractions. You then translate the fractions into fractions with like denominators and add the fractions. You simplify the fraction and then if there is a whole number, you will add it to the other whole number addends.

The challenge of fractions is not the addition of the numerators, it is in the preparation of the fractions for addition and then the simplification of those fractions prior to adding the whole numbers.

Do several problems with the students on the board, talking through each of the steps before giving them the Addition of Unlike Mixed Card.

Addition of Unlike Mixed

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

Consult 4 Kids Lesson Plans

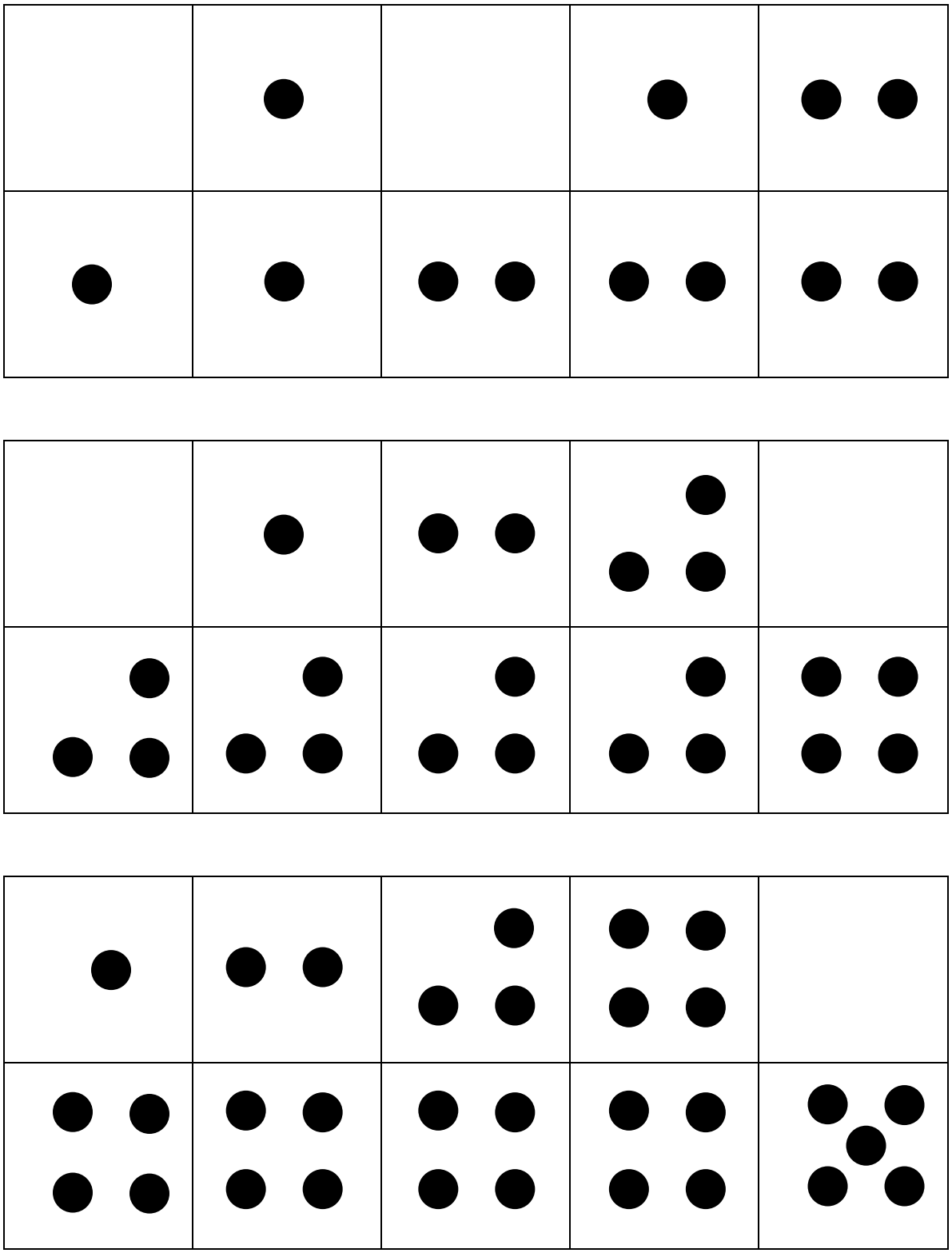
Directions: 1. Divide students into pairs. 2. Give each pair an Addition of Unlike Mixed problems and white boards. 3. Working together, pairs complete each of the problems. 4. When the problems are completed, pair should take the letter of the problem and plug the letters into the riddle card. 5. If the problems were completed correctly, the answer to the riddle will be obvious. (Not all of the letters may be used in the answer.)	

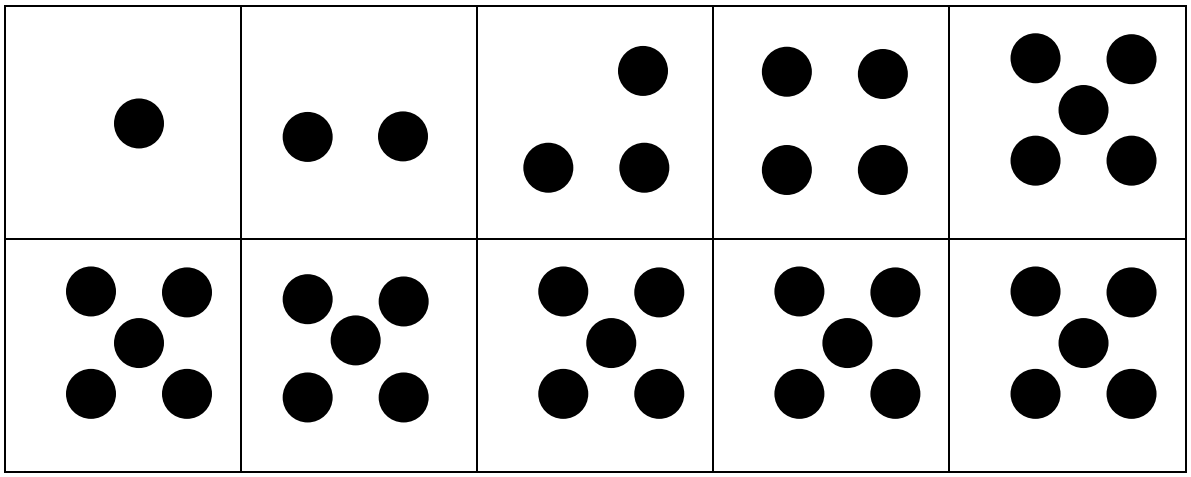
Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" student getting ready to do this activity.

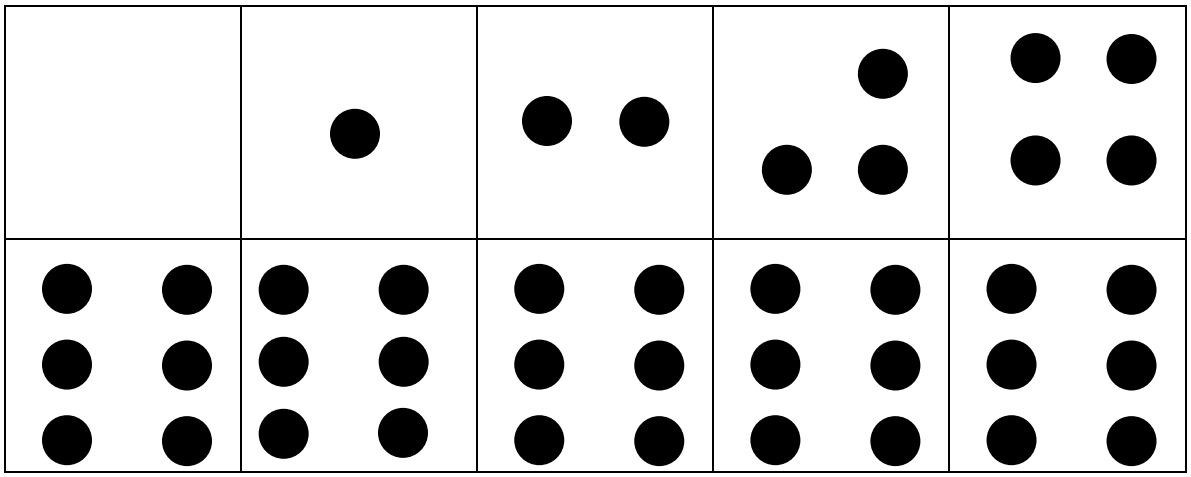
Reflection (Confirm, Tweak, Aha!)

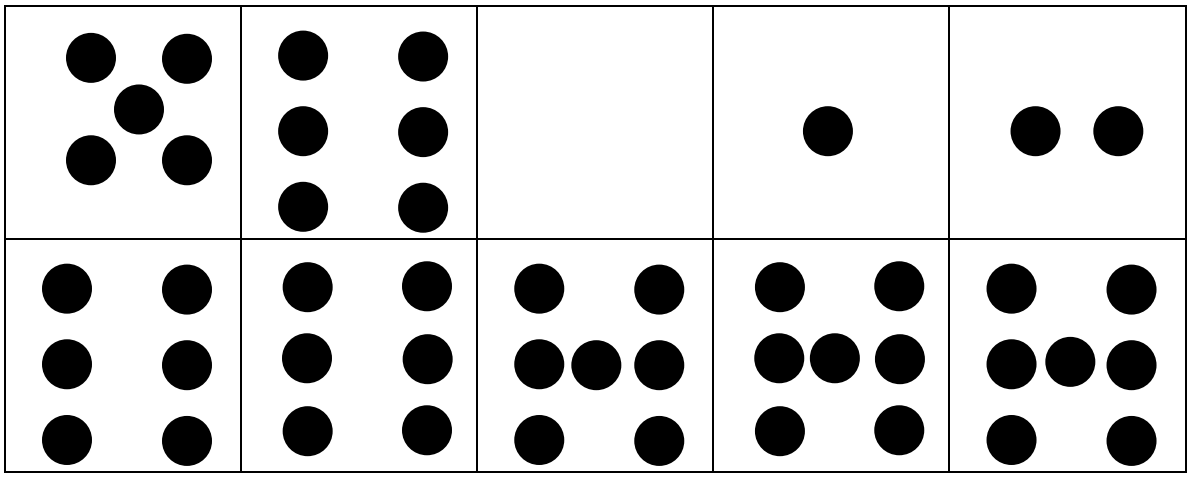
1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

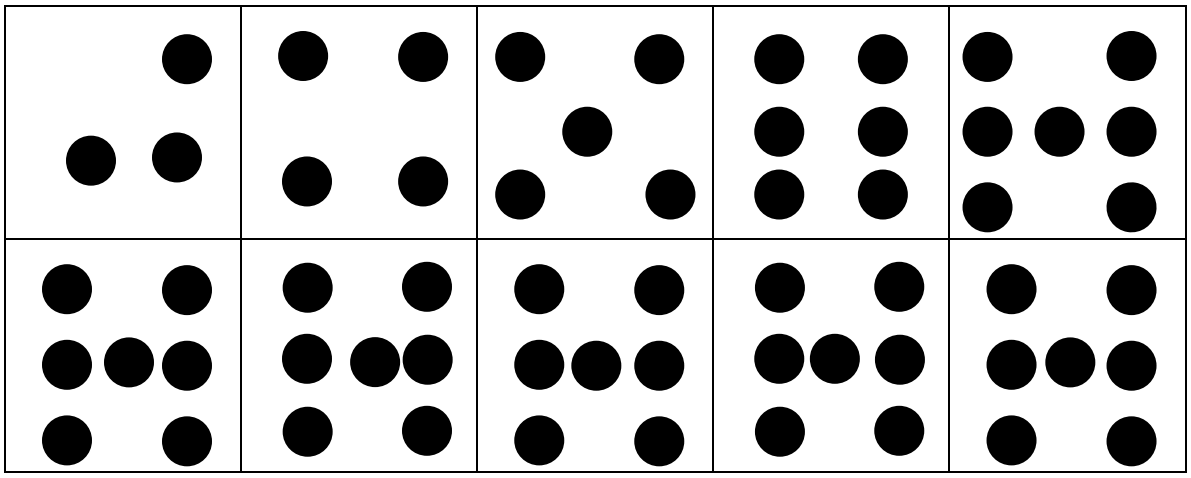
Double 9 Dominoes











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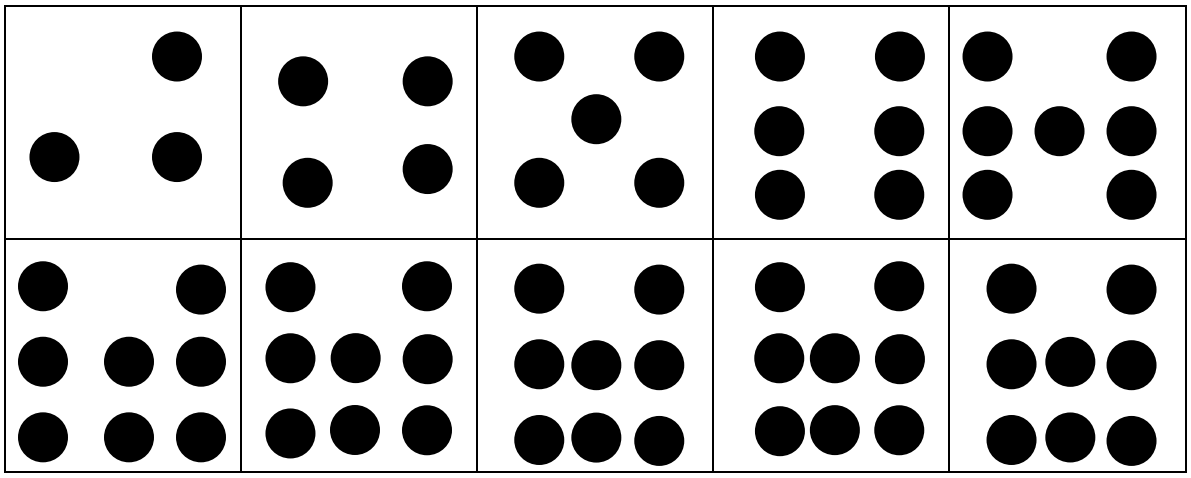

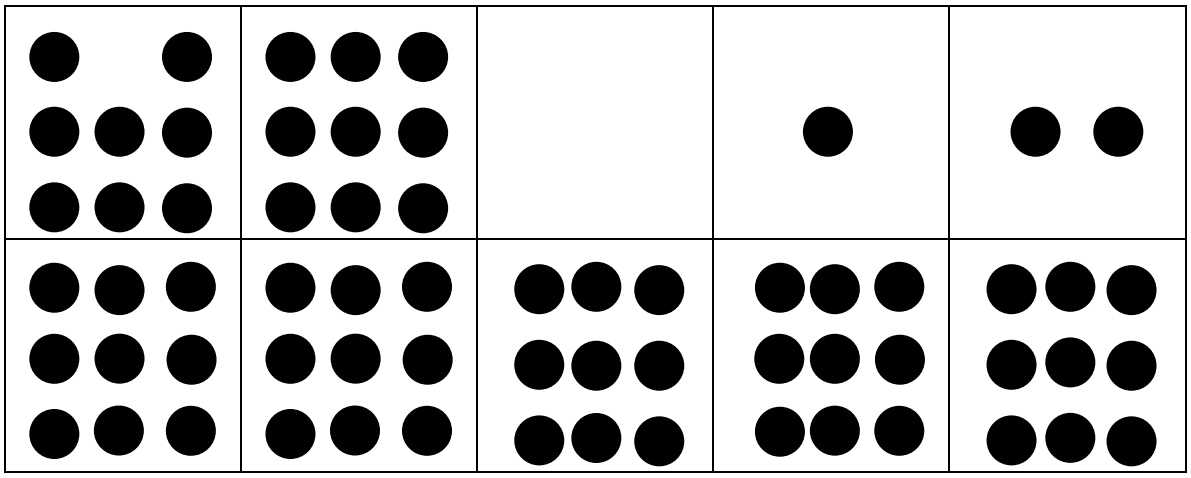

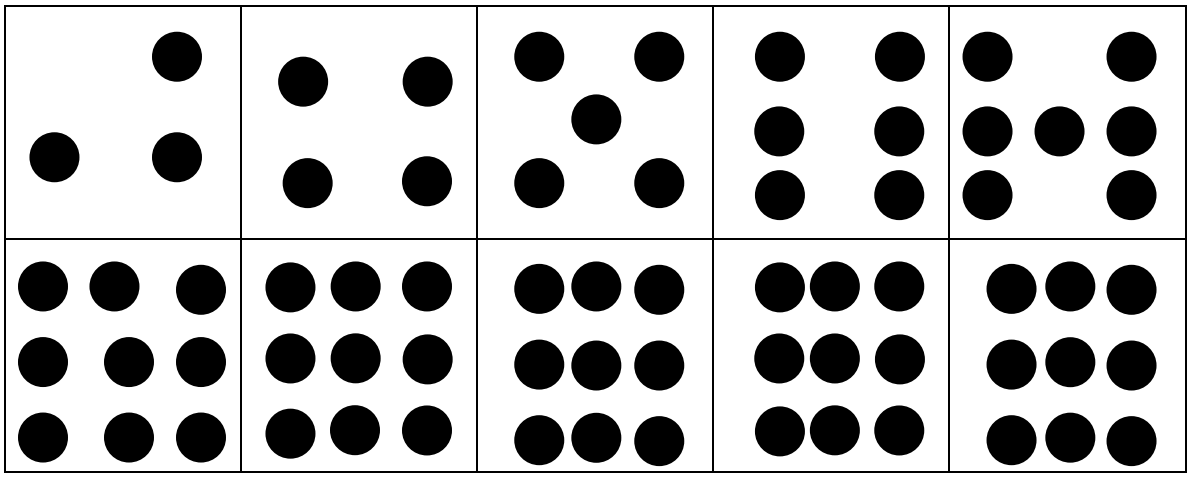

Consult 4 Kids Lesson Plans

Addition of Unlike Mixed

H	S	T	E	N
$4\frac{1}{3} + 3\frac{1}{2}$	$7\frac{5}{9} + 4\frac{2}{3}$	$2\frac{5}{9} + 7\frac{5}{6}$	$3\frac{1}{2} + 5\frac{5}{6}$	$6\frac{2}{3} + 2\frac{5}{8}$
B	**P**	**I**	**G**	**F**
$4\frac{3}{5} + 2\frac{2}{3}$	$1\frac{3}{4} + 9\frac{3}{10}$	$5\frac{5}{6} + 2\frac{1}{3}$	$4\frac{1}{2} + 7\frac{4}{5}$	$3\frac{3}{7} + 6\frac{3}{14}$
C	**J**	**A**	**W**	**M**
$7\frac{5}{8} + 3\frac{1}{2}$	$4\frac{7}{12} + 9\frac{2}{3}$	$3\frac{8}{9} + 2\frac{2}{3}$	$5\frac{3}{4} + 3\frac{5}{6}$	$5\frac{1}{6} + 4\frac{3}{4}$
U	**D**	**R**	**O**	**L**
$3\frac{5}{9} + 2\frac{13}{18}$	$6\frac{1}{2} + 3\frac{2}{5}$	$6\frac{3}{4} + 2\frac{5}{8}$	$2\frac{2}{3} + 6\frac{1}{4}$	$6\frac{3}{4} + 3\frac{1}{2}$

Riddle for Day #8

$9\frac{3}{8}$	$8\frac{11}{12}$	$9\frac{7}{24}$	$6\frac{5}{9}$	$10\frac{1}{4}$	$9\frac{9}{10}$

$9\frac{3}{8}$	$9\frac{1}{3}$	$6\frac{5}{9}$	$12\frac{3}{10}$	$6\frac{5}{9}$	$9\frac{7}{24}$

Remove the answer from the puzzle before giving to students.

Actor, California Governor, President of the United States: Ronald Reagan

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Subtraction, Unlike Denominators
Focus:	Fractions

Materials:		
White boards	Vocabulary Notebooks	Activity at end of the lesson plan
Crayolas	6-sided dice; 12-sided dice	
Decks of cards	Socks (use as erasers)	

Opening

State the objective

Today we are going to practice using our math vocabulary and skills in working with fractions.

Gain prior knowledge by asking students the following questions

What do you know about adding fractions? What do you know about subtracting fractions? How do you find a common denominator? How can you find equivalent fractions? What is a mixed number? What are the steps for subtracting fractions with mixed numbers?

Content (the "Meat")

Problem of the Day

Look at the menu below. If you have $6.00 to spend and you want a drink, sandwich, and a dessert, what possible combinations could you order? Tell how you know.

Hamburger	$4.25
Grilled Cheese	$2.70
Turkey	$3.85
Soda	$1.30
Juice	$1.45
Chocolate Milk	$0.80
Cookie	$0.50
Ice Cream Cone	$0.75
Apple	$1.00

Fact Practice

Fact Family

A Fact Family is 3 numbers which have a relationship in multiplication and division. For example, the number 9, 4, and 36 have a particular relationship in math. This family has four members:

9 X 4 = 36
4 X 9 = 36
36 ÷ 4 = 9
36 ÷ 9 = 4

Students should roll 2 dice and create a Fact Family by writing the members of the family on the white board. Student should roll a total of 5 times, creating 5 Fact Families

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: common denominator

Description: Common denominator is a term we use to describe two or more denominators that are the same. It is an essential understanding in order to add or subtract fractions. Thinking in terms of common denominators helps you to understand how much of something you really have. Review your entry for common denominator. Add any information that you need to add. Have a conversation with a partner about common denominators and how you find them in order to add or subtract fractions.

Vocabulary Notebook Sample:

New Word	My Description
common denominator	Two fractions that has the same bottom number even if the numerators are different
Personal Connection	**Drawing**
These two fractions have a common denominator: $\frac{5}{9}$ and $\frac{7}{9}$.	$\rightarrow \frac{x}{8} \quad \frac{n}{8} \quad \frac{o}{8}$

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity

Fractions

Subtraction of Mixed Numbers—Unlike Denominators

Subtraction of mixed numbers with unlike denominators begins just like simply subtracting fractions. You must first determine the common denominator for the fractions. You then translate the fractions into fractions with like denominators and subtract the fractions. You simplify the fraction and then subtract the whole numbers.

The challenge of fractions is not the subtraction of the numerators, it is in the preparation of the fractions for subtraction and then the simplification of those fractions prior to subtracting the whole numbers.

Do several problems with the students on the board, talking through each of the steps before giving them the Subtraction of Unlike Mixed Card.

Subtraction of Unlike Mixed

Directions:

1. Divide students into pairs.
2. Give each pair an Subtraction of Unlike Mixed problems and white boards.
3. Working together, pairs complete each of the problems.
4. When the problems are completed, pair should take the letter of the problem and plug the letters into the riddle card.
5. If the problems were completed correctly, the answer to the riddle will be obvious. (Not all letters may be used in the answer).

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" student getting ready to do this activity.

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Consult 4 Kids Lesson Plans

Subtraction of Unlike Mixed

R	U	H	L	N
$9\frac{4}{5}$ $-6\frac{7}{10}$	$9\frac{7}{8}$ $-4\frac{3}{4}$	$8\frac{3}{4}$ $-2\frac{1}{6}$	$6\frac{5}{6}$ $-2\frac{2}{3}$	$6\frac{2}{3}$ $-2\frac{5}{12}$
P	**W**	**B**	**E**	**Y**
$6\frac{2}{3}$ $-2\frac{2}{5}$	$11\frac{3}{4}$ $-9\frac{3}{10}$	$5\frac{5}{6}$ $-2\frac{1}{3}$	$7\frac{4}{5}$ $-2\frac{1}{2}$	$6\frac{3}{7}$ $-3\frac{3}{14}$
I	**M**	**F**	**O**	**T**
$7\frac{5}{8}$ $-4\frac{1}{2}$	$9\frac{11}{12}$ $-4\frac{2}{3}$	$3\frac{8}{9}$ $-2\frac{2}{3}$	$5\frac{5}{6}$ $-3\frac{3}{4}$	$5\frac{3}{4}$ $-4\frac{1}{6}$
G	**D**	**A**	**S**	**C**
$3\frac{8}{9}$ $-2\frac{13}{18}$	$6\frac{1}{2}$ $-3\frac{2}{5}$	$6\frac{3}{4}$ $-2\frac{5}{8}$	$9\frac{2}{3}$ $-6\frac{1}{4}$	$6\frac{3}{4}$ $-3\frac{1}{2}$

Riddle Day #9

$4\frac{1}{8}$	$5\frac{1}{4}$	$5\frac{3}{10}$	$3\frac{1}{10}$	$3\frac{1}{8}$	$3\frac{1}{4}$	$4\frac{1}{8}$	$4\frac{1}{4}$

$3\frac{1}{8}$	$3\frac{1}{10}$	$2\frac{1}{12}$	$4\frac{1}{6}$

Remove the answer before giving the riddle to the students.

Show hosted by Jennifer, Randy, and Steven: American Idol

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Subtraction, Unlike Denominators 2
Focus:	Fractions

Materials:

White boards Vocabulary Notebooks

Crayolas Decks of cards

Activity at the end of the lesson plan Socks (use as erasers)

Opening

State the objective

Today we are going to practice using our math vocabulary and skills in working with fractions.

Gain prior knowledge by asking students the following questions

What do you know about adding fractions? What do you know about subtracting fractions? How do you find a common denominator? How can you find equivalent fractions? What is a mixed number? Why does a common denominator matter when you are working with mixed numbers? What is an example of a mixed number in the real world?

Content (the "Meat")

Problem of the Day

If a = 6, what is the value of c? Explain your answer.
a + a + a = b
c = b + b

Fact Practice
Multiples

Multiplication facts are learned by recognizing the multiples of any given number. In this practice you will be determining the multiples of randomly generated numbers. You will need a chart and crayolas (150 chart).

1. Roll one or two dice (if you roll two add the numbers together to determine the factor in the fact practice)
2. Mark all multiples of the number and then pass off to the next person.
3. Player may mark the same number.

Activity → Teachable Moment(s) *throughout

During the lesson check in with students repeatedly.

Check in about what is happening and what they are thinking.

Take advantage of any teachable moments.

Stop the class and focus on a student's key learning or understanding. Ask open-ended questions to determine what the rest of the group is thinking.

When possible, engage students in a "teach to learn" opportunity and have the student become the teacher.

Consult 4 Kids Lesson Plans

Math Vocabulary

Word for Today: Z pattern

Description: Z pattern is a term we use to describe the process for translating fractions into equivalent fractions. This is a pattern that describes the process of finding equivalent fractions. Turn to a partner and explain the process to them. Then review your Vocabulary Notebook entry. Add to it if you need to do so.

Vocabulary Notebook Sample:

New Word	My Description
Z pattern	A pattern that you use to find equivalent fractions
Personal Connection	**Drawing**
After using the Z pattern I found that ½ is equal to $\frac{5}{10}$.	$\frac{1}{2} \rightarrow \frac{5}{10}$

It is important to review academic math vocabulary often throughout the day.

Complete the Vocabulary notebook for each word.

When possible, have students experience the word (Ex. 4 students creating a right angle, multiple students acting out an equation).

Vocabulary Notebooks can be made from ½ of a composition book.

Activity
Fractions

Subtraction of Mixed Numbers—Unlike Denominators

Subtraction of mixed numbers with unlike denominators begins just like simply subtracting fractions. You must first determine the common denominator for the fractions. You then translate the fractions into fractions with like denominators and subtract the fractions. You simplify the fraction and then subtract the whole numbers.

The challenge of fractions is not the subtraction of the numerators, it is in the preparation of the fractions for subtraction and then the simplification of those fractions prior to subtracting the whole numbers.

Do several problems with the students on the board, talking through each of the steps before giving them the Subtraction of Unlike Mixed Card.

Subtraction of Unlike Mixed

Directions:

1. Divide students into pairs.
2. Give each pair a Subtraction of Unlike Mixed problems and white boards.
3. Working together, pairs complete each of the problems.
4. When the problems are completed, pair should take the letter of the problem and plug the letters into the riddle card.
5. If the problems were completed correctly, the answer to the riddle will be obvious. (Not all letters may be used in the answer).

Focus on having young people "compete" in pairs or small groups. Once a game is mastered you can utilize it in the "When Homework Is Complete" center.

Closing
Review Say: • Please recap what we did today. • Did we achieve our objectives?
Debrief **Three Whats** Ask the following three what questions: What was your key learning for the day? What opportunities might you have to do this same thing in the "real world"? What advice would you give to a "new" student getting ready to do this activity?

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.

Fact Practice—Multiples

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150

Consult 4 Kids Lesson Plans

Subtraction of Unlike Mixed

R	U	H	L	N
$9\frac{4}{5} - 6\frac{7}{10}$	$9\frac{7}{8} - 4\frac{3}{4}$	$8\frac{3}{4} - 2\frac{1}{6}$	$6\frac{5}{6} - 2\frac{2}{3}$	$6\frac{2}{3} - 2\frac{5}{12}$
P	**W**	**B**	**E**	**Y**
$6\frac{2}{3} - 2\frac{2}{5}$	$11\frac{3}{4} - 9\frac{3}{10}$	$5\frac{5}{6} - 2\frac{1}{3}$	$7\frac{4}{5} - 2\frac{1}{2}$	$6\frac{3}{7} - 3\frac{3}{14}$
I	**M**	**F**	**O**	**T**
$7\frac{5}{8} - 4\frac{1}{2}$	$9\frac{11}{12} - 4\frac{2}{3}$	$3\frac{8}{9} - 2\frac{2}{3}$	$5\frac{5}{6} - 3\frac{3}{4}$	$5\frac{3}{4} - 4\frac{1}{6}$
G	**D**	**A**	**S**	**C**
$3\frac{8}{9} - 2\frac{13}{18}$	$6\frac{1}{2} - 3\frac{2}{5}$	$6\frac{3}{4} - 2\frac{5}{8}$	$9\frac{2}{3} - 6\frac{1}{4}$	$6\frac{3}{4} - 3\frac{1}{2}$

Consult 4 Kids Lesson Plans

Riddle Day #10

$1\frac{7}{12}$	$6\frac{7}{12}$	$5\frac{3}{10}$

$3\frac{5}{12}$	$3\frac{1}{8}$	$5\frac{1}{4}$	$4\frac{4}{15}$	$3\frac{5}{12}$	$2\frac{1}{12}$	$4\frac{1}{4}$	$3\frac{5}{12}$

Bart, Homer, and others: The Simpsons

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4th & 5th Grades
Lesson Title:	Student Activity Choice
Focus:	Review

Materials:
Game Boards for games below

Opening
State the objective
Today we are going to have fun playing games that we learned this week.

Content (the "Meat")
Activity
Today is a review day. Students should select from the following list of activities: **Add 'Em Up** **Subtract 'Em** **Unlike Addition** **Unlike Subtraction** **Mixed Results—Addition** **Mixed Results—Subtraction** **Addition of Unlike Mixed** **Subtraction of Unlike Mixed**

Closing
Review
Say: • Please recap what we did today. • Did we achieve our objectives?

Reflection (Confirm, Tweak, Aha!)

1. Ask students to think about what they did today in math.
2. Ask them to comment on what they did today was something they already knew how to do. (Confirmation)
3. Ask them to comment on what they did today that was like something they had done before except in one particular way which was new to them. (Tweak)
4. Ask them to comment on something (if anything) they have learned today that was brand new to them.