| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Regrouping |
| Focus: | Addition |

## Materials:

White boards Decks of cards Dominoes (Double 9)

Crayolas
Socks

Vocabulary Notebooks
Activity at the end of this lesson plan

Opening
State the objective
Today we are going to practice using our math vocabulary and practice in the basic operation of multiplication.

## Gain prior knowledge by asking students the following questions

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. What do you know about regrouping? When would you use this process? For what reason do you regroup? Is this a process you can use in any operation?

## Content (the "Meat")

## Problem of the Day

The train can carry 425 people at one time. 637 people bought a ticket. How many people will have to wait for the second train? How do you know?

## Fact Practice

## Addition 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 add 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


## Math Vocabulary

Word for Today: addend
$* A c t i v i t y ~$
Moment(s) Theachable
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.
It is important to review academic math vocabulary

Description: The term addend refers to the numbers you add together in an addition problem. When you are adding any column (ones, tens, hundred, thousands, and so on), and the tal in that column is ten or more, you must regroup, taking the number in the tens column to the column to the left and writing the numeral in the ones place underneath the column you are adding.
Review the entry in your Vocabulary Notebook for the term "addend". Share with a friend what the term means. Give an example.
Vocabulary Notebook Sample:

| New Word | My Description <br> addend <br> the numbers you add together in an addition <br> problem |
| :--- | :--- |
| Personal Connection <br> In the addition problem, $6+9=15$, the <br> digits 6 and 9 are the addends | Drawing |

## Activity <br> Regrouping

## Addition

When you are adding, sometimes you will need to regroup. This means that the answer or sum of two numbers is more than ten. For example if you are adding 45 and 36 , you begin with the ones column, adding the 5 and the 6 for a total of eleven. In the number 11, you have one unit or one, which goes underneath the ones column, and you have one ten which you carry over to the tens column. So the second addition problem would be $1+4+$ 3 for a total of 81 . This means that you write the tens above the tens column and then include it in the addition. You can also have a problem that has a tens column that adds up to ten or more in which case you move the tens to the hundreds column, continuing to add. Complete several problems on the board with the students. Be sure to use metacognition to share with the students what you are thinking as you complete the problem.
When you are confident that the children know what to do, distribute the game.

## Regrouping

## Directions:

1. Divide students into pairs.
2. Give each pair a deck of cards, remove the face cards, tens, and jokers.
3. Shuffle the cards and place them face down in between the students.
4. Player one draws six cards and arranges them into a 3 digit +3 digit problem. For example:

## 647

+396
5. He/she then finds the sum, using the white boards.
6. He/she shares his/her answer with Player 2.
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 $1 / 2$ of a composition book.

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.
7. Player 2 continues in the same way.
8. Play is complete when all cards have been used.

9. If the student drew this domino, the problem would be $6 \times 3$ for an answer of 18 .
10. If Player gives the correct answer (within 15 seconds), he/she keeps the domino and Player 2 takes his/her turn. If Player cannot provide the answer, then the domino is returned to the pile.

## 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.

| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Regrouping 2 |
| Focus: | Addition |

## Materials:

White boards
Crayolas
Socks (for erasers)

Decks of cards Vocabulary Notebooks
Activity at the end of this lesson plan

Dominoes (Double 9)

Opening
State the objective
Today we are going to practice using our math vocabulary and practice in the basic operation of multiplication.

## Gain prior knowledge by asking students the following questions

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. What do you know about regrouping? When would you use this process? For what reason do you regroup? Is this a process you can use in any operation? Create a problem that will require you to regroup. Share it with a peer.

## Content (the "Meat")

## Problem of the Day

Last year the Little League Baseball Team raised $\$ 3,450$ for rebuilding the team dugout. This year they raised $\$ 4,275$ for rebuilding the opposing team's dugout. If the price has remained the same, how much do they have left for trophies?

## 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 adds 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

## *Activity $\rightarrow$ Teachable <br> 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 Vocabulary |  |
| :---: | :---: |
| Word for today: regroup |  |
| Description: The term, regroup refers to a process that you use when you are working an addition problem and the sum in any column is ten or higher. In this process the number in the ones place remains the ones place while the number in the tens column in the answer will be moved to the next column to the right. |  |
| Review the entry for the word "regroup" in your Vocabulary Notebook. Talk with a friend about the term. Give an example of multiples. |  |
| Vocabulary Notebook Sample: |  |
| New Word | My Description |
| regroup | when the total is ten or higher, you regroup to finish addition |
| Personal Connection | Drawing |
| $27+18$ requires that you regroup to get the correct sum of 45 . | $\begin{aligned} & 48 \\ & +\quad 9 \\ & \hline 57 \end{aligned}$ |

## Activity <br> Regrouping

## Addition

When you are adding, sometimes you will need to regroup. This means that the answer or sum of two numbers is more than ten. For example if you are adding 45 and 36 , you begin with the ones column, adding the 5 and the 6 for a total of eleven. In the number 11, you have one unit or one, which goes underneath the ones column, and you have one ten which you carry over to the tens column. So the second addition problem would be $1+4+$ 3 for a total of 81 . This means that you write the tens above the tens column and then include it in the addition. You can also have a problem that has a tens column that adds up to ten or more in which case you move the tens to the hundreds column, continuing to add. Complete several problems on the board with the students. Be sure to use metacognition to share with the students what you are thinking as you complete the problem.
When you are confident that the children know what to do, distribute the game.

## Regrouping

## Directions:

1. Divide students into pairs.
2. Give each pair a deck of cards, remove the face cards, tens, and jokers.
3. Shuffle the cards and place them face down in between the students.
4. Player one draws six cards and arranges them into a 3 digit +3 digit problem. For example:

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 $1 / 2$ of a composition book.

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.
5. He/she then finds the sum, using the white boards.
6. He/she shares his/her answer with Player 2.
7. Player 2 continues in the same way.
8. Play is complete when all cards have been used.

9. If the student drew this domino, the problem would be $6 \times 3$ for an answer of 18 .
10. If Player gives the correct answer (within 15 seconds), he/she keeps the domino and Player 2 takes his/her turn. If Player cannot provide the answer, then the domino is returned to the pile.

## 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.

| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Connect the Dots \#1 |
| Focus: | Subtraction |

## Materials:

White boards
Crayolas
Dice

Vocabulary Notebooks
Activity at end of this lesson plan
Socks (erasers for white board)
Cards(remove face cards, use the joker as a zero)

| Opening |
| :--- |
| $\quad$ State the objective |
| Today we are going to practice using our math vocabulary and practice multiplication. |
| Gain prior knowledge by asking students the following questions |
| Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe |
| those things. What do you know about subtraction? When you have a problem like this: $62-18=$, what do you need to |
| do to be able to subtract in the ones column? Give several examples. |

## Content (the "Meat")

## Problem of the Day

If the sum of two numbers is 138 , and one number is 32 more than the other, what are the two numbers?

## ? + ? = 138

## 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 $7+8=15$
6. Process continues until all spokes have an equation

> *Activity $\rightarrow$ 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 Vocabulary |
| :--- |
| Word for today: subtraction |
| Description: Subtraction is a term that refers to beginning with a certain amount and then |
| taking a portion of that away and ending up with a difference. When you want to subtract, |
| and the number that is in the subtrahend is larger than the number in the minuend in that |
| place, you must regroup so you can complete the subtraction. |
| Review your Vocabulary Notebook entry for the term "subtraction". Talk with a partner |
| about the term. Share with them when you would use subtraction with regrouping. |
| Vocabulary Notebook Sample: | | New Word | My Description |
| :--- | :--- |
| subtraction | Drawing or take away |
| Personal Connection <br> Subtraction reduces a number by another <br> number. | $\frac{52}{15}$ |

## Activity <br> Subtraction

## Subtraction

When you subtract you first subtract the digits in the right hand column or ones place.
Once you have subtracting the ones, you will then subtract the tens, and then subtract in the hundreds.
For example:

$$
678
$$

-325

You would begin by subtracting 5 from 8 , getting a difference of 3 . You would then subtract 2 from 7, so now you are at 53 . Finally you will subtract the 3 from the 6 , making the difference of 353 .
Work several problems on the board with students. Be sure to talk through each program. When you are pleased with the results, then give the students a game to play.

## Connect the Dots \#1

## Directions:

1. Give each pair of students a Connect the Dots game Board. If you want to keep the game board, laminate it or place it in a sheet protector.
2. Working together, students complete the subtracting problem and connect the problem to the correct answer.
3. Students will be able to see a pattern emerge.
4. When pair is finished have them share with another pair.

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 $1 / 2$ of a composition book

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


## 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.

3rd Grade Connect the Dots \#1


| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Connect the Dots \#2 |
| Focus: | Subtraction |

## Materials:

White boards
Crayolas
Socks (for erasers)

Vocabulary Notebooks
dice
$\qquad$
numbers in the ladder, writing the sum to the right of the number

## Math Vocabulary

## Word for Today: subtraction

Description: Subtraction is a term that refers to beginning with a certain amount and then taking a portion of that away and ending up with a difference. When you want to subtract, and the number that is in the subtrahend is larger than the number in the minuend in that place, you must regroup so you can complete the subtraction.
Review your Vocabulary Notebook entry for the term "subtraction". Talk with a partner about the term. Share with them when you would use subtraction with regrouping. Write three problems on your white board. Have your partner solve them.

## Vocabulary Notebook Sample:

| New Word | My Description <br> subtraction <br> minus or take away |
| :--- | :--- |
| Personal Connection <br> Subtraction reduces a number by another <br> number. | Drawing |
|  |  |

Activity
Subtraction

## Subtraction

When you subtract you first subtract the digits in the right hand column or ones place. Once you have subtracting the ones, you will then subtract the tens, and then subtract in the hundreds.
For example:

## 678

-325
You would begin by subtracting 5 from 8 , getting a difference of 3 . You would then subtract 2 from 7 , so now you are at 53 . Finally you will subtract the 3 from the 6 , making the difference of 353 .
Work several problems on the board with students. Be sure to talk through each program. When you are pleased with the results, then give the students a game to play.

## Connect the Dots \#2

## Directions:

1. Give each pair of students a Connect the Dots game Board. If you want to keep the game board, laminate it or place it in a sheet protector.
2. Working together, students complete the subtracting problem and connect the problem to the correct answer.
3. Students will be able to see a pattern emerge.

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 $1 / 2$ of a composition book.

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.
4. When pair is finished have them share with another pair.

## 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.

3rd Grade Connect the Dots \#2


| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Domino Subtraction |
| Focus: | Subtraction |

## Materials:

White boards Vocabulary Notebooks Dominoes
Crayolas Deck of Cards for each pair

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

| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, |
| multiplication, and division. |
| Gain prior knowledge by asking students the following questions |
| Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe |
| those things. What are some strategies that you use when you are trying to figure out how to solve a mathematics |
| problem? When do you subtract? How are addition and subtraction linked? What do you call the different numerals in a |
| subtraction problem? |

## Content (the "Meat")

## Problem of the Day

Look at the bus schedule below. Does it take longer to get to LA or San Francisco?

| To | Departs | Arrives |
| :--- | :--- | :--- |
| Los Angeles | 8:00 a.m. | 12:30 p.m. |
| San Francisco | 9:00 a.m. | 3:00 p.m. |
| Fresno | 8:30 a.m. | 11:30 a.m. |

## 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 $10^{\text {th }}$ 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 or subtract.
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

## *Activity $\rightarrow$ 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.
example if the target card is 10 , then I could say $6+4=10$, and pick up the 6 and the 4.
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

## Math Vocabulary

## Word for today: regrouping

Description: Regrouping is a mathematical term that describes what you do when you have a total that is more ones, tens, hundreds, etc. than nine or if you have a subtrahend that has a value in one column that is more that the minuend in that same place value.. Regrouping allows you to translate tens into ones (like dimes into pennies), and hundreds into tens.
Review your Vocabulary Notebook for the term regrouping. Discuss this process with your friend.
Vocabulary Notebook Sample:

| New Wordregroup | My Description <br> Getting digits in a math problem to be in the <br> place value column correctly |
| :--- | :--- |
| Personal Connection | Drawing |
| When you subtract 81-37, you must <br> regroup making the units 11 and the tens 7 <br> before you subtract. | $\frac{-37}{44}$ |

## Activity

## Subtraction

When you are subtracting, you begin with the ones or units column first. If the bottom digit is greater than the top digit, you will need to regroup. Regrouping means that you take one of the tens, and instead of keeping the ten items as a group you separate them into ones. For example, if you needed 8 items and you only had a package of 10 , you would need to open up the package of ten so you could take out 8 of the single units. As another example, if you needed 8 single items and you only had four, you would still need to break apart a ten. Once separated, you would have the ten you separated + the 4 you already had, so you would now have a total of 10 units plus 4 units from which you would subtract the 8 you needed, so you would have 6 units left over.

Work several 2 digit subtract subtraction problems that require the student to regroup on the board with the group. Use metacognition to share with the student what you are thinking as you solve the problem.

## Domino Subtraction

## Directions:

1. Divide student into pairs.
2. Give each pair a set of Double 9 dominoes and white boards.
3. Player 1 draws 2 dominoes and creates a subtraction problem:

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 $1 / 2$ of a composition book.

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.

4. The dominoes create the problem:
5. When Player 1 is finished, he/she keeps the two dominoes and Player 2 continues play in the same way.
6. Play is over when all dominoes have been taken.


## 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.

| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Domino Subtraction 2 |
| Focus: | Subtraction |


| Materials: |  |  |
| :--- | :--- | :--- |
| White boards | Vocabulary Notebooks | Materials at end of lesson plan |
| Crayolas | 12-sided dice for each pair | Deck of Card for every 2 students |
| Number Hunt Work Sheet | Socks (for erasers) | Dominoes |


| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, |
| multiplication, and division. |
| Gain prior knowledge by asking students the following questions |
| Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe |
| those things. What are some strategies that you use when you are trying to figure out how to solve a mathematics |
| problem? When do you subtract? How are addition and subtraction linked? What do you call the different numerals in a |
| subtraction problem? |

## Content (the "Meat")

## Problem of the Day

If Joni has $1 \$ 10$ bill, $1 \$ 5$ bill, 6 quarters, and 14 dimes, can he afford to buy a game that costs $\$ 16.95$ ? Tell how you know.

## Fact Practice

## Number Hunt

1. Divide students into pairs
2. Each pair needs a Number Hunt sheet (attached to this lesson plans )
3. Player rolls two, 12 -sided dice.
4. Player adds or subtracts the two numbers.
5. If the number is not yet covered, then player may cover the number.
6. Next player repeats steps 1-3.
7. Winner is determined by who has the most numbers covered.

## *Activity $\rightarrow$ 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 Vocabulary |  |
| :---: | :---: |
| Word for Today: regrouping |  |
| Description: Regrouping is a mathematical term that describes what you do when you have a total that is more ones, tens, hundreds, etc. than nine or if you have a subtrahend that has a value in one column that is more that the minuend in that same place value.. Regrouping allows you to translate tens into ones (like dimes into pennies), and hundreds into tens. |  |
| Review your Vocabulary Notebook for the term regrouping. Discuss this process with your friend. |  |
| Vocabulary Notebook Sample: |  |
| New Word | My Description |
| regroup | Getting digits in a math problem to be in the place value column correctly |
| Personal Connection | Drawing |
| When you subtract 81-37, you must regroup making the units 11 and the tens 7 before you subtract. | $\begin{gathered} 81 \\ \frac{-37}{44} \end{gathered}$ |

Subtraction

When you are subtracting, you begin with the ones or units column first. If the bottom digit is greater than the top digit, you will need to regroup. Regrouping means that you take one of the tens, and instead of keeping the ten items as a group you separate them into ones. For example, if you needed 8 items and you only had a package of 10 , you would need to open up the package of ten so you could take out 8 of the single units. As another example, if you needed 8 single items and you only had four, you would still need to break apart a ten. Once separated, you would have the ten you separated + the 4 you already had, so you would now have a total of 10 units plus 4 units from which you would subtract the 8 you needed, so you would have 6 units left over.

Work several 2 digit subtract subtraction problems that require the student to regroup on the board with the group. Use metacognition to share with the student what you are thinking as you solve the problem.

## Domino Subtraction

## Directions:

1. Divide student into pairs.
2. Give each pair a set of Double 9 dominoes and white boards.
3. Player 1 draws 2 dominoes and creates a subtraction problem:

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 $1 / 2$ of a composition book.

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.

4. The dominoes create the problem:

$$
51
$$

$-38$ 13
5. When Player 1 is finished, he/she keeps the two dominoes and Player 2 continues play in the same way.
6. Play is over when all dominoes have been taken.


## 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.

Number Hunt

| 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 |

Number Hunt

| 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 |


| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Math Magic |
| Focus: | Addition and Subtraction |

## Materials:

White boards Vocabulary Notebooks dice
Crayolas deck of cards, no face cards or jokers for math fact practice

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 practice in the basic operations of addition, subtraction, |
| multiplication, and division. |
| Gain prior knowledge by asking students the following questions |
| Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe |
| those things. What are some strategies that you use when you are trying to figure out how to solve a mathematics |
| problem? How are addition and subtraction alike? How are they different? What does it mean to be a reciprocal process? |


| Content (the "Meat") |  |
| :---: | :---: |
| Problem of the Day <br> Grandma has 5 equal bags of radish seeds. If she has 75 seeds all together, how many seeds are in each bag? How do you know? | *Activity $\rightarrow$ Teachable Moment(s) throughout During the lesson check in |
| Fact Practice <br> Draw! <br> 1. Divide students into pairs and give each pair a deck of cards <br> 2. Remove the face cards and jokers from the deck of cards. <br> 3. Shuffle the deck. <br> 4. Decide who will go first. <br> 5. First player draws two cards. <br> 6. Student adds or subtracts the cards. <br> 7. Student writes his/her problem on the white board, writing a complete number sentence. <br> 8. Students take turns drawing cards and creating problems. | with students repeatedly. <br> Check in about what is happening and what they are thinking. <br> Take advantage of any teachable moments. <br> 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. <br> When possible, engage students in a "teach to learn" opportunity and have the student become the teacher. |

## Math Vocabulary

## Word for Today: reciprocal operations

Description: The term "reciprocal operations" refers to two operations which are related to each other such as completing one operation to check the correctness of the other operation. Addition and subtraction are reciprocal operations. In addition you are looking for a total, in subtraction you start with a total and then find the difference.
Enter the term "reciprocal operations" in your Vocabulary Notebook. Talk with a peer about what this term means to you.
Vocabulary Notebook Sample:

| New Word <br> reciprocal operations | My Description <br> addition - subtraction, multiplication - <br> division |
| :--- | :--- |
| Personal Connection <br> Addition is a reciprocal operation to <br> subtraction | Drawing <br> $\mathbf{4 + 5}=9 ; 9-4=5$ |

## Activity Addition and Subtraction

## Addition and Subtraction

Addition and Subtraction are reciprocal mathematical processes. In addition you are looking for a total of two or more groups; in subtraction you are looking for the difference after you take a portion of the total. Being able to go back and forth between addition and subtraction comfortably is important.
To find if you have correctly done an addition problem, you can subtract, making the sum the subtrahend, subtracting one of the addends, and then finding the second addend. To check subtraction, you will add the difference and the minuend, and should arrive at the subtrahend.

Today we are going to practice moving between addition and subtraction to find particular numbers.

## Math Magic <br> Directions:

1. Divide students into groups of 3 .
2. Give each group of 3 a Math Magic game board and six, 5 -sided dice. Also give students a white board and game tokens. (Notes: For tokens, you can give each student a small piece of different colored construction paper, usually the scraps, and they tear off a small piece when they need to mark the number. This way you do not have to keep track of small pieces.)
3. First player rolls all five dice. With the numbers showing, student creates a number sentence by adding, subtracting and/or multiplying. For example, if I rolled a $3,6,2$, 5, and 4 . I could say $3+6=8+2=10-5=5-4=1$ and then cover the one. I could also say, $3-2=1+6=8+5=13-4=9$.
4. The object is to make a number that is not already covered.
5. When player cannot make a number, he/she misses the turn and it moves to the next

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 $1 / 2$ of a composition book.

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.
player. When all numbers are covered, play is over.

## 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
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3rd Grade Math Magic


| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Math Magic 2 |
| Focus: | Addition and Subtraction |

## Materials:

White boards Vocabulary Notebooks dice

Crayolas Double 9 Dominoes
Activity at the end of this lesson plan
Socks (use for erasers)

| Opening |
| :--- |
| $\quad$ State the objective |
| Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, |
| multiplication, and division. |
| Gain prior knowledge by asking students the following questions |
| Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe |
| those things. What are some strategies that you use when you are trying to figure out how to solve a mathematics |
| problem? How are addition and subtraction alike? How are they different? What does it mean to be a reciprocal process? |
| Write several math problems on the board and invite students to come up and talk through the process. |



| Addition: $2+3=5$ |  |
| :---: | :---: |
| Math Vocabulary |  |
| Math term: reciprocal operations <br> Description: The term "reciprocal operations" refers to two operations which are related to each other such as completing one operation to check the correctness of the other operation. Addition and subtraction are reciprocal operations. In addition you are looking for a total, in subtraction you start with a total and then find the difference. |  |
| Enter the term "reciprocal operations" in your Vocabulary Notebook. Talk with a peer about what this term means to you. <br> Create an entry for the word digit in your Vocabulary Notebook. |  |
| Vocabulary Notebook Sample: |  |
| New Word reciprocal operations | My Description <br> addition - subtraction, multiplication division |
| Personal Connection <br> Addition is a reciprocal operation to subtraction | Drawing $4+5=9 ; 9-4=5$ |

## Activity Addition and Subtraction

## Addition and Subtraction

Addition and Subtraction are reciprocal mathematical processes. In addition you are looking for a total of two or more groups; in subtraction you are looking for the difference after you take a portion of the total. Being able to go back and forth between addition and subtraction comfortably is important.
To find if you have correctly done an addition problem, you can subtract, making the sum the subtrahend, subtracting one of the addends, and then finding the second addend. To check subtraction, you will add the difference and the minuend, and should arrive at the subtrahend.

Today we are going to practice moving between addition and subtraction to find particular numbers.

## Math Magic <br> Directions:

1. Divide students into groups of 3 .
2. Give each group of 3 a Math Magic game board and six, 5 -sided dice. Also give students a white board and game tokens. (Notes: For tokens, you can give each student a small piece of different colored construction paper, usually the scraps, and they tear off a small piece when they need to mark the number. This way you do not

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 $1 / 2$ of a composition book.

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.
have to keep track of small pieces.)
3. First player rolls all five dice. With the numbers showing, student creates a number sentence by adding, subtracting and/or multiplying. For example, if I rolled a 3, 6, 2, 5, and 4. I could say $3+6=8+2=10-5=5-4=1$ and then cover the one. $I$ could also say, $3-2=1+6=8+5=13-4=9$.
4. The object is to make a number that is not already covered.
5. When player cannot make a number, he/she misses the turn and it moves to the next player. When all numbers are covered, play is over.

## 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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3rd Grade Math Magic


| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | + or - |
| Focus: | Addition and Subtraction |


| Materials: |  |
| :--- | :--- |
| White boards | Vocabulary Notebooks |
| Crayolas | dice (6-sided and 12-sided for each pair) |
| Socks (for erasers) | deck of card (one for every 2 players) |


| Opening |
| :--- |
| State the objective |
| Today we are going to practice using our math vocabulary and practice in the basic. |
| Gain prior knowledge by asking students the following questions |
| Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe |
| those things. It is important that you can go back and forth between the operations, even though each operation has its |
| own set of guidelines. Create 5 addition and/or subtraction problems. Have a peer do the problems you created while you |
| complete theirs. |


| Content (the "Meat") |  |
| :---: | :---: |
| Problem of the Day <br> Write at least 2 multiplication problems that has the product of 30 . Write two stories, one for each of the two problems you created. | *Activity $\rightarrow$ Teachable Moment(s) throughout During the lesson check in |
| Fact Practice <br> Fact Family <br> A Fact Family is 3 numbers which have a relationship in addition and subtraction. For example, the number 9,4 , and 13 have a particular relationship in math. This family has four members: $\begin{aligned} & 9+4=13 \\ & 4+9=13 \\ & 13-9=4 \\ & 13-4=9 \end{aligned}$ <br> 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 | with students repeatedly. <br> Check in about what is happening and what they are thinking. <br> Take advantage of any teachable moments. <br> 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. |



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\begin{array}{r}
647 \\
+396 \\
\hline
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$$

6. He/she find the sum or the difference (using a white board)
7. He/she shares his/her answer with Player 2.
8. Player 2 continues in the same way.
9. Play is complete when all cards have been used.

## 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.

| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | + or - |
| Focus: | Addition and Subtraction |

## Materials:

White boards
Crayolas
Socks (use as erasers)

Vocabulary Notebooks
Deck of cards
Dice

Opening
State the objective
Today we are going to practice using our math vocabulary and practice in the basic operations of addition, subtraction, multiplication, and division.

## Gain prior knowledge by asking students the following questions

Math is about intentionally thinking of the relationships between numbers, operations, and the words we use to describe those things. It is important that you can go back and forth between the operations, even though each operation has its own set of guidelines. Create 5 addition and/or subtraction problems. Have a peer do the problems you created while you complete theirs.


6. He/she find the sum or the difference (using a white board)
7. He/she shares his/her answer with Player 2.
8. Player 2 continues in the same way.
9. Play is complete when all cards have been used.

## 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.

| Component | Math |
| :--- | :--- |
| Grade Level: | 3rd Grade |
| Lesson Title: | Student Activity Choice |
| Focus: | Review |

## Materials:

Game Boards and materials from this week.
Prizes (these can be time, a leadership role, opportunities to be the "teacher"

| Opening <br> $\quad$ State the objective <br> Today we are going to have fun playing a game. Students will be able to choose from the games learned in the past two <br> weeks. |
| :--- |

## Content (the "Meat")

teams
Activity
Today is a review day. Students should select from the following list of activities:

## Regrouping

Connect the Dots \#1
Connect the Dots \#2
Domino Subtraction
Math Magic
Addition or Subtraction

|  | Closing |
| :---: | :---: |
| Say: | Review |
| $\bullet$ - Please recap what we did today. |  |
| $\bullet$ 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.
