

Component	Math
Grade Level:	2 <sup>nd</sup> – 5 <sup>th</sup> Grades
Lesson Title: Fact Family	
Focus: Learning Each Math Lesson Segment	

**Materials:** 

Dice

White boards, paper and pencil

## **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

## Content (the "Meat")

## **Problem of the Day**

In this segment you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

If a pattern looks like this: ♥♥♥♥♥♥♥, what is next?

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

#### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).
- Tell them how they will know that the game is over.

# \*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.



- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### **Step 2: Demonstration**

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

## Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **Fact Practice**

#### **Fact Family**

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

9 X 4 = 36

 $4 \times 9 = 36$ 

 $36 \div 4 = 9$ 

 $36 \div 9 = 4$ 

The numbers 9, 4 and 13 have a particular relationship in addition and subtraction.



9 + 4 = 13

4 + 9 = 13

13 - 4 = -

13 - 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

#### **Student Practice**

General guidelines for students playing games follow

## Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) **Note:** If you are playing with cards you might want to have the students display their hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

## Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - o What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

#### Math Vocabulary

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

Word for Today: odd

**Description:** Numbers that cannot be divided evenly by 2. Examples: 3, 5, 7, 9, 31, 33, 35

Complete the journal entry in your Vocabulary Notebook. In space 1, write the word. In space 2, explain the word in your own words. In space 3 use the word in a

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,



sentence. In space 4 demonstrate your understanding of the word by drawing a picture of the word.

## **Vocabulary Notebook Sample:**

New Word	My Description
odd	Numbers that are not even
Personal Connection	Drawing
Are these numbers odd or even?	3, 5, 7, and 9 are odd numbers

multiple students acting out an equation).

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

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**

Each day there will also be a mathematics activity that will occur in this space. This week we will not do an activity here since you are learning how to play each of the Math Fact Games. This activity can be added to the Homework Center.

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.



Component	Math	
<b>Grade Level:</b> 2 <sup>nd</sup> – 5 <sup>th</sup> Grades		
Lesson Title: Addition or Multiplication War		
Focus: Learning Each Math Lesson Segment		

#### Materials:

Cards, one deck for every 2 students

White boards, paper and pencil

## **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

## Content (the "Meat")

## **Problem of the Day**

In this segment you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

If you have 19 chocolate chip cookies and 13 Oreos, how many cookies do you have altogether?

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).

# \*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.



- Tell them how they will know that the game is over.
- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### Step 2: Demonstration

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **Fact Practice**

#### **Addition War or Multiplication War**

- 1. Divide students into pairs. Give each pair a deck of cards have them remove face cards and jokers and place in the box.
- 2. Shuffle the deck and divide the cards evenly between the two players.
- 3. On go, the players turn over the cards at the same time.
- 4. Students add (or multiply) the 2 numbers that have been turned up.
- 5. 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.



- 6. At the end of round, students may reshuffle the pile of cards that they have.
- 7. Play can continue until one player has all cards or time has called.

#### **Student Practice**

General guidelines for students playing games follow

## Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) **Note:** If you are playing with cards you might want to have the students display their hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

## Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - o What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

#### **Math Vocabulary**

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

## Word for Today: math

**Description:** Math is the word we use that is short for mathematics. Math is the study of numbers, patterns, space, and change. In math we learn about operations, geometry, data and statistics, algebra, and mathematical reasoning. Complete the journal entry in your Vocabulary Notebook. In space 1, write the word. In space 2, explain the word in your own words. In space 3 use the word in a sentence. In space 4 demonstrate your understanding of the word by drawing a picture of the word.

## **Vocabulary Notebook Sample:**

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.



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New Word  math	My Description  A term that is short for mathematics and is about numbers and patterns	It is important to review academic math vocabulary often throughout the day.
Personal Connection  Math is one of my favorite subjects in school.	Drawing  Math  2***********************************	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  Each day there will also be a mathematics activity that will occur in this space. This week we will not do an activity here since you are learning how to play each of the Math Fact Games. This activity can be added to the Homework Center.		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.

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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?

## 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:	2 <sup>nd</sup> – 5 <sup>th</sup> Grades
Lesson Title:	Foreheader
Focus:	Learning Each Math Lesson Segment

#### **Materials:**

Cards, one deck for every 3 students

White boards, paper and pencil

## **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

## Content (the "Meat")

## **Problem of the Day**

In this segment you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

If you have 32 marbles and you lose 12, how many marbles do you have left?

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

#### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).
- Tell them how they will know that the game is over.

# \*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.



- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### **Step 2: Demonstration**

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **Fact Practice**

## **Foreheader**

- 1. Divide students into trios. Give each trio a deck of cards without face cards and jokers.
- 2. Shuffle the deck and give all of the cards to the referee who will be "judging" the contest.
- 3. On go, players are each handed a card by the referee and **WITHOUT** looking, put the card face out on his/her forehead.
- **4.** The referee multiplies (or 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.
- Players can repeat play (if there is another time) with each other so each has an opportunity to be both a player and referee.

#### **Student Practice**

General guidelines for students playing games follow

## Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) **Note:** If you are playing with cards you might want to have the students display their hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

## Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - o What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

#### Math Vocabulary

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

#### Word for Today: operations

**Description:** The word operation refers to a mathematical process. The four most common are addition, subtraction, multiplication, and division that are represented with these symbols: +, -, -, -, -, and +.

Complete the journal entry in your Vocabulary Notebook. In space 1, write the

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



word. In space 2, explain the word in your own words. In space 3 use the word in a sentence. In space 4 demonstrate your understanding of the word by drawing a picture of the word.

## **Vocabulary Notebook Sample:**

New Word	My Description
operations	There 4 basic operations: addition, subtraction, multiplication and division
Personal Connection	Drawing
How many of the operations can you complete?	

out an equation).

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

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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

Each day there will also be a mathematics activity that will occur in this space. This week we will not do an activity here since you are learning how to play each of the Math Fact Games. This activity can be added to the Homework Center.

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.



Component	Math	
Grade Level:	e Level: $2^{nd} - 5^{th}$ Grades	
Lesson Title: Addition or Multiplication Ladder		
Focus: Learning Each Math Lesson Segment		

Materials:

Dice

White boards, paper and pencil

## **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

## Content (the "Meat")

## **Problem of the Day**

In this segment you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

What do these symbols mean: < and >. Give an example.

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

#### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).
- Tell them how they will know that the game is over.

# \*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.



- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### **Step 2: Demonstration**

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

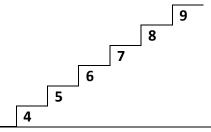
## Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
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- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
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- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **Fact Practice**

## **Multiplication (or Addition) Ladder**

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





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

#### **Student Practice**

General guidelines for students playing games follow

## Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) **Note:** If you are playing with cards you might want to have the students display their hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

## Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
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#### **Math Vocabulary**

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

#### Word for Today: subtraction

**Description:** Reducing a total by a specific amount and then finding the difference between what you started with and what you have after removing some items. Complete the journal entry in your Vocabulary Notebook. In space 1, write the word. In space 2, explain the word in your own words. In space 3 use the word in a

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,



sentence. In space 4 demonstrate your understanding of the word by drawing a picture of the word.

## **Vocabulary Notebook Sample:**

New Word	My Description
subtraction	Reducing a total number and finding the difference
Personal Connection	Drawing
Do you know how to do subtraction problems?	7-3-4

multiple students acting out an equation).

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

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**

Each day there will also be a mathematics activity that will occur in this space. This week we will not do an activity here since you are learning how to play each of the Math Fact Games. This activity can be added to the Homework Center.

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:

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- Did we achieve our objectives?



#### Debrief

#### **Three Whats**

Ask the following three what questions:

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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:	2 <sup>nd</sup> – 5 <sup>th</sup> Grades
Lesson Title: Spokes on a Wheel	
Focus: Learning Each Math Lesson Segment	

Materials:

Dice

White boards, paper and pencil

## **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

### Content (the "Meat")

## **Problem of the Day**

In this segment you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

If there are 5 rows and each row has 5 chairs in it, how many chairs are there?

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

#### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).
- Tell them how they will know that the game is over.

# \*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.



- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### **Step 2: Demonstration**

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

## Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **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  $7 \times 8 = 56$  or 6 + 8 = 14)



#### **Student Practice**

General guidelines for students playing games follow

#### Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) Note: If you
  are playing with cards you might want to have the students display their
  hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

#### Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

#### **Math Vocabulary**

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

## Word for Today: addition

**Description:** Combining two or more groups of things (usually representing by numerals) and finding a total.

Complete the journal entry in your Vocabulary Notebook. In space 1, write the word. In space 2, explain the word in your own words. In space 3 use the word in a sentence. In space 4 demonstrate your understanding of the word by drawing a picture of the word.

## **Vocabulary Notebook Sample:**

New Word	My Description	

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

Complete the Vocabulary

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.

It is important to review



addition	Combining the values of two or more things into a whole	academic math vocabulary often throughout the day.
Personal Connection  Do you know how to do addition problems?	Drawing 7 + 3 = 10	Complete the Vocabulary notebook for each word. When possible, have students experience the
p. co		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	Focus on having young people "compete" in pairs or small groups. Once a
1	tics activity that will occur in this space. This nce you are learning how to play each of the added to the Homework Center.	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.



Component	Math
Grade Level:	2 <sup>nd</sup> – 5 <sup>th</sup> Grades
	Spot and Dots
Focus:	Learning Each Math Lesson Segment

#### **Materials:**

Cards, one deck for every 2 students

White boards, paper and pencil

## **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

## Content (the "Meat")

## **Problem of the Day**

In this segment you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

If you have 11 rows and each row has 6 chairs in it, how many chairs do you have in all?

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).

# \*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.



- Tell them how they will know that the game is over.
- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### Step 2: Demonstration

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **Fact Practice**

#### **Fact Practice - Spots and Dots**

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

- 1. Players sit across from each other.
- 2. Dominoes are between them, face (or spots) down.
- 3. Each student draws a domino and writes the multiplication (or addition) problem on their white board, multiplying (or adding) the numbers represented by the spots



Example: Domino drawn is

••

Multiplication:  $2 \times 3 = 6$ Addition: 2 + 3 = 5

#### **Student Practice**

General guidelines for students playing games follow

## Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) Note: If you
  are playing with cards you might want to have the students display their
  hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

#### Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - o What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

#### **Math Vocabulary**

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

Word for Today: pentagon

**Description:** A flat-5 side figure. It looks a little like a house.

Complete the journal entry in your Vocabulary Notebook. In space 1, write the

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. In space 2, explain the word in your own words. In space 3 use the word in a sentence. In space 4 demonstrate your understanding of the word by drawing a picture of the word.

## **Vocabulary Notebook Sample:**

	New Word	My Description
	pentagon	A 5 sided figure that is flat
Ī	Personal Connection	Drawing
	The Pentagon is a 5-sided building.	

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.

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

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

## **Activity**

Each day there will also be a mathematics activity that will occur in this space. This week we will not do an activity here since you are learning how to play each of the Math Fact Games. This activity can be added to the Homework Center.

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.



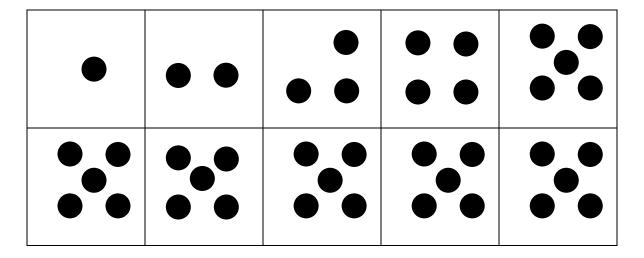
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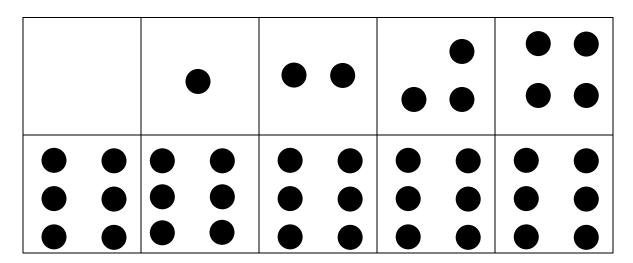
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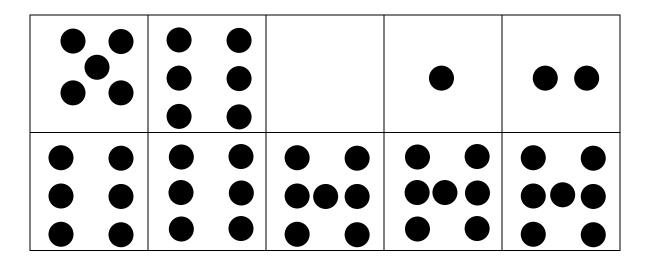
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Component	Math
Grade Level:	2 <sup>nd</sup> – 5 <sup>th</sup> Grades
Lesson Title:	Draw
Focus:	Learning Each Math Lesson Segment

#### **Materials:**

Cards, one deck for every 2 students

White boards, paper and pencil

## **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

## Content (the "Meat")

## **Problem of the Day**

In this segment, you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

Joe has 8 coins. Judy has 9 coins. How many coins do they have together?

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

#### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).
- Tell them how they will know that the game is over.

# \*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.



- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### **Step 2: Demonstration**

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

## Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **Fact Practice**

## Draw!

- 1. Divide students into pairs and give each pair a deck of cards.
- 2. Remove the face cards and jokers from the deck of cards.
- 3. Shuffle the deck.
- 4. Decide who will go first.
- 5. First player draws two cards.
- 6. Student multiplies (adds) 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.

#### Student Practice

General guidelines for students playing games follow

#### Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers). Note: If you
  are playing with cards you might want to have the students display their
  hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

#### Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - o What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

#### Math Vocabulary

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

### Word for Today: circle

**Description:** A circle is a 2-dimensional shape made by drawing a curve that is always the same distance from the center. A circle is round. Complete the journal entry in your Vocabulary Notebook. In space 1, write the word. In space 2, explain the word in your own words. In space 3 use the word in a sentence. In space 4 demonstrate your understanding of the word by drawing a

picture of the word.

#### **Vocabulary Notebook Sample:**

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



Γ	New Word	My Description	composition book.
	circle	A closed figure that is made with a single arching line	It is important to review academic math vocabulary often throughout the day.
	Personal Connection	Drawing	Complete the Vocabulary notebook for each word.
	That clock is a circle.		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.
	Acti	Focus on having young people "compete" in pairs	
	Each day there will also be a mathematics week we will not do an activity here since Math Fact Games. This activity can be add	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.



Component	Math
Grade Level:	2 <sup>nd</sup> – 5 <sup>th</sup> Grades
Lesson Title:	Target
Focus:	Learning Each Math Lesson Segment

#### Materials:

Cards, one deck for every 2 students

White boards, paper and pencil

#### **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

#### Content (the "Meat")

### **Problem of the Day**

In this segment you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

How much money do you have if you have 3 dimes, 4 nickels, 8 pennies, and one quarter?

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

#### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).

## \*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.



- Tell them how they will know that the game is over.
- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### Step 2: Demonstration

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **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<sup>th</sup> card which will be to the side and becomes the target number (aces count as 1).
- 5. Each player makes an equation with some or all of the numbers in the grid to equal the target number. Students may add, subtract, multiply or divide.
- 6. Each card may be used only one time in the equation.



- 7. As the cards are being picked up, the player must say the equation aloud—for example if the target card is 10, then I could say  $5 \times 2 = 10$ , 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.

#### **Student Practice**

General guidelines for students playing games follow

#### Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) **Note:** If you are playing with cards you might want to have the students display their hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

#### Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - o What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

#### Math Vocabulary

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

#### Word for Today: triangle

**Description:** A shape that has three sides and three angles.

Complete the journal entry in your Vocabulary Notebook. In space 1, write the word. In space 2, explain the word in your own words. In space 3 use the word in a sentence. In space 4 demonstrate your understanding of the word by drawing a

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



picture of the word.		out an equation).			
Vocabulary Notebook Sample:		Vocabulary Notebooks can be made from ½ of a			
New Word	My Description	composition book.			
triangle	A three-sided flat shape	It is important to review academic math vocabulary often			
Personal Connection	Drawing	throughout the day.			
Have you seen a triangle?		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.			
A	ctivity	Focus on having young			
		people "compete" in pairs			
Each day there will also be a mathemat	or small groups. Once a game is mastered you can				
-	veek we will not do an activity here since you are learning how to play each of the				
Math Fact Games. This activity can be a	added to the Homework Center.	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.



Component	Math
Grade Level:	2 <sup>nd</sup> – 5 <sup>th</sup> Grades
Lesson Title:	Number Hunt or Product Hunt
Focus:	Learning Each Math Lesson Segment

#### Materials:

12-sided dice (1 pair for every 2 students)

White boards, paper and pencil

#### **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

### Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

#### Content (the "Meat")

### **Problem of the Day**

In this segment you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

Think of the following shapes:  $\triangle$   $\bigcirc$ 

Organize them in some way and then share that organization with a partner.

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

#### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).

## \*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.



- Tell them how they will know that the game is over.
- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### Step 2: Demonstration

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **Fact Practice**

#### Number Hunt (Grades 2-3—Game Board Attached)

- 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.



## Product Hunt (Grades 3-5—Game Board Attached)

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

#### **Student Practice**

General guidelines for students playing games follow

#### Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) **Note:** If you are playing with cards you might want to have the students display their hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

#### Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - o What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

#### **Math Vocabulary**

Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

Word for Today: square

**Description:** A shape that has four sides that are all equal in length.

It is important to review academic math vocabulary often throughout the day.
Complete the Vocabulary notebook for each word.
When possible, have



Complete the journal entry in your Vocabulary Notebook. In space 1, write the word. In space 2, explain the word in your own words. In space 3 use the word in a sentence. In space 4 demonstrate your understanding of the word by drawing a picture of the word.

## **Vocabulary Notebook Sample:**

New Word	My Description				
square	A four-sided shape with 4 equal sides and 4 equal right angles				
Personal Connection	Drawing				
That clock is in the shape of a square.					

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.

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

Each day there will also be a mathematics activity that will occur in this space. This week we will not do an activity here since you are learning how to play each of the Math Fact Games. This activity can be added to the Homework Center.

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

## Closing

## **Review**

#### Say:

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



#### Debrief

#### **Three Whats**

Ask the following three what questions:

What was your key learning for the day?

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

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

## Reflection (Confirm, Tweak, Aha!)

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



## **Product Hunt**

48	20	81	3	45	27	
1	24	108	77	7	40	
120	72	96	6 8		60	
14	144	70	22	15	11	
33	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	



## **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:	2 <sup>nd</sup> – 5 <sup>th</sup> Grades
Lesson Title:	Bump It Up and Add A Zero
Focus:	Learning Each Math Lesson Segment

#### **Materials:**

Dice, cards, game boards

White boards, paper and pencil

### **Opening**

#### State the objective

Today we are going to practice the different aspects of the math lesson plan.

## Gain prior knowledge by asking students the following questions

What are some of the games that you know how to play?

What are some of the math vocabulary words that you know?

What do you think is meant by "Problem of the Day"?

#### Content (the "Meat")

## **Problem of the Day**

In this segment, you will have a problem for students to complete. The problems will vary and will be both review and in line with the lesson. Write the problem on chart paper. Let youth work the problem on a white board either alone or with a partner. Following is a sample problem:

#### I have \$1.00. I spend \$.68. How much do I have left?

#### **Math Facts**

The Fact Practice activity will be different each day. During Group 1 Lessons the youth will be taught 10 different ways to practice math facts in fun and engaging ways. You may use dice, dominoes, cards, white board, or other items to practice the math facts that are appropriate for the grade level students are in. In order for youth to practice effectively, you will need to teach each game following the protocol below.

#### **Step 1: Basic Information**

- Tell the students the name of the game.
- Tell them the skill that they will be practicing.
- Tell them the materials they will need to play the game.
- Tell them how many people may play the game at one time.
- Tell them if the game is cooperative (all students working together to defeat the game) or competitive (each student hopes to defeat the other players).
- Tell them how they will know that the game is over.

# \*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.



- Remind them of how to choose who will be first.
- Remind them at the end of the game that they will need to do to clean-up.

#### **Step 2: Demonstration**

- Talk the students through the game.
- Give the rules (it is best if they can see these).
- Give a demonstration or a "for example"
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### Step 3: Model

- Ask for 2-3 student volunteers to play a "teaching game" so the remainder of the class can see the game played from beginning to end.
- Ask other students to make a circle around the volunteers so they can see how the game is played.
- Go through the game step by step having the volunteers actually make the plays.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- After playing the game for several minutes, praise the first volunteers and ask for 2-3 more.
- Replay the game with the new volunteers, providing less direction but being very responsive if the players are stuck or playing the game incorrectly.
- Ask players to explain what they were thinking when they made a particular move.
- Ask onlookers to make observations or ask questions.
- Check for understanding by asking students to tell another student "how" to play the game from what they observed.

#### **Fact Practice**

#### Bump It Up! Add A Zero

- 1. Divide students into pairs
- 2. Give each pair a white board and a deck of cards (ask them to remove face cards, jokers, and 10s and return to the box)
- 3. The object of this fact practice is to sum numbers until you reach 1,000.
- 4. Student draws 2 cards, adds the value of the cards together, multiplies by ten and writes the total on the sheet.
- 5. It is not the other person's turn to do the same
- 6. When play returns to the first player, the process is repeated, although this



time, the totals are added together.

7. First person to 1,000 wins.

Example: Player draws a 7 and a 4. Total is 11. Multiply by 10 (add the zero) equals 110. Next turn, player draws a 3 and a 2 which totals 5. Multiply by 10 and I now add 50 to 110 for a total of 160.

#### **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.

Players may mark the same number.

#### **Student Practice**

General guidelines for students playing games follow

#### Step 4: Open Play

- Divide students into small groups (you might want to put a "volunteer" who played the game in each of these small groups)
- Have the students play a practice game (no winners or losers) Note: If you
  are playing with cards you might want to have the students display their
  hand of cards during Open Play.
- Check for understanding by asking students to tell another student "how" to play the game from what they experienced.

**Note:** This is the last "practice" for the game. The majority of students will have a full understanding of the game by this point. There will be only minor tweaks and adjustments that need to be made.

#### Step 5: Play

- Have students play the game.'
- Circulate and answer questions as needed.
- Debrief the game at the end asking students:
  - o What skill did you practice?
  - o What did you learn?
  - o What about the game was enjoyable? What makes you say that?
  - o How would you have taught the game differently?

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Each lesson will also have a vocabulary word that is appropriate for the grade level. The word may be reviewed more than one time. Youth need to complete the vocabulary entry in an Academic Vocabulary Notebook. The Vocabulary section will follow this pattern. We will practice working on this for the next 11 days.

Word for Today: even

**Description:** Numbers that can be divided evenly by 2. Examples: 2, 8, 14, 22, 48, and 100.

Complete the journal entry in your Vocabulary Notebook. In space 1, write the word. In space 2, explain the word in your own words. In space 3 use the word in a sentence. In space 4 demonstrate your understanding of the word by drawing a picture of the word.

**Vocabulary Notebook Sample:** 

New Word	My Description				
even	Numbers that are not odd				
Personal Connection	Drawing				
Are these numbers odd or even?	322, 46, 52, and 98 are even numbers				

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.

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).

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Activity

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

## Closing

#### Review

Say:

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



#### **Debrief**

#### **Three Whats**

Ask the following three what questions:

What was your key learning for the day?

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

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

## Reflection (Confirm, Tweak, Aha!)

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

CONSULT

## **Consult 4 Kids Lesson Plans**

## 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