

Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Draw It
Focus:	Fractions

Materials:

White boards Activities at end of lesson plan

Crayolas Vocabulary Notebooks

Socks Deck of cards

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? Why is it important that items be divided equally? Explain a time when your understanding of fractions made handling a challenging situation easier. (Share with a friend if necessary).

Content (the "Meat")		
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>	
Judy has 125 bananas and grapefruit in all. If she has 43 bananas, how many more grapefruit than bananas does she have? Explain your answer.	During the lesson check in with students repeatedly.	
Fact Practice Multiplication War	Check in about what is happening and what they are thinking.	
 Divide students into pairs. Give each pair a deck of cards without face cards and jokers. 	Take advantage of any teachable moments	
 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 	Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking When possible, engage students in "teaching to learn"	
Math Vocabulary	It is important to review	



Word for Today: denominator

Description: Denominator is a term that we use to describe the number of parts that a whole has been divided into. For example, the United States as a whole has 50 states. Each state would be 1/50 states. The denominator lets you know how many parts there are if you look at the whole thing. Another example would be graham crackers. If you were to break graham crackers apart on the "lines" in the cracker only, you would have 4 parts and each single part would represent one of the four you would need to have the whole graham cracker. Ask students to talk with a peer and share other things that can be made into fractional parts.

Create an entry in your Vocabulary Notebook for the word **denominator**.

Vocabulary Notebook Sample:

Vocabulary Notebook Sample.	
New Word picnic	My Description Hot dogs, mustard, catsup, drinks, ball games, family fun at the park
Personal Connection	Drawing
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.	

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

Drawing and Identifying Fractions

It is essential that students are able to identify and represent fractional parts. Be sure that students understand that the term fraction refers to a "part of a whole".

Draw It

Directions:

- 1. Divide students into pairs.
- 2. Give each pair a white board and a deck of Draw It cards.
- 3. Player one draws a card and follows the directions, drawing onto the white board. If the drawing is correct, then the player keeps the card.
- 4. Player two repeats the process
- 5. Game is over when all cards have been drawn.

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



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

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.

- 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



4th-5th Grade Draw It!

Draw a pizza (circular). Mark and color ½ of the pizza.	Use any kind of drawing that you would like to show the fraction $\frac{7}{10}$
Draw 8 shapes. Color in ½ of them	Draw 12 shapes. Color in $\frac{2}{3}$ of the shapes.
Use any kind of drawing you like to show the fraction $\frac{3}{5}$	Draw a picture of a board. Mark and color in ¾ of board.
Draw 12 shapes and color in $\frac{1}{3}$ of them.	Draw a pizza. Divide it into 8 pieces. Color in $\frac{3}{8}$ of the pizza.



Use any kind of drawing that you would like to show the fraction $\frac{5}{10}$. What is another way you could write the number you have marked?	Draw 18 circles. Color in $\frac{5}{6}$ of the circles.
Use any kind of drawing that you want to show the fraction $\frac{7}{8}$	Draw a board. Show $\frac{4}{5}$ of the board.
Draw 24 stars. Circle $\frac{1}{6}$ of them.	Draw 10 dimes. Circle $\frac{9}{10}$ of them. How much money does this represent?
Draw 16 squares. Color in $\frac{7}{8}$ of them.	Draw a picture that illustrates $\frac{4}{9}$

CONSULT 4 KIDS

Consult 4 Kids Lesson Plans

Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Draw It 2
Focus:	Fractions

Materials:

White boards Decks of cards

Crayolas Vocabulary Notebooks

Socks 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. What do you know about fractions? When would you use your knowledge of fractions in the real world? Why is it important that items be divided equally? Explain a time when your understanding of fractions made handling a challenging situation easier. (Share with a friend if necessary).

Content (the "Meat")		
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>	
Grandma planted 15 rows of flowers with 9 plants in each row. How many plants does she have in all. Write the equation to explain your work?	During the lesson check in with students repeatedly.	
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 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	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 openended questions to determine what the rest of the group is thinking When possible, engage students in "teaching to learn".	
Math Vocabulary	It is important to review	
Vord for today: numerator academic math vocabulary		



Description: Numerator is the terms we use to designate the top number in a fraction. This number tells you how many of the pieces you actually have. To continue with the United States, the denominator is 50 because that is how many total states there are. If we were to wonder what fraction would describe the number of states that touch the Pacific Ocean, we would need to include Alaska, Hawaii, California, Oregon and Washington, so we would show the fraction as $\frac{5}{50}$ which could be reduced to $\frac{1}{10}$. Another example would be a dozen eggs. The denominator would be 12, and depending on how many eggs we were going to eat for breakfast, say 5, we would have a numerator of 5 and a denominator of 12 or a fraction that would look like this: $\frac{5}{12}$.

Create an entry in your notebook for the term: numerator

Vocabulary Notebook Sample:

New Word	My Description
picnic	Hot dogs, mustard, catsup, drinks, ball games, family fun at the park
Personal Connection	Drawing
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.	

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

Vocabulary Notebooks can be made from ½ of a composition book

Activity Fractions

Students participated in this activity yesterday. Ask students what they learned about playing fractions that is helpful. Have students share strategies. Ask students to work in a trio that they did not work in yesterday.

Drawing and Identifying Fractions

It is essential that students are able to identify and represent fractional parts. Be sure that students understand that the term fraction refers to a "part of a whole".

Draw It

Directions:

- 1. Divide students into pairs.
- 2. Give each pair a white board and a deck of Draw It cards.
- 3. Player one draws a card and follows the directions, drawing onto the white board. If the drawing is correct, then the player keeps the card.
- 4. Player two repeats the process
- 5. Game is over when all cards have been drawn.

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.

- 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



4th-5th Grade Draw It!

Draw a pizza (circular). Mark and color ½ of the pizza.	Use any kind of drawing that you would like to show the fraction $\frac{7}{10}$
Draw 8 shapes. Color in ½ of them	Draw 12 shapes. Color in $\frac{2}{3}$ of the shapes.
Use any kind of drawing you like to show the fraction $\frac{3}{5}$	Draw a picture of a board. Mark and color in ¾ of board.
Draw 12 shapes and color in $\frac{1}{3}$ of them.	Draw a pizza. Divide it into 8 pieces. Color in $\frac{3}{8}$ of the pizza.



Use any kind of drawing that you would like to show the fraction $\frac{5}{10}$. What is another way you could write the number you have marked?	Draw 18 circles. Color in $\frac{5}{6}$ of the circles.
Use any kind of drawing that you want to show the fraction $\frac{7}{8}$	Draw a board. Show $\frac{4}{5}$ of the board.
Draw 24 stars. Circle $\frac{1}{6}$ of them.	Draw 10 dimes. Circle $\frac{9}{10}$ of them. How much money does this represent?
Draw 16 squares. Color in $\frac{7}{8}$ of them.	Draw a picture that illustrates $\frac{4}{9}$



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

Materials:

White boards Vocabulary Notebooks

Crayolas dice

Socks 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? Why is it important that items be divided equally? Explain a time when your understanding of fractions made handling a challenging situation easier. (Share with a friend if necessary). Sometimes there is more than one way to represent a fraction. For example, if you $\frac{1}{2}$ of a dollar or you have 2 of the 4 quarters you need to make a dollar, or $\frac{2}{4}$ of a dollar, you still have $\frac{1}{2}$ of a dollar, half of what you need to have a whole dollar. Give another example of equivalent fractions.

Content (the "Meat")

Problem of the Day

Ten soccer balls are on the playground. 6 of the balls are white, the others are red. Write a decimal to show the fraction of the soccer balls that are red.

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 $7 \times 8 = 56$
- **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 openended questions to determine what the rest of the group is thinking
When possible, engage

When possible, engage students in a "teach to learn"



opportunity and have the student become the teacher **Math Vocabulary** It is important to review academic math vocabulary Word for Today: equivalent often throughout the day **Description:** Equivalent is a term we use to say that two things are equal. It is a way of Complete the Vocabulary saying that what you find on one side of an equal sign will be the same value as what you notebook for each word. find on the other side. For example, 4 + 6 = 2 +8. We know that this is true because both 4 + 6 and 2 + 8 = 10. In fractions it works the same way. For example, if you had $\frac{1}{2}$ dozen When possible, have eggs or you had $\frac{6}{12}$ of the eggs, you still have the same number. The difference is that you students experience the word (Ex. 4 students creating a are speaking about parts in fractions and whole items in the other. right angle, multiple students Students complete the Vocabulary Notebook acting out an equation) **Vocabulary Notebook Sample:** Vocabulary Notebooks can **New Word** My Description be made from 1/2 of a composition book picnic Hot dogs, mustard, catsup, drinks, ball games, family fun at the park **Personal Connection** Drawing I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs. **Activity** Focus on having young **Comparing Fractions** people "compete" in pairs or small groups. Once a game **Comparison and Equivalent** is mastered you can utilize it in the "When Homework Is Some fractions are equivalent and others are not. For example, if you have a dollar, you Complete" center could have $\frac{1}{2}$ of a dollar by having $\frac{2}{4}$ of the quarters, $\frac{5}{10}$ of the dimes, $\frac{10}{20}$ of the nickels, and $\frac{50}{100}$ of the pennies. You would also have $\frac{1}{2}$ if you had $\frac{3}{6}$, $\frac{4}{8}$, or $\frac{7}{14}$. These fractions are all equivalent. When you compare fractions you can also discover that you have fractions that are not equivalent. For example, $\frac{3}{5}$ and $\frac{1}{2}$ are not equivalent. We can determine that if we look at the comparison below: Today's activity will have students determine if fractions are equivalent and if they are not, then which is the largest fraction.



Compare

Directions

- 1. Divide the students into pairs
- 2. Give each pair a set of Compare cards
- 3. Player one draws a Compare card and determines if the fractions are equivalent and if not, which of the fractions is largest.
- 4. Player 2 checks Player 1's answer. If they agree play moves to Player 2. If not, then they discuss and determine the correct answer.
- 5. Player 2 then continues
- 6. Activity is over when all cards have been worked through.

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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.

- 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



4th and 5th Grade—Compare

If the drawings below are candy, which is more: $\frac{1}{3}$ or $\frac{3}{5}$	Would you rather have $\frac{5}{6}$ of a candy bar or $\frac{7}{8}$ of a candy bar.
Which is more $\frac{2}{3}$ or $\frac{8}{12}$?	Which is more $\frac{4}{6}$ or $\frac{7}{8}$?
Is it more to have $\frac{1}{4}$ or $\frac{3}{8}$?	Is it more to have $\frac{2}{3}$ or $\frac{4}{6}$?





Which is more: $\frac{3}{7}$ or $\frac{1}{3}$?

Which is more: $\frac{4}{8}$ or $\frac{3}{6}$?

Which is more: $\frac{4}{9}$ or $\frac{1}{2}$?

Which is more: $\frac{3}{4}$ or $\frac{12}{16}$?

Which is more: $\frac{5}{8}$ or $\frac{3}{4}$?

Which is more: $\frac{7}{10}$ or $\frac{3}{5}$?

CONSULT 4 KIDS

Consult 4 Kids Lesson Plans

Component	Math	
Grade Level:	4 th & 5 th Grades	
Lesson Title:	Comparing Fractions 2	
Focus:	Fractions	

Materials:

White boards Vocabulary Notebooks

Crayolas Dice

Socks Activity at the end of the 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. What do you know about fractions? When would you use your knowledge of fractions in the real world? Why is it important that items be divided equally? Explain a time when your understanding of fractions made handling a challenging situation easier. (Share with a friend if necessary). Sometimes there is more than one way to represent a fraction. For example, if you $\frac{1}{2}$ of a dollar or you have 2 of the 4 quarters you need to make a dollar, or $\frac{2}{4}$ of a dollar, you still have $\frac{1}{2}$ of a dollar, half of what you need to have a whole dollar. Give examples of equivalent fractions. Another thing we do with fractions is compare them to see which are the same, or which is greater or less than the others. If someone asked you if you would rather have $\frac{4}{5}$ of a dollar or $\frac{19}{20}$ it would be important for you to be able to compare so you would know what answer or decision to make.

Content (the "Meat")

Problem of the Day

Study the symbols below. What are the next three symbols in this pattern? Explain your answer.



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

8 7

*Activity → Teachable Moment(s) throughout

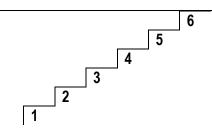
During the lesson check in with students repeatedly.

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

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

Math Vocabulary

Word for today: compare

Description: Compare is a term that we use to describe how things are alike and how they are not alike. In fractions we compare so we can know if the amounts or value we are talking about is the same (equal), or if one fraction is greater or less than the other fraction. While this is relatively easy in whole numbers, there is more to consider when we think of fractions. You must consider both the denominator and the numerator in your decision making. Write several fraction comparisons on the board and have students decide if they are =, < or >.

Create a Notebook entry for the word: compare

Vocabulary Notebook Sample:

New Word	My Description
picnic	Hot dogs, mustard, catsup, drinks, ball games, family fun at the park
Personal Connection	Drawing
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.	

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

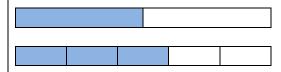


Activity

Comparison and Equivalent

Some fractions are equivalent and others are not. For example, if you have a dollar, you could have $\frac{1}{2}$ of a dollar by having $\frac{2}{4}$ of the quarters, $\frac{5}{10}$ of the dimes, $\frac{10}{20}$ of the nickels, and $\frac{50}{100}$ of the pennies. You would also have $\frac{1}{2}$ if you had $\frac{3}{6}$, $\frac{4}{8}$, or $\frac{7}{14}$. These fractions are all equivalent. When you compare fractions you can also discover that you have fractions that are not equivalent. For example, $\frac{3}{5}$ and $\frac{1}{2}$ are not equivalent. We can determine that if we look at the comparison below:

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



Today's activity will have students determine if fractions are equivalent and if they are not, then which is the largest fraction.

Compare

Directions

- 1. Divide the students into pairs
- 2. Give each pair a set of Compare cards
- 3. Player one draws a Compare card and determines if the fractions are equivalent and if not, which of the fractions is largest.
- 4. Player 2 check Player 1's answer. If they agree play moves to Player 2. If not, then they discuss and determine the correct answer.
- 5. Player 2 then continues
- 6. Activity is over when all cards have been worked through.

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.

CONSULT 4 KIDS

Consult 4 Kids Lesson Plans

- 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)
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- 4. Ask them to comment on something (if anything) they have learned today that was brand new to them

4th and 5th Grade—Compare

If the drawings below are candy, which is more: $\frac{1}{3}$ or $\frac{3}{5}$	Would you rather have $\frac{5}{6}$ of a candy bar or $\frac{7}{8}$ of a candy bar.	
Which is more $\frac{2}{3}$ or $\frac{8}{12}$?	Which is more $\frac{4}{6}$ or $\frac{7}{8}$?	
Is it more to have $\frac{1}{4}$ or $\frac{3}{8}$?	Is it more to have $\frac{2}{3}$ or $\frac{4}{6}$?	





Which is more: $\frac{3}{7}$ or $\frac{1}{3}$?

Which is more: $\frac{4}{8}$ or $\frac{3}{6}$?

Which is more: $\frac{4}{9}$ or $\frac{1}{2}$?

Which is more: $\frac{3}{4}$ or $\frac{12}{16}$?

Which is more: $\frac{5}{8}$ or $\frac{3}{4}$?

Which is more: $\frac{7}{10}$ or $\frac{3}{5}$?



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Simplest Form
Focus:	Fractions

Materials:

White boards Vocabulary Notebooks

Crayolas Cards

Socks Activities at the end of this 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. What do you know about fractions? When would you use your knowledge of fractions in the real world? Why is it important that items be divided equally? When we are looking at fractions we can see them in two ways—an actual representation of the whole or an equivalent fraction that may be easier to understand. For example, if you were told that you had $\frac{17}{51}$ of the 51 pieces of candy, you would know that this is 17 of the 51 total pieces. But if you were asked if you would rather have $\frac{17}{51}$ or of a candy that was tied for your favorite or $\frac{2}{5}$ of your other favorite, that would be more difficult to decide—especially if there were a lot more pieces than 5 of your other favorite candy. If we look at it in its simplest form $\frac{17}{51}$ is the same as $\frac{1}{3}$ of the candy, so knowing this might make it easier for you to determine which candy you would most want. Share a time when having "easier" to think about information has been helpful or might be helpful.

Content (the "Meat")		
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>	
Jorge made a goal to walk 2.5 kilometers. He walked 2,000 meters. Did he meet his goal? Explain your answer.	During the lesson check in with students repeatedly.	
	Check in about what is	
Fact Practice Target	happening and what they are thinking.	
Divide students into trios Each trio needs a deck of cards without face cards and jokers	Take advantage of any teachable moments	
 Place the cards face up in a TicTac Toe Grid Turn up a 10th card which will be to the side and becomes the target number (aces count as 1) 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 	'	
	determine what the rest of	





- 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 $5 \times 2 = 10$, 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

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

Math Vocabulary

Word for Today: simplest form

Description: Simplest form is a term we can use in a conversation about fractions that refers to a fraction that has been put in its simplest form, a form that is easier to understand. When we are using large fractions we reduce them to their simplest form so it is easier for us to understand what is being discussed. The simplest form of $\frac{60}{120}$ or $\frac{350}{700}$ or $\frac{9}{18}$ is $\frac{1}{2}$. Once you understand that you are discussing one half of something, it is easier for you to get your brain wrapped around the concept.

Students should complete the Vocabulary Notebook

Vocabulary Notebook Sample:

New Word	My Description
picnic	Hot dogs, mustard, catsup, drinks, ball games, family fun at the park
Personal Connection	Drawing
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.	

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

Simplest Form

A fraction is written in its simplest form when both the numerator and denominator are whole numbers and the common factor between the two is 1.

When you look at the fractions $\frac{3}{4}$ and $\frac{4}{6}$ the factors for 3 are 1 and 3, the factors for 4 are 1, 2, and 4. The only factor the 3 and 4 share is one, so the fraction is written in its simplest form. The factors for 4 are 1, 2 and 4, the factors for 6 are 1, 2, 3, 6. These two numbers have two common factors, 1 and 2. Therefore, $\frac{4}{6}$ is not in its simplest form. Do several problems on the board with students before having them begin to play the game.

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



Simplest Form

Directions:

- 1. Divide the students into pairs
- 2. Give each pair a deck of Simplest Form cards and a white board
- 3. Player 1 draws a card writes the factors and determines which factor(s) the numerator and the denominator have and then, if the fraction is not in its simplest form, then player should write the simplest form.
- 4. Player 2 continues with the same process.
- 5. Game is over when all of the fractions are in the simplest forms

	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.

- 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





4th-5th Grade Simplest Form

5 10	6 14	4 20	20 70
15 25	12 28	8 32	18 45
15 18	24 30	40 80	36 42
36 45	28 49	26 39	48 54
33 44	40 100	81 90	64 96





2 4	3 12	14 21	4 7
38	<u>5</u>	<u>5</u>	9 10
<u>5</u>	51 100	3 10	6 7
17 51	6 11	9 31	<u>5</u> 8
8 17	14 49	12 48	15 43



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Simplest Form 2
Focus:	Fractions

Materials:		
White boards	Vocabulary Notebooks	Activity at the end of the lesson plan
Crayolas	two, 12-sided dice for each pair	
Socks	Product Hunt Work Sheet	

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? Why is it important that items be divided equally? When we are looking at fractions we can see them in two ways—an actual representation of the whole or an equivalent fraction that may be easier to understand. For example, if you were told that you had $\frac{17}{51}$ of the 51 pieces of candy, you would know that this is 17 of the 51 total pieces. But if you were asked if you would rather have $\frac{17}{51}$ or of a candy that was tied for your favorite or $\frac{2}{5}$ of your other favorite, that would be more difficult to decide—especially if there were a lot more pieces than 5 of your other favorite candy. If we look at it in its simplest form $\frac{17}{51}$ is the same as $\frac{1}{3}$ of the candy, so knowing this might make it easier for you to determine which candy you would most want. Share a time when having "easier" to think about information has been helpful or might be helpful.

Content (the "Meat")			
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>		
If you had a triangle, trapezoid, pentagon, rectangle, parallelogram and you were given these clues, in what order with the shapes appear?	During the lesson check in with students repeatedly.		
 The figure with the most sides is first. The figure with just one pair of parallel sides is last. The parallelogram is right after the triangle. The figure with three sides is second. 	Check in about what is happening and what they are thinking.		
5. What is the order of the shapes? How do you know?	Take advantage of any teachable moments		
Fact Practice	Stop the class and focus on a student's key learning or		
Product Hunt 1. Divide students into pairs	understanding. Ask open- ended questions to determine what the rest of		





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

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

Math Vocabulary

Word for Today: factors

Description: Factors is a term used to designate the numerals that you multiply together to get a product. In fractions you have two different sets of factors, the factors for the numerator and the factors for the denominator. Remember that on set of factors is always 1 x the number itself. When you want to determine if a fraction is written in its simplest form, you can do this by listing the factors for the numerator and the factors for the denominator and canceling out the ones that are the same (with the exception of the 1), and then you can multiply the factors together again to determine what the simplest form of the fraction is. (Demonstrate this on the board)

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

Vocabulary Notebook Sample:

New Word	My Description
picnic	Hot dogs, mustard, catsup, drinks, ball games, family fun at the park
Personal Connection	Drawing
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.	

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

Simplest Form

A fraction is written in its simplest form when both the numerator and denominator are whole numbers and the common factor between the two is 1.

When you look at the fractions $\frac{3}{4}$ and $\frac{4}{6}$ the factors for 3 are 1 and 3, the factors for 4 are 1, 2, and 4. The only factor the 3 and 4 share is one, so the fraction is written in its simplest form. The factors for 4 are 1, 2 and 4, the factors for 6 are 1, 2, 3, 6. These two numbers have two common factors, 1 and 2. Therefore, $\frac{4}{6}$ is not in its 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



Simplest Form

Directions:

- 1. Divide the students into pairs
- 2. Give each pair a deck of Simplest Form cards and a white board
- 3. Player 1 draws a card writes the factors and determines which factor(s) the numerator and the denominator have and then, if the fraction is not in its simplest form, then player should write the simplest form.
- 4. Player 2 continues with the same process.
- 5. Game is over when all of the fractions are in the simplest forms

	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.

- 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

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





4th-5th Grade Simplest Form

5 10	6 14	4 20	20 70
15 25	12 28	8 32	18 45
15 18	24 30	40 80	36 42
36 45	28 49	26 39	48 54
33 44	40 100	81 90	64 96





2 4	3 12	14 21	4 7
38	<u>5</u>	<u>5</u>	9 10
<u>5</u>	51 100	3 10	6 7
17 51	6 11	9 31	<u>5</u> 8
8 17	14 49	12 48	15 43



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Improper and Mixed Fractions
Focus:	Fractions

Materials:

White boards Vocabulary Notebooks

Crayolas decks of cards

Socks Activity at the end of the lesson plan

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

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? Why is it important that items be divided equally? When we are looking at fractions we can see them in two ways—an actual representation of the whole or an equivalent fraction that may be easier to understand. For example, if you were told that you had $\frac{17}{51}$ of the 51 pieces of candy, you would know that this is 17 of the 51 total pieces. But if you were asked if you would rather have $\frac{17}{51}$ or of a candy that was tied for your favorite or $\frac{2}{5}$ of your other favorite, that would be more difficult to decide—especially if there were a lot more pieces than 5 of your other favorite candy. If we look at it in its simplest form $\frac{17}{51}$ is the same as $\frac{1}{3}$ of the candy, so knowing this might make it easier for you to determine which candy you would most want. Share a time when having "easier" to think about information has been helpful or might be helpful.

Content (the "Meat")		
Problem of the Day	*Activity → Teachable Moment(s) <i>throughout</i>	
Look at the sequence of numbers below. What number comes next? Explain your answer. 39 , 44 , 42 , 47 , 45 , 50 , 48 ,	During the lesson check in with students repeatedly.	
	Check in about what is	
Fact Practice	happening and what they are	
Draw!	thinking.	
Divide students into pairs and give each pair a deck of cards	Take advantage of any teachable moments	
2. Remove the face cards and jokers from the deck of cards.	Stop the class and focus on a	
3. Shuffle the deck.	student's key learning or	
4. Decide who will go first.	understanding. Ask open-	
5. First player draws two cards.	ended questions to determine what the rest of	





- 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.

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

Math Vocabulary

Word for Today: improper fraction

Description: Improper fraction is a term we use to describe a fraction that has a numerator that is the same or larger than the denominator. In other words, you have as many or more parts that you need to make the whole thing. Let's think about pizza. Let's say you ordered 2 pizzas and both were cut into 10 equal slices. If someone ate $\frac{2}{10}$ or 2 of the 10 pieces of one pizza, and someone else ate $\frac{3}{10}$ or the second pizza, you would have 15 slices left over or $\frac{15}{10}$ 15 of the 10 pieces it would take to make one pizza. The fraction would be improper. Have students complete his/her Vocabulary Notebook. Have students make up several scenarios in which this would be true.

Create a Notebook entry for the term: improper fraction

Vocabulary Notebook Sample:

New Word	My Description
picnic	Hot dogs, mustard, catsup, drinks, ball games, family fun at the park
Personal Connection	Drawing
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.	

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

Improper Fractions to Mixed Numbers

An improper fraction is a fraction that has a numerator larger or equal to the denominator. An example of an improper fraction is $\frac{8}{5}$. Since the numerator is 8 and the denominator is 5, we know that there is one whole something and 3 extra pieces. To determine this you divide the denominator into the numerator (in this case it goes one time) and the remainder (the amount left over, in this case 3) is then written as a fraction: $\frac{3}{8}$, in other words 3 of the 8 parts you would need to have another whole. So the improper fraction $\frac{8}{5}$ can be written as the mixed number $1\frac{3}{5}$

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



Demonstrate several of these problems with the students in preparation for the game.

Improper Fractions

Directions:

- 1. Divide the students into pairs
- 2. Give each pair a deck of Improper Fractions cards and a white board
- 3. Player 1 draws a card completes the math to change the improper fraction into a mixed number.
- 4. Player 2 continues with the same process.
- 5. Game is over when all of the improper fractions are in the mixed number form.

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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.

- 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



4th – 5th Grade Improper Fractions

3 2	$\frac{5}{3}$	7 4	9 7
9 2	1 <u>5</u>	14 5	16 5
25 8	35 6	57 10	91 15
86	12 8	12 3	21 9
30 12	13 7	45 36	60 48





4 4	15 12	14 6	23 7
100 24	3 2	8 3	17 5
9 2	21 8	29 6	31 3
59 7	122 3	73 6	13 8
38 17	78 49	48 48	12 4



Component:	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Improper to Mixed Fractions
Focus:	Fractions

Materials:

White boards Vocabulary Notebooks
Crayolas Double 9 Dominoes

Socks Activity at the end of the 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. What do you know about fractions? When would you use your knowledge of fractions in the real world? Why is it important that items be divided equally? When we are looking at fractions we can see them in two ways—an actual representation of the whole or an equivalent fraction that may be easier to understand. For example, if you were told that you had $\frac{17}{51}$ of the 51 pieces of candy, you would know that this is 17 of the 51 total pieces. But if you were asked if you would rather have $\frac{17}{51}$ or of a candy that was tied for your favorite or $\frac{2}{5}$ of your other favorite, that would be more difficult to decide—especially if there were a lot more pieces than 5 of your other favorite candy. If we look at it in its simplest form $\frac{17}{51}$ is the same as $\frac{1}{3}$ of the candy, so knowing this might make it easier for you to determine which candy you would most want. Share a time when having "easier" to think about information has been helpful or might be helpful.

Content (the "Meat")	
Problem of the Day	*Activity → Teachable Moment(s) throughout
Complete the number line below. What number is ½ way between 2.5 and 2.6?	During the lesson check in with students repeatedly.
	Check in about what is happening and what they are thinking.
Fact Practice	Take advantage of any
Spots and Dots	teachable moments
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.	Stop the class and focus on a student's key learning or understanding. Ask openended questions to
Players sit across from each other.	determine what the rest of
Dominoes are between them, face (or spots) down.	the group is thinking





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

••

Multiplication: $2 \times 3 = 6$

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

Math Vocabulary

Word for Today: mixed number

Description: Mixed number is a term we use to describe a whole number and a fraction that is used to describe how much of something you have. For example, if you have 1 $\frac{1}{2}$ candy bars 1 $\frac{1}{2}$ is a mixed number, you have 1 whole candy bar and $\frac{1}{2}$ of another candy bar. You have more than one, but less than 2. You could also have \$10 and $\frac{3}{4}$ of a dollar (this would be 75¢, so you have 3 of the 4 quarter you would need to have a total of \$11. Have students share several things that they could have that would represented in a mixed number.

Create an entry for the term mixed number in your Vocabulary Notebook.

Vocabulary Notebook Sample:

New Word	My Description
picnic	Hot dogs, mustard, catsup, drinks, ball games, family fun at the park
Personal Connection	Drawing
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.	

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

Improper Fractions to Mixed Numbers

An improper fraction is a fraction that has a numerator larger or equal to the denominator. An example of an improper fraction is $\frac{8}{5}$. Since the numerator is 8 and the denominator is 5, we know that there is one whole something and 3 extra pieces. To determine this you divide the denominator into the numerator (in this case it goes one time) and the remainder (the amount

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



left over, in this case 3) is then written as a fraction: $\frac{3}{8}$, in other words 3 of the 8 parts you would need to have another whole. So the improper fraction $\frac{8}{5}$ can be written as the mixed number 1 $\frac{3}{8}$

Demonstrate several of these problems with the students in preparation for the game.

Improper Fractions

Directions:

- 1. Divide the students into pairs
- 2. Give each pair a deck of Improper Fractions cards and a white board
- Player 1 draws a card completes the math to change the improper fraction into a mixed number.
- 4. Player 2 continues with the same process.
- 5. Game is over when all of the improper fractions are in the mixed number form.

	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

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4th – 5th Grade Improper Fractions

3 2	$\frac{5}{3}$	7 4	9 7
9 2	15 5	14 5	16 5
25 8	35 6	57 10	91 15
86	12 8	12 3	21 9
30 12	13 7	45 36	60 48



4 4	15 12	14 6	23 7
100 24	3 2	8 3	17 5
9 2	21 8	<u>29</u> 6	$\frac{31}{3}$
59 7	$\frac{122}{3}$	73 6	13 8
38 17	78 49	48 48	12 4



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Movin' to Improper
Focus:	Fractions

Materials:

White boards Vocabulary Notebooks Activity at end of the lesson plan

Crayolas 6-sided dice; 12-sided dice

Socks decks of cards

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

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? Why is it important that items be divided equally? When we are looking at fractions we can see them in two ways—an actual representation of the whole or an equivalent fraction that may be easier to understand. For example, if you were told that you had $\frac{17}{51}$ of the 51 pieces of candy, you would know that this is 17 of the 51 total pieces. But if you were asked if you would rather have $\frac{17}{51}$ or of a candy that was tied for your favorite or $\frac{2}{5}$ of your other favorite, that would be more difficult to decide—especially if there were a lot more pieces than 5 of your other favorite candy. If we look at it in its simplest form $\frac{17}{51}$ is the same as $\frac{1}{3}$ of the candy, so knowing this might make it easier for you to determine which candy you would most want. Share a time when having "easier" to think about information has been helpful or might be helpful. Talk about times when you have more than one whole thing.

Content (the "Meat")		
Problem of the Day	*Activity → Teachable Moment(s) throughout	
Jorge, Maria, Larry, and Martha finished the hot dog eating contest with the following times: 6.85, 6.37, 6.73, and 6.53 seconds. Jorge finished last. Maria finished exactly 0.2 seconds	During the lesson check in with students repeatedly.	
faster than Larry. Who came in first? How do you know?	Check in about what is happening and what they are thinking.	
Fact Practice Fact Family	Take advantage of any teachable moments	
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: $9 \times 4 = 36$ $4 \times 9 = 36$ $36 \div 4 = 9$	Stop the class and focus on a student's key learning or understanding. Ask openended questions to determine what the rest of the group is thinking	



 $36 \div 9 = 4$

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

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

Math Vocabulary

Word for Today: multiplication

Description: Multiplication is the term that we use to describe repeated addition. It requires that you have a grid that has equal columns of items—in other words that each row has the same number of items in it. Then you simply multiply the number of rows times the number of columns and you know how many individual items you have. It makes addition easier when you get into larger numbers. Multiplication is an operation that we utilize with fractions, especially if we are looking at factors to know if the fraction is in its simplest form, but also when we change a mixed number into a fraction. Practice several on the board.

Create and entry in your Vocabulary Notebook for the term "multiplication".

Vocabulary Notebook Sample:

New Word	My Description
picnic	Hot dogs, mustard, catsup, drinks, ball games, family fun at the park
Personal Connection	Drawing
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.	

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

Mixed Numbers to Improper Fractions

Just as it is important for the student to understand how to change an improper fraction to a mixed number, it is important that a student know how to change a mixed number to an improper fraction. To change a mixed number to an improper fraction multiply the whole number times the denominator and find the product. Then to that product, add the numerator. You now have the improper fraction. The numerator is the total you have just found and then put the denominator that you have had as the denominator, it does not change. So, in the mixed number $3\frac{1}{3}$ you would first say 3 (the whole number) X 3 (the denominator = 9 + 1 (the numerator) for a total of 10, over the denominator of 3 so the improper fraction looks this way: $\frac{10}{3}$

Demonstrate several of these problems with students, helping them to understand how to play the game.

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



Movin' to Improper

Directions:

- 1. Divide the students into pairs
- 2. Give each pair a deck of Movin' to Improper cards and a white board
- 3. Player 1 draws a card completes the math to change the mixed number into an improper fraction.
- 4. Player 2 continues with the same process.
- 5. Game is over when all of the improper fractions are in the mixed number form.

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





4th-5th Grade Movin' to Improper

$1\frac{1}{2}$	$1\frac{2}{3}$	$1\frac{3}{4}$	$1\frac{2}{7}$
$4\frac{1}{2}$	$3\frac{2}{3}$	2 ⁴ / ₅	3 ¹ / ₅
3 1/8	5 \frac{5}{6}	5 7 20	6 1 1 5
1 ⁵ / ₆	1 ⁴ / ₅	3 7 8	2 <mark>4</mark>
2 8 12	1 ⁵ / ₈	4 ³ / ₄	$3\frac{3}{10}$





$5\frac{3}{7}$	$3\frac{3}{4}$	$2\frac{2}{6}$	$3\frac{2}{3}$
4 1 24	$1\frac{1}{2}$	$2\frac{2}{3}$	$3\frac{2}{5}$
4\frac{1}{2}	2 ⁷ / ₈	4 ⁵ / ₆	$10\frac{1}{3}$
$8\frac{4}{7}$	$4\frac{2}{3}$	$11\frac{1}{6}$	1 5 8
$2\frac{4}{7}$	3 ⁷ / ₉	4 ² / ₅	$3\frac{1}{4}$



Component	Math
Grade Level:	4 th & 5 th Grades
Lesson Title:	Movin' to Improper 2
Focus:	Fractions

Materials:

White boards Vocabulary Notebooks

Crayolas Decks of cards

Socks Activity at the end of the lesson plan

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

We have spent a great deal of time this past few days talking about fractions. Share with the group your understanding of the following:

improper fractions

mixed number

numerator

denominator

equivalent fractions

simplest form

Content (the "Meat")

Problem of the Day

Millie collected 3,478 baseball cards. Mark collected 2,976 baseball cards. How many cards do they have all together? How do you know?

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 openended 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 V	It is important to review academic math vocabulary	
Word for Today: like denominators Description: Te term like denominators reference.	re to two or more denominators that are the	often throughout the day
•	or a fraction, it is important to compare apples	Complete the Vocabulary
to apple and oranges to oranges, not apples that in order to compare fractions, they must be	o oranges. This is a metaphorical way of saying	notebook for each word. When possible, have
To find like denominators we must find equiva	elent fractions to the fraction we have, but	students experience the word
expressed with a different denominator. If I have	(Ex. 4 students creating a right angle, multiple students	
in the other, I need to think about $\frac{2}{4}$ of a dollar	acting out an equation)	
dollar, or one dollar and a quarter. Share other	Vocabulary Notebooks can	
Create an entry in your Vocabulary Notebook Vocabulary Notebook Sample:	be made from ½ of a composition book	
New Word My Description		Composition Book
picnic	Hot dogs, mustard, catsup, drinks, ball games, family fun at the park	
Personal Connection	Drawing	
I love to go to the park with my family. We take a picnic lunch and barbeque hot dogs.		



Activity **Fractions**

Mixed Numbers to Improper Fractions

Just as it is important for the student to understand how to change an improper fraction to a mixed number, it is important that a student know how to change a mixed number to an improper fraction. To change an mixed number to an improper fraction multiply the whole number times the denominator and find the product. Then to that product, add the numerator. You now have the improper fraction. The numerator is the total you have just found and then put the denominator that you have had as the denominator, it does not change. So, in the mixed number $3\frac{1}{3}$ you would first say 3 (the whole number) X 3 (the denominator = 9 + 1 (the numerator) for a total of 10, over the denominator of 3 so the improper fraction looks this way: 10 3

Demonstrate several of these problems with students, helping them to understand how to play

the game.

Movin' to Improper

Directions:

- 1. Divide the students into pairs
- 2. Give each pair a deck of Movin' to Improper cards and a white board
- 3. Player 1 draws a card completes the math to change the mixed number into an improper fraction.
- 4. Player 2 continues with the same process.
- 5. Game is over when all of the improper fractions are in the mixed number 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

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



4th-5th Grade Movin' to Improper

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





$5\frac{3}{7}$	$3\frac{3}{4}$	$2\frac{2}{6}$	$3\frac{2}{3}$
4 1 24	$1\frac{1}{2}$	$2\frac{2}{3}$	$3\frac{2}{5}$
4\frac{1}{2}	2 ⁷ / ₈	4 ⁵ / ₆	$10\frac{1}{3}$
$8\frac{4}{7}$	$4\frac{2}{3}$	$11\frac{1}{6}$	1 5 8
$2\frac{4}{7}$	3 ⁷ / ₉	4 ² / ₅	$3\frac{1}{4}$



Component	Math	
Grade Level:	4 th & 5 th Grade	
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 review day. Students will be able to select from the Fraction Games you played for the last 10 days. Ask students to select from:

Draw It Compare Simplest Form Improper Fractions Movin' to Improper

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