

UNIT NINE

OVERVIEW

	FOCUS	STANDARD
WEEK 1	Multiplication: Multiplication Charts, Tables, and Patterns Multiplication Expressions and Comparisons	TEKS: 3.4EK, 3.5BC, 3.5E CC: 3.0A.A.1, 3.0A.D.9
WEEK 2	Multiplication: Multiples of Ten, Partial Products, and Multiplying a 2-digit by a 1-digit number	TEKS: 3.4GK, 3.5B CC: 3.0A.B.5, 3.0A.D.9, 3.NBT.A.3
WEEK 3	Multiplication and Division: Related Facts and Unknown Numbers	TEKS: 3.4IK, 3.5BD CC: : 3.0A.A.2, 3.0A.A.3, 3.0A.A.4, 3.0A.B.5, 3.0A.B.6, 3.0A.D.8
WEEK 4	Multiplication and Division: Divisibility Rules with Even and Odd, Divide By 10, Relate to Multiplication	TEKS: 3.4IK, 3.5B CC: 3.0A.A.2, 3.0A.B.6

DAILY LESSON PLANS

-20 Days of Lesson Plans for:

Week 1: Multiplication: Patterns, Tables, and Charts & Multiplication Expressions and Comparisons

Week 2: Multiples of 10, Multiply a 2 Digit Number by a 1 Digit Number, Partial Products

Week 3: Multiplication and Division: Related Facts, Unknown Numbers

Week 4: Divisibility Rules with Even and Odd, Dividing by 10, Relate to Multiplication

PATTERNS	TABLES & CHARTS		PATTERNS	TABLES & CHARTS		
PATTERNS	PATTERNS, TABLES, & CHARTS	PATTERNS, TABLES, & CHARTS	PATTERNS, TABLES, & CHARTS	Day FIVE		
FOCUS	FOCUS	FOCUS	FOCUS	FOCUS	OBJECTIVE	MATERIALS
Tables and Patterns:	Patterns and Rules	Expressions and Comparisons:	Expressions and Comparisons:	Expressions and Comparisons	I can model and describe multiplication expressions.	Game Pieces, Paperclips
VOCABULARY	VOCABULARY WORDS	VOCABULARY	VOCABULARY	VOCABULARY WORDS	WORD PROBLEM	
FACTOR, PRODUCT	FACTOR, PRODUCT, MULTIPLE, PA	FACTOR, PRODUCT, MULTIPLE, EXP	FACTOR, PRODUCT, MULTIPLE, EXP	FACTOR, PRODUCT, MULTIPLE, EXPRESSION, COMPARISON	<p>Complete the word problem using the multiplication chart.</p> <p>_____</p> <p>_____</p> <p>_____</p>	
MINILESSON	MINILESSON	MINILESSON	MINILESSON	ACTIVITY	INTERACTIVE NOTEBOOKS	ASSESSMENT
<p>Use the multiplication chart and question stems from Monday to continue noticing patterns in the chart.</p> <p>Discuss how we can know if a product will be even or odd using the cards:</p> <p>even x even = even even x odd = even odd x odd = odd odd x even = even</p> <p>You need 7 even cards, 4 odd cards, 4 times signs, and 4 equal signs.</p> <p>Use the cards to discuss and practice. Students use dry erase boards or spirals to show their work.</p>	<p>Down the Domino Hole! Put the dominoes in a spiral formation. You can use the printable dominoes or actual dominoes. Start in the center of the spiral. Spin the spinner. This will tell you how far to move forward. Whenever you land, multiply the two numbers on the domino together. With your product, you must create a pattern of numbers. Your number can be at the beginning, middle, or end of the pattern made. Your pattern must contain five numbers total. This can be done verbally or on the recording sheet. Continue spinning, moving, and creating patterns until someone has reached the outside of the spiral. Emphasize the patterns made and using our multiplication chart to assist us with making patterns. After playing with the class, the students can play with each other.</p> <p>Lower blocks The j 204 Each might I Stu Part and de build only a making numb ca ident The low ider come keep If the no game the po on</p>	<p>Introduce multiplication expressions with the templates provided. Discuss the difference between 4 times as many as 2 and 2 times as many as 4. Do a few of these so students can see examples. Discuss the words as many as AND as much as. Use the word problems to build multiplication expressions and comparisons as a class.</p>	<p>Multiplication Comparison Game:</p> <p>Students need a partner. Students cut out the cards and face upsides down OR you can leave them on a sheet and have students answer on the sheet with their partner.</p> <p>Partner 1 spins. Students choose a card BOTH students answer and call out a product. Partner 1 moves forward. If there is a star, stay. If there is a command, follow the command.</p> <p>Continue spinning, answering, and moving until someone reaches the end.</p>	<p>Problem Solving: Students cut out the rectangle and in between the flaps. Students glue underneath the center title. Students solve the problems by drawing a model and writing a multiplication expression underneath the flaps.</p>	<p>Students complete the quick assessment.</p>	

MINILESSONS

- Ideas and materials on how to teach the concepts
- Hands On and Fun for students

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

5 times as much as 8

6 times as many as 3

MULTIPLICATION CHART

even X even = even

Odd X Odd = Odd

Odd X even = even

even X Odd = even

50 X 2 X 2 =

20 X 3 X 4 =

WORK IT OUT!

4 X 30

4 X 30 = 120

4 X 30 = 120

5 X 40 = 200

5 X 4 Tens = 20 Tens = 200

FUN ACTIVITIES

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



INTERACTIVE NOTEBOOKS

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



DAILY WORD PROBLEMS

20 Word Problems that fit the skills included

Glue this in your spiral. Use to answer the daily word problems

MULTIPLICATION CHART					
×	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25
6	6	12	18	24	30
7	7	14	21	28	35
8	8	16	24	32	40
9	9	18	27	36	45
10	10	20	30	40	50

WORD PROBLEM

Use the multiplication chart 10, what pattern d

Use the multiplication chart 10, what pattern d

Use the multiplication chart

WORD PROBLEM- D

Describe pattern of even and the column for multiplication

Describe pattern of even and the column for multiplication

Describe pattern of even and the column for multiplication

Describe pattern of even and the column for multiplication

Describe pattern of even and the column for multiplication

Describe pattern of even and the column for multiplying by 5.

WORD PROBLEM- DAY TWO

Use the multiplication chart. Write the products for:

- multiplying by 3
- multiplying by 8
- multiplying by 6

Use the multiplication chart. Write the products for:

- multiplying by 3
- multiplying by 8
- multiplying by 6

Use the multiplication chart. Write the products for:

- multiplying by 3
- multiplying by 8

WORD PROBLEM- DAY FOUR

Use the multiplication chart. Write the products for:

products for:

WORD PROBLEM- DAY FIVE

Complete the patterns using your multiplication chart:

- 4, 8, ____, ____, 20, 24, ____, 32, ____,
- ____, 18, 27, ____, ____, 54, ____, ____,
- 6, ____, ____, ____, 30, ____, ____, 48

Complete the patterns using your multiplication chart:

- 4, 8, ____, ____, 20, 24, ____, 32, ____,
- ____, 18, 27, ____, ____, 54, ____, ____,
- 6, ____, ____, ____, 30, ____, ____, 48

Complete the patterns using your multiplication chart:

- 4, 8, ____, ____, 20, 24, ____, 32, ____,
- ____, 18, 27, ____, ____, 54, ____, ____,
- 6, ____, ____, ____, 30, ____, ____, 48

Complete the patterns using your multiplication chart:

- 4, 8, ____, ____, 20, 24, ____, 32, ____,
- ____, 18, 27, ____, ____, 54, ____, ____,
- 6, ____, ____, ____, 30, ____, ____, 48

Complete the patterns using your multiplication chart:

- 4, 8, ____, ____, 20, 24, ____, 32, ____,
- ____, 18, 27, ____, ____, 54, ____, ____,
- 6, ____, ____, ____, 30, ____, ____, 48


Complete the patterns using your multiplication chart:

- 4, 8, ____, ____, 20, 24, ____, 32, ____,
- ____, 18, 27, ____, ____, 54, ____, ____,
- 6, ____, ____, ____, 30, ____, ____, 48

VOCABULARY CARDS

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


COMPARISON
 6×3 6 TIMES AS MUCH AS 3


RELATED FACTS 

UNKNOWN NUMBERS
 $3 \times ? = 21$ $? \times 8 = 56$

PARTIAL PRODUCTS
 - MULTIPLY THE TENS AND ONES SEPARATELY
 - ADD THE PRODUCTS THAT IS CALLED FINDING PARTIAL PRODUCTS!

$8 \times 15 = ?$	
$8 \times 10 = 80$	$8 \times 5 = 40$
$80 + 40 = 120$	
$8 \times 15 = 120$	

SHARE EQUALLY 

PATTERN 
 - AN ORDERED SET OF NUMBERS OR OBJECTS
 - HELPS YOU PREDICT WHAT WILL COME NEXT

RULE
 - YOU CAN DESCRIBE A PATTERN USING A RULE
 - THE RULE MUST BE TRUE FOR THE WHOLE PATTERN

1, 3, 9, 27
 Rule: Multiply by 3

DIVISOR
 $8 \div 2 = 4$

QUOTIENT
 $8 \div 2 = 4$

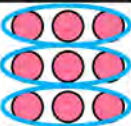
RELATED FACTS
 $2 \div 2 = 6$ & $12 \div 6 = 2$

DIVISIBLE
 $6 \div 2 = ?$ $5 \div 2 = ?$

FACTOR
 $9 \times 3 = 27$

EXPRESSION
 - HAS NUMBERS
 - HAS OPERATION SIGNS
 - DOES NOT HAVE AN EQUALS SIGN

6×3

DIVIDE 
 $9 \div 3$ share 9 EQUALLY

PRODUCT
 $4 \times 5 = 20$

COMMUTATIVE PROPERTY
 $4 \times 5 = 5 \times 4$

IDENTITY PROPERTY
 $0 \times 1 = 0$


DIVIDEND
 $8 \div 2 = 4$

MULTIPLY
 2×3 2 GROUPS of 3

ASSOCIATIVE PROPERTY
 $5 \times (2 \times 3) = (5 \times 2) \times 3$

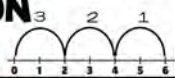
REPEATED ADDITION
 $6 + 6 + 6 + 6$


EQUATION
 $4 \div 2 = 2$

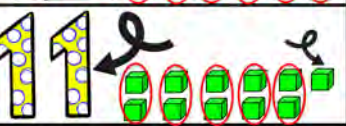
EQUAL GROUPS 

DISTRIBUTIVE PROPERTY
 $6 \times 8 = (6 \times 2) + (6 \times 6)$

IDENTITY PROPERTY
 $5 \times 1 = 5$

REPEATED SUBTRACTION
 $6 \div 2 = 3$ 

MULTIPLY ARRAY
 $3 \times 4 = 12$ 


$1 \times 12 = 12$ 

I CAN STATEMENTS


I Can Statements can be displayed throughout the unit.

I CAN:

USE DIFFERENT STRATEGIES TO REPRESENT MULTIPLICATION FACTS



MULTIPLY WITH FLUENCY




COMPLETE MULTIPLICATION TABLES

x	2	4	6	8
5	10	20	30	40

MODEL AND DESCRIBE MULTIPLICATION EXPRESSIONS


2×7 2 TIMES AS MUCH AS 7

MULTIPLY A TWO-DIGIT NUMBER BY A TWO-DIGIT NUMBER



SHOW DIVISION AS EQUAL SHARING

$4 \div 2 = 2$




USE DIFFERENT STRATEGIES TO DIVIDE

DIVIDE WITH FLUENCY

$12 \div 3 = 4$

$6 \div 2 = 3$ $9 \div 3 = 3$

EXPLAIN PATTERNS ON MULTIPLICATION TABLE



MULTIPLY WITH MULTIPLES OF TEN

$4 \times 30 = 120$

USE RELATED FACTS TO MULTIPLY AND DIVIDE

FIND UNKNOWN IN MULTIPLICATION AND DIVISION EQUATIONS

$5 \times \square = 35$

DIVIDE BY TEN

$50 \div 10 = 5$

TELL IF THE PRODUCT WILL BE EVEN OR ODD


EVEN X EVEN	EVEN
EVEN X ODD	EVEN
ODD X EVEN	EVEN
ODD X ODD	ODD

USE DIVISIBILITY RULES

$8 \div 2 = ?$ ~~$7 \div 2 = ?$~~

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

PATTERNS, TABLES, AND CHARTS

Name: _____

1. Complete the tables.

X	1	2	3	4	5	6
4						

X	2	4	6	8	10
7					

X	1	3	5	7	9
6					

2. Don is counting a group of beads in his collection. Describe the pattern.

8, 16, 24, 32, 40, 48

4. Tamika makes a pattern with blocks. How many blocks does Tamika need to place in the next two parts of her pattern?

4, 9, 14, 19, 24, _____

5. Which comparison describes the multiplication expression?

3×7

- 3 more than 7
- 7 less than 3
- 7 times as many as 3
- 3 times as many as 7

Rule: _____

TWO DIGIT MULTIPLICATION

Name: _____

1. Solve the equation using place value strategies.

$$7 \times 30$$

\times		\times	tens
tens	=		

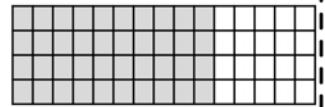
2. Solve the equation using place value strategies.

$$5 \times 40$$

\times		\times	tens
tens	=		

4. Solve the equation by finding the partial products.

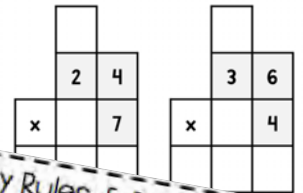
$$15 \times 4$$



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$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

5. Solve the equations.



RELATED FACTS & MISSING #'S

1. Write the related facts for 6, 7, and 42.

- _____
- _____
- _____
- _____

2. Write the related facts for the array:



- _____
- _____
- _____
- _____

3. Heather makes an array of 5 rows of 5 files. What multiplication and division equation can Bethany write about arrays?

4. Solve for the missing factors using repeated addition:

a. $4 \times ? = 12$	
b. $? \times 6 = 42$	

- ? = _____
- ? = _____

5. Nina and Lucas are using an array to write equations. Nina writes $8 \times 4 = 32$. Lucas writes $42 \div 6 = 7$. Which is true about the equations?



- both equations are correct.
- Only Nina is correct.
- Only Lucas is correct.
- Both equations are incorrect.

6. Solve for the missing number:

- $28 + ? = 4$? = _____
- $\square - 4 = 5$ $\square =$ _____
- $8 \times ? = 56$? = _____

Odd/Even, Divisibility Rules, & Dividing by 10

1. Identify if the numbers are odd or even.

- 54 _____
- 2,483 _____
- 190 _____
- 8,409 _____

2. Identify if the products would be odd or even.

- 54×28 _____
- 274×33 _____
- 87×63 _____
- 49×182 _____

3. Look at the following numbers. Determine if they are divisible by 2. Write yes or no.

- 58 _____
- 371 _____
- 4,192 _____
- 79 _____

4. Use repeated subtraction to solve:

$$90 \div 10 =$$

5. Model the following problem on a number line.

$$60 \div 10 =$$



6. There are 80 students going on a class trip. Each van seats 10 students. How many vans are needed for the class trip? Explain your thinking.

WEEK ONE

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

MULTIPLICATION CATCH-I!

pink green

MULTIPLICATION CHART

X	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

go back a space
lose turn
go back one space

Card eight

X	3	5	7	9
3	9	15	21	27
5	15	25	35	45
7	21	35	49	63
9	27	45	63	81

Card one

X	1	2	3	4
1	1	2	3	4
2	2	4	6	8
3	3	6	9	12
4	4	8	12	16

MULTIPLICATION TABLE

EVEN	ODD	MIX	EVEN	ODD
6, 12, 18, 24	2, 4, 6, 8			
10, 20, 30, 40	16, 32			
10, 30, 50, 70, 90	27, 45			
9, 15, 21, 27	8, 12			
14, 28, 42, 56	10, 15			

3 AND PATTERNS

Complete the Table

X	2	3	4	5
3	6	9	12	15
4	8	12	16	20
5	10	15	20	25

All products are even
Even x even = E
E x O = E

5 times as much as 8

8

3

3 3 3 3 3 3

6 times as many as 2

All products are

Use the table to write 5 multiplication facts.

The Product Add, even, odd, even pattern

even x even = even

Odd x Odd = Odd

Odd x even = even

even x Odd = even

BOOK of MULTIPLICATION EXPRESSIONS & OPERATIONS

2

2 2 2 2 2 2 2

7 7 2 2

PRIORITY COUNTING

3 + 2 + 4 = 9

4 x 9 = 36

4 times as many as 9

WEEK TWO

PARTIAL PRODUCTS

4

10 3

5

18

10 6

$30 + 18 = 48$

BINGO

2 47 15 27 8 69

x 3 14 1

x 3 29 x 1 13

x 4 14 x 1 1

x 2 24 x 2 10

x 3 95 x 1 20

x 3 26 x 2 1

x 6 33 x 1 30

x 3 14 x 1 8

x 2 13 0

x 2 23 x 1 7

x 3 7 x 1 38

x 2 14 x 1 8

x 2 13 0

x 2 23 x 1 7

x 3 7 x 1 38

$3 \times 2 \times 50 =$

TRY IT ONE WAY
NOW TRY IT ANOTHER!

$(3 \times 2) \times 50 = 6 \times 50 = 300$

$3 \times (2 \times 50) = 3 \times 100 = 300$

$2 \times (3 \times 50) = 2 \times 150 = 300$

$2 \times (3 \times 25) = 2 \times 75 = 150$

$6 \times 30 = 180$

$2 \times 90 = 180$

$6 \times 30 = 180$

$10 \times (2 \times 2) = 10 \times 4 = 40$

$10 \times 2 = 20$

$20 \times 2 = 40$

$(3 \times 2) \times 50 = 6 \times 50 = 300$

$3 \times (2 \times 50) = 3 \times 100 = 300$

$2 \times (3 \times 50) = 2 \times 150 = 300$

$40 \times (2 \times 4) = 40 \times 8 = 320$

$(40 \times 2) \times 4 = 80 \times 4 = 320$

$40 \times 8 = 320$

$(2 \times 3) \times 30 = 6 \times 30 = 180$

GROUP THE FACTORS TO FIND THE PRODUCT

$3 \times (2 \times 20)$

$50 \times (2 \times 2)$

$(40 \times 3) \times 3$

GROUP THE FACTORS TO FIND THE PRODUCT

$(4 \times 2) \times 30$

$8 \times 30 = 240$

GROUP THE FACTORS TO FIND THE PRODUCT

$2 \times (4 \times 60)$

GROUP THE FACTORS TO FIND THE PRODUCT

$(2 \times 3) \times 50$

$50 \times 2 \times 2 =$

$20 \times 3 \times 4 =$

WORK IT OUT!

$50 \times (2 \times 2) = (20 \times 3) \times 4$

$50 \times 4 = 200$

$60 \times 4 = 240$

$7 \times 40 = 280$

$5 \times 4 \text{ tens} = 200$

20 tens = 200

LET'S Multiply

$2 \times 4 = 8$

$7 \times 4 = 28$

$4 \times 4 = 16$

$4 \times 4 = 16$

$2 \times 5 = 10$

$3 \times 8 = 24$

$4 \times 4 = 16$

$1 \times 9 = 9$

$2 \times 7 = 14$

$2 \times 2 = 4$

$2 \times 5 = 10$

$3 \times 8 = 24$

$4 \times 4 = 16$

FLIP & MULTIPLY

$74 \times 3 = 222$

$148 \times 6 = 888$

$3 \times 4 = 12$

$4 \times 9 = 36$

$1 \times 9 = 9$

$2 \times 8 = 16$

$2 \times 2 = 4$

$1 \times 3 = 3$

$2 \times 2 = 4$

$1 \times 3 = 3$

4 x 40

$4 \times 40 = 160$

$4 \times 150 = 600$

$5 \times 150 = 750$

$4 \times 170 = 680$

$5 \times 170 = 850$

$4 \times 200 = 800$

$5 \times 200 = 1000$

LONG JUMP

$3 \times 3 \text{ tens} = 9 \text{ tens} = 90$

$9 \text{ tens} = 90$

$3 \times 3 \text{ tens} = 9 \text{ tens} = 90$

Multiply and Sort

These products are **EVEN**

These products are **ODD**

$8 \times 8 = 64$

$4 \times 3 = 12$

$2 \times 12 = 24$

$4 \times 2 = 8$

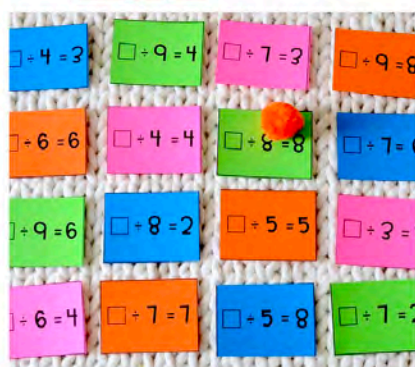
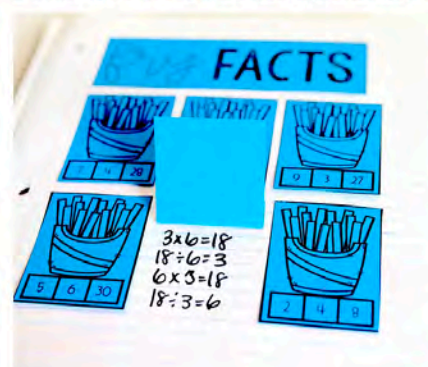
$2 \times 12 = 24$

$4 \times 2 = 8$

$2 \times 12 = 24$

$4 \times 2 = 8$

WEEK THREE



WEEK FOUR

