

20 Days of Lesson
Plans and Activities

3rd
grade



THE MAGIC OF MATH

Unit **3**:

MULTIPLICATION

by Hope King and Amy Lemons

UNIT THREE

OVERVIEW

	FOCUS	STANDARD
WEEK 1	Intro to Multiplication	TEKS: 3.4DEK, 3.5B CCSS: 3.0A.A.1, 3.0A.A.3
WEEK 2	Multiplication Facts and Strategies	TEKS: 3.4DEFK, 3.BD CCSS: 3.0A.A.4, 3.0A.C.7
WEEK 3	Properties of Multiplication	TEKS: 3.4EGK CCSS: 3.0A.A.5
WEEK 4	Multiplication Multi-Step Word Problems	TEKS: 3.4K, 3.5B CCSS: 3.0A.A.3, 3.0A.D.8

DAILY LESSON PLANS

-20 Days of Lesson Plans for: Multiplication Strategies, Multiplication Facts, Properties of Multiplication, Multi-Step Word Problems

-STANDARDS ALIGNED to Common Core and TEKS

-I Can Statements

-Description of Activities

INTRO TO MULTIPLICATION

INTRO TO MULTIPLICATION

STANDARD	OBJECTIVE
TEKS: 3.4DEK, 3.5B CCSS: 3.OA.A.1, 3.OA.A.3	I use different strategies to represent multiplication facts.

VOCABULARY WORDS	WORD PROBLEM
ARRAY, FACTORS, PRODUCT	Lenny has four boxes of toys. Each box has 8 toys in it. Draw a picture to show how many toys Lenny has in his 4 boxes.

MINILESSON	ACTIVITY
Introduce how we can skip to find the answer to a multiplication problem. I want to practice skip counting with the class. You can use pennant banners to skip count multiples. It may be helpful to hang these up throughout the multiplication unit. Use skip counting cards to skip count the rows of objects. Then we can solve multiplication problems much more easily. We can also give a set of cards to each group and then we can work together to skip count the rows.	Real World Arrays: Pictures can be displayed using a projector, placed around the room, or used to the different table groups. Students will work with a partner to find the array in the picture. In their flipbooks, students will write "_____ rows of _____". Underneath students will write the multiplication equation and product that matches the array shown.

MINILESSON	ACTIVITY
Introduce making arrays to the class. To solve multiplication equations and word problems we can make arrays by drawing objects into rows. The important thing to remember is that each row must have the same number of objects represented. Show the clipart images of the buildings. Discuss how we can find arrays in our world. The arrays are based off so that students can see them better. Some of the pictures have multiple arrays. Discuss the arrays and show how you can write a multiplication equation to match the picture. Give students square tiles or counters to practice making arrays with your guidance. Call out different equations or "rows of" and have students model that array on their desk.	Real World Arrays: Pictures can be displayed using a projector, placed around the room, or used to the different table groups. Students will work with a partner to find the array in the picture. In their flipbooks, students will write "_____ rows of _____". Underneath students will write the multiplication equation and product that matches the array shown.

INTRO TO MULTIPLICATION

INTRO TO MULTIPLICATION Day one

STANDARD	OBJECTIVE	MATERIALS
TEKS: 3.4DEK, 3.5B CCSS: 3.OA.A.1, 3.OA.A.3	I use different strategies to represent multiplication facts.	Optional: classroom objects and baggies

VOCABULARY WORDS	WORD PROBLEM
REPEATED ADDITION	Lenny has four boxes of toys. Each box has 8 toys in it. Draw a picture to show how many toys Lenny has in his 4 boxes.

MINILESSON	ACTIVITY	INTERACTIVE NOTEBOOKS
To prepare: Gather items such as counters, linking cubes, or small objects that you can place in equal groups. For example: 3 red linking cubes, 3 blue linking cubes, 4 pink beads, 4 yellow beads. Place objects with equal groups into baggies/containers. Pass out the baggies to the class. You can make one baggie for each set of partners or just pass out random baggies. Have students come up and share what is in their bags. Discuss how we have equal groups of objects and can use repeated addition to find the total number of objects. Explain to students that we are going to be multiplying this week. You can also introduce the multiplication equation for each bag if you think the students are ready. I have provided clip art pages that can be printed and placed into bags if you don't have access to the objects as described above.	Pennant Banner: Each student needs a pennant to add to the class banner. Students will draw a picture that shows equal groups. For example: 3 bugs with 6 legs/4 bees with 2 wings each/7 bikes with 2 wheels each/4 flowers with 5 petals each. You may want to discuss and then let students generate some ideas. The most important thing is that they make equal groups as they illustrate. On their pennant, students will draw their picture and write the problem and repeated addition equation. If students are ready they can also write the multiplication equation that matches. Put all of these together to create a class banner.	Repeated Addition: Students cut out the flaps and glue only under the title. Students will cut between the flaps. There are four flaps. Students will write the repeated addition sentence that matches the picture shown underneath the flap. If students are ready they can write the multiplication sentence as well. You can also have students write a word problem for each picture and solve.

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FUN ACTIVITIES

Easy to Print Activities, Games, and Fun Stuff that help students stay engaged during your math block



DAILY WORD PROBLEMS

20 Word Problems that fit the skills included

WORD PROBLEM- DAY ONE

Gentry puts stickers on 6 pages of a sticker album. He puts 3 rows of 4 stickers on each page. How many stickers does Gentry have in his album? Draw a picture to show your answer.

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WORD PROBLEM- DAY THREE

The movie theatre has 6 rows of 7 seats. The theatre right beside it has 8 rows of 9 seats. How many seats are there in total? Draw a picture to support your answer.

WORD PROBLEM- DAY TWO

There are 4 tanks with 9 fish in each tank. Soleil counted the number of fish. What is another way to find the number of fish? Explain your thinking.

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Jillian buys 7 packages of erasers. Each package has 9 erasers. Use the distributive property to write an equation that will show how many erasers Jillian has.

There are 7 tables in our classroom. 6 students sit at each table. If all but four chairs are filled, how many students are in class today?

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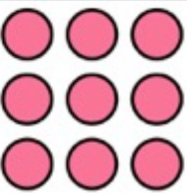
INTERACTIVE NOTEBOOKS

Activities that are easy to cut and glue into math spirals/interactive notebooks



VOCABULARY CARDS



Cards that you can display on a math word wall or bulletin board


FACTOR $9 \times 3 = 27$	ZERO PROPERTY $0 \times 1 = 0$ ANY NUMBER TIMES ZERO EQUALS ZERO
PRODUCT $4 \times 5 = 20$	REPEATED ADDITION  $5 + 5 + 5 + 5$
MULTIPLY 2×3 2 GROUPS OF 3 	IDENTITY PROPERTY $5 \times 1 = 5$ MULTIPLYING BY ONE WILL NOT CHANGE THE IDENTITY OF THE NUMBER
EQUAL GROUPS 	ARRAY 
DISTRIBUTIVE PROPERTY $6 \times 8 = (6 \times 2) + (6 \times 6)$	
MULTIPLE 3 6 9 12 15 18 21	


I CAN STATEMENTS

I Can Statements can be displayed throughout the unit.

I CAN:






 **USE DIFFERENT STRATEGIES TO REPRESENT MULTIPLICATION FACTS** 

MULTIPLY WITH FLUENCY 
2X1-2 3X3-9 4X5-20

USE THE PROPERTIES OF MULTIPLICATION TO SOLVE PROBLEMS 





SOLVE ONE-STEP WORD PROBLEMS

JENN HAS TWO FIREFLIES. SHE FOUND THREE MORE. HOW MANY FIREFLIES DOES JENN HAVE ALTOGETHER?

SOLVE MULTI-STEP WORD PROBLEMS

KEENAN HAD FOUR GUMBALLS. HE CHEWED ONE. THEN HIS FRIEND MARK GAVE HIM TWO MORE. HOW MANY GUMBALLS DOES KEENAN HAVE?

QUICK ASSESSMENTS

MULTIPLICATION

Name: _____

1. Which repeated addition sentence matches the picture below? Answer the equation.



- a. $3 + 3 + 3 + 3 + 3 + 3$
 b. $6 + 6 + 6$
 c. $6 + 3$

2. Draw a picture of making equal groups to match the multiplication equation. Choose the correct product.

$$3 \times 8 =$$

- a. 21
 b. 26
 c. 24

5. What is the answer to a multiplication problem called?

- a. factor
 b. sum
 c. multiple
 d. product

6. There were 8 students coloring pictures. Each student had 4 colored pencils. How many colored pencils were there in all?

- a. 32
 b. 84
 c. 23
 d. 48

7. What multiplication equation matches the array? Find the product of the equation.



Name: _____

MULTIPLICATION FACTS

$2 \times 3 =$	$7 \times 7 =$	$6 \times 1 =$	$5 \times 6 =$	$8 \times 3 =$
$8 \times 7 =$	$7 \times 3 =$	$8 \times 8 =$	$4 \times 4 =$	$12 \times 3 =$
$6 \times 6 =$	$1 \times 5 =$	$6 \times 7 =$	$11 \times 2 =$	$6 \times 4 =$
$4 \times 8 =$	$4 \times 9 =$	$10 \times 4 =$	$8 \times 1 =$	$1 \times 11 =$
$3 \times 4 =$	$9 \times 8 =$	$5 \times 3 =$	$2 \times 12 =$	$7 \times 5 =$

PROPERTIES OF MULTIPLICATION QUIZ

Name: _____

1. Which property of multiplication does this problem show?

$$(3 \times 2) \times 6 = 3 \times (2 \times 6)$$

- a. distributive property
 b. commutative property
 c. associative property

2. Which property of multiplication does this problem show?

$$8 \times 9 = 9 \times 8$$

- a. associative property
 b. distributive property
 c. commutative property

3. Use the commutative property to check this problem.

$$6 \times 9$$

4. Myron went apple picking. He had 7 buckets of apples. Each bucket had 5 apples. Which way can Myron use to show how many apples he has?

- a. $(7 \times 2) + (7 \times 2)$
 b. $(7 + 3) + (7 + 2)$
 c. $(7 \times 3) + (7 \times 2)$
 d. $(7 \times 7) + (7 \times 5)$

5. Kamyah buys 5 packages of cookies. Each package has 8 cookies. Use the distributive property to show how many cookies Kamyah has.

6. Use these three numbers to demonstrate the associative property of multiplication (3, 2, 3).

UNIT THREE: CUMULATIVE ASSESSMENT

Multiplication, Properties of Multiplication, & Multi-step Word Problems

Name: _____

1. Which property of multiplication does this problem show?

$$7 \times 8 = (4 \times 8) + (3 \times 8)$$

- a. distributive property
 b. commutative property
 c. associative property

2. Which property of multiplication does this problem show?

$$(9 \times 4) \times 3 = 9 \times (4 \times 3)$$

- a. associative property
 b. distributive property
 c. commutative property

3. Use the commutative property to check this problem.

$$8 \times 6$$

4. Solve using repeated addition:
 $5 \times 9 =$

5. Marcie and her mom are making her grandmother a family quilt. The quilt will be made of 8 rows with 7 squares in each row. Draw an array to show how many squares they will need.

7. Liam and his brother were star gazing. They saw 9 rows with 7 stars in each row. Which way can Liam show how many stars he saw?

- a. $(9 + 7) \times (9 + 7)$
 b. $(5 \times 7) + (5 \times 7)$
 c. $(5 \times 7) + (4 \times 7)$
 d. $(5 + 7) \times (4 + 7)$

8. 8 monster trucks are in the parking lot. Each truck has four tires. Write an equation to show how many tires the trucks have altogether. Use the commutative property to check.

9. Danielle is throwing a party. She wants to give out some party favors. She has enough to give 7 stickers and 5 pieces of candy to each girl. If she has 9 girls attending, how many party favors does she have to give out? _____

10. Solve:

- a. $5 \times 8 =$
 b. $9 \times 4 =$
 c. $3 \times 2 =$
 d. $8 \times 0 =$
 e. $1 \times 89 =$
 f. $7 \times 9 =$
 g. $8 \times 5 =$
 h. $9 \times 1 =$

WEEK ONE

Match & Multiply

2x8= 2x7=6
 2 groups of 8

2x4= 4x2= 6x3= 3x4= 2x3= 3x5=

Repeated Addition

There are 4 bees. Each has 2 wings. How many wings are there in all?

2+2+2+2+2=12

3+3+3=9

12 24 36 48 60 72 84 96 108

4+4+4=12
 3x4=12

I HAVE: 4VE: S

WHO HAS 3x6=?

Task 8

MAKE AN array with PLAYDOH

5x15 7x21 4x12

PRODUCTS GREATER THAN 13

PRODUCTS LESS THAN 13

4x4=

Task 8

MAKE AN array with CUPCAKE LINERS

Making arrays

The gardener planted flowers. She arranged them into rows of four. If she had two rows of flowers, how many flowers were there in all?

2 ROWS OF 4
2x4=8

1 row of 5 4x5=20
 1 row of 3 1x3=3
 1 row of 4 1x4=4
 2 rows of 3 2x3=6
 1 row of 2 1x2=2

10 15 20 25

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EQUAL GROUPS

2 groups of 8
 2x8=16

1 2 3 4 5 6 7 8

COMPLETE THE task

TASK counters 4x5=20	TASK Cereal 2x5=10	TASK blocks 2x4=8
TASK playdoh 4x4=24	TASK cupcake 2x4=8	TASK
TASK	TASK	TASK

Task 8

MAKE AN array with CUPCAKE LINERS

2 5 4 6
 4 10 8 12
 6 15 12 18
 8 20 16 24

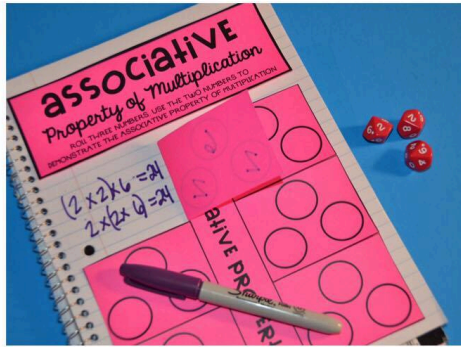
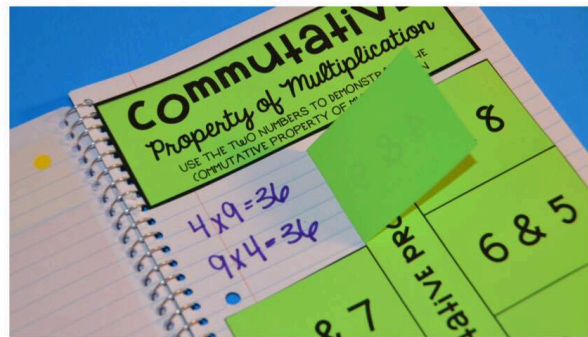
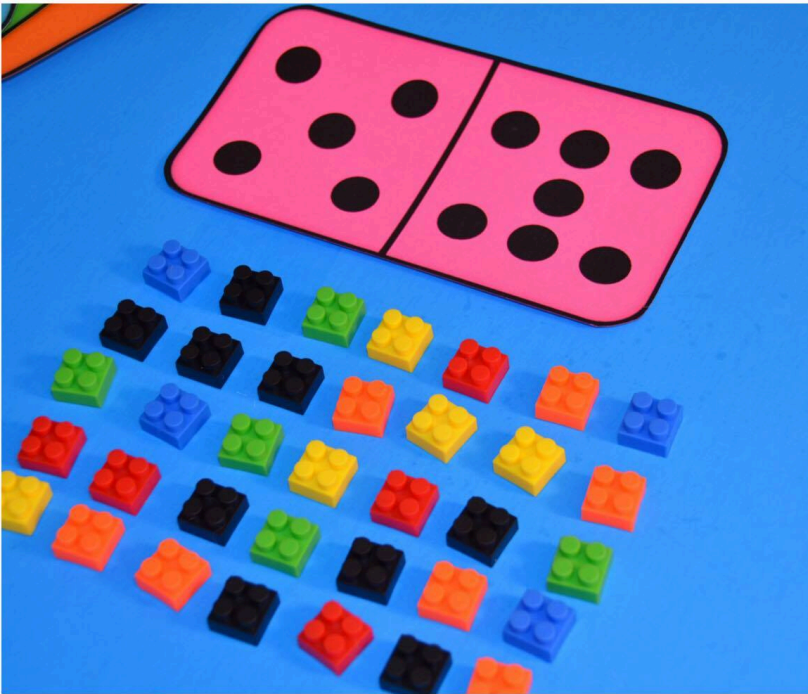
3+3+3=9
 3x3=9

There were 4 bikes. Each bike had 2 wheels. How many wheels in all? 2x2=4

SKIP COUNTING STRIPS

repeat

WEEK THREE



WEEK FOUR

