

NOT SO WIMPY

UNIT 3:

MULTIPLICATION

4th GRADE MATH CURRICULUM

25 DAYS OF MULTIPLICATION

MATH LESSON PLANS,

POWERPOINTS, ACTIVITIES,

AND ASSESSMENT





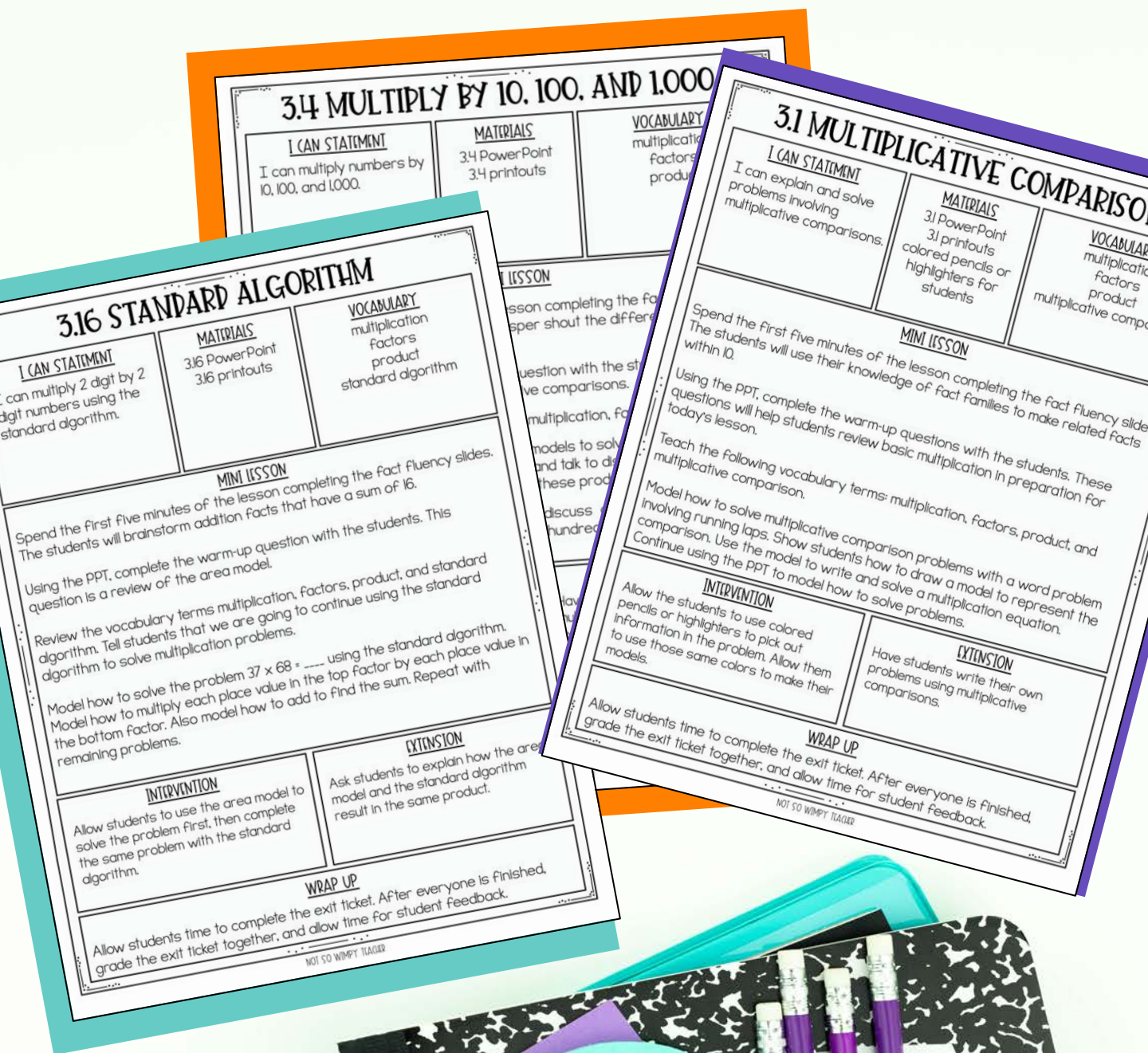
UNIT 3: MULTIPLICATION *at a glance*

Day 1 Multiplicative Comparisons	Day 2 Multiplicative Comparisons	Day 3 Multiplicative Comparisons	Day 4 Multiplying by 10, 100, and 1,000.	Day 5 Multiplying by 10, 100, and 1,000.
Day 6 Multiplying 1 by 2 Digit with Partial Products	Day 7 Multiplying 1 by 3 Digit with Partial Products	Day 8 Multiplying 1 by 4 Digit with Partial Products	Day 9 Multiplication with the Standard Algorithm	Day 10 Multiplication with the Standard Algorithm
Day 11 Review	Day 12 2 Digit by 2 Digit with Area Model	Day 13 2 Digit by 2 Digit with Area Model	Day 14 2 Digit by 2 Digit with Area Model	Day 15 2 Digit by 2 Digit with Standard Algorithm
Day 16 2 Digit by 2 Digit with Standard Algorithm	Day 17 2 Digit by 2 Digit with Standard Algorithm	Day 18 Factors, Prime, and Composite	Day 19 Factors, Prime, and Composite	Day 20 Factors and Multiples
Day 21 Factors and Multiples	Day 22 Word Problems	Day 23 Word Problems	Day 24 Review	Day 25 Assessment

THIS UNIT COVERS THE FOLLOWING COMMON CORE MATH STANDARDS: 4.OA.1, 4.OA.2, 4.OA.3, 4.OA.4, 4.OA.5, and 4.NBT.5

Notes:

Includes a pacing guide to see your entire week at a glance



3.4 MULTIPLY BY 10, 100, AND 1,000

I CAN STATEMENT

I can multiply numbers by 10, 100, and 1,000.

MATERIALS

3.4 PowerPoint
3.4 printouts

VOCABULARY

multiplication
factors
product

3.1 MULTIPLICATIVE COMPARISON

I CAN STATEMENT

I can explain and solve problems involving multiplicative comparisons.

MATERIALS

3.1 PowerPoint
3.1 printouts
colored pencils or highlighters for students

VOCABULARY

multiplication
factors
product
multiplicative comparison

MINI LESSON

Spent the first five minutes of the lesson completing the fact fluency slides. The students will use their knowledge of fact families to make related facts within 10.
Using the PPT, complete the warm-up questions with the students. These questions will help students review basic multiplication in preparation for today's lesson.
Teach the following vocabulary terms: multiplication, factors, product, and multiplicative comparison.
Model how to solve multiplicative comparison problems with a word problem involving running laps. Show students how to draw a model to represent the comparison. Use the model to write and solve a multiplication equation. Continue using the PPT to model how to solve problems.

INTERVENTION

Allow the students to use colored pencils or highlighters to pick out information in the problem. Allow them to use those same colors to make their models.

EXTENSION

Have students write their own problems using multiplicative comparisons.

WRAP UP

Allow students time to complete the exit ticket. After everyone is finished, grade the exit ticket together, and allow time for student feedback.

NOT SO WIMPY TEACHER

3.16 STANDARD ALGORITHM

I CAN STATEMENT

I can multiply 2 digit by 2 digit numbers using the standard algorithm.

MATERIALS

3.16 PowerPoint
3.16 printouts

VOCABULARY

multiplication
factors
product
standard algorithm

MINI LESSON

Spent the first five minutes of the lesson completing the fact fluency slides. The students will brainstorm addition facts that have a sum of 16.
Using the PPT, complete the warm-up question with the students. This question is a review of the area model.
Review the vocabulary terms multiplication, factors, product, and standard algorithm. Tell students that we are going to continue using the standard algorithm to solve multiplication problems.

Model how to solve the problem $37 \times 68 = \dots$ using the standard algorithm. Model how to multiply each place value in the top factor by each place value in the bottom factor. Also model how to add to find the sum. Repeat with remaining problems.

INTERVENTION

Allow students to use the area model to solve the problem first, then complete the same problem with the standard algorithm.

EXTENSION

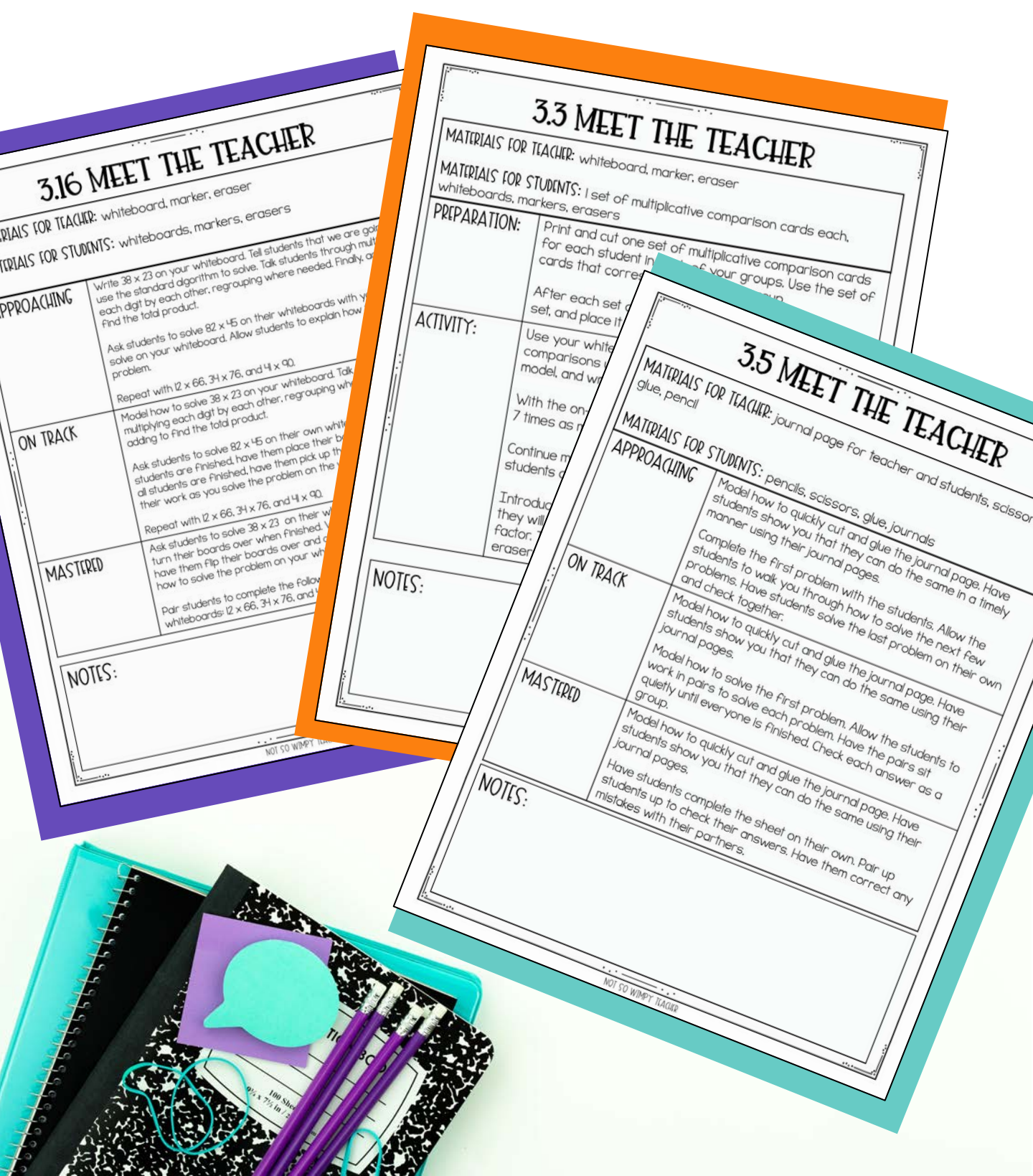
Ask students to explain how the area model and the standard algorithm result in the same product.

WRAP UP

Allow students time to complete the exit ticket. After everyone is finished, grade the exit ticket together, and allow time for student feedback.

NOT SO WIMPY TEACHER

INCLUDES WHOLE GROUP LESSON PLANS!



3.16 MEET THE TEACHER

MATERIALS FOR TEACHER: whiteboard, marker, eraser
MATERIALS FOR STUDENTS: whiteboards, markers, erasers

APPROACHING
Write 38×23 on your whiteboard. Tell students that we are going to use the standard algorithm to solve. Talk students through multiplying each digit by each other, regrouping where needed. Finally, add to find the total product.
Ask students to solve 82×45 on their whiteboards with your solve on your whiteboard. Allow students to explain how they solve the problem.
Repeat with 12×66 , 34×76 , and 41×90 .

ON TRACK
Model how to solve 38×23 on your whiteboard. Talk through multiplying each digit by each other, regrouping when adding to find the total product.
Ask students to solve 82×45 on their own whiteboards. When students are finished, have them place their boards on the table. When all students are finished, have them pick up their boards and show their work as you solve the problem on the whiteboard.
Repeat with 12×66 , 34×76 , and 41×90 .

MASTERCED
Ask students to solve 38×23 on their whiteboards. When students are finished, have them flip their boards over and solve the problem. Have them flip their boards over and solve the problem on your whiteboard.
Repeat with 12×66 , 34×76 , and 41×90 .

NOTES:

3.3 MEET THE TEACHER

MATERIALS FOR TEACHER: whiteboard, marker, eraser
MATERIALS FOR STUDENTS: 1 set of multiplicative comparison cards each, whiteboards, markers, erasers

PREPARATION:
Print and cut one set of multiplicative comparison cards for each student in advance. Use the set of cards that correspond to the problem.
After each set of cards is prepared, place it on the table.

ACTIVITY:
Use your whiteboard to solve the problem. Use the multiplicative comparison model, and write the answer on your whiteboard.
With the one set of cards, solve the problem 7 times as many as the first problem.
Continue to solve the problem with students of your own choosing.
Introduce the problem to the class. They will solve the problem using the factor, the product, and the eraser.

NOTES:

3.5 MEET THE TEACHER

MATERIALS FOR TEACHER: journal page for teacher and students, scissors, glue, pencil
MATERIALS FOR STUDENTS: pencils, scissors, glue, journals

APPROACHING
Model how to quickly cut and glue the journal page. Have students show you that they can do the same in a timely manner using their journal pages.
Complete the first problem with the students. Allow the students to walk you through how to solve the next few problems. Have students solve the last problem on their own and check together.

ON TRACK
Model how to quickly cut and glue the journal page. Have students show you that they can do the same using their journal pages.
Model how to solve the first problem. Allow the students to work in pairs to solve each problem. Have the pairs sit quietly until everyone is finished. Check each answer as a group.

MASTERCED
Model how to solve the first problem. Allow the students to work in pairs to solve each problem. Have the pairs sit quietly until everyone is finished. Check each answer as a group.
Model how to quickly cut and glue the journal page. Have students show you that they can do the same using their journal pages.

NOTES:
Have students complete the sheet on their own. Pair up students up to check their answers. Have them correct any mistakes with their partners.

INCLUDES SMALL GROUP/ MEET WITH TEACHER LESSON PLANS

Name: _____

Unit 3 Lesson 14 Problem Set

Directions: Use the area model to solve for each product.

1. $34 \times 35 =$ 2. $65 \times 72 =$

Name: _____

Unit 3 Lesson 2 Homework

Directions: Draw a line to match each factor to the product that is 3 times as many.

1. 9 2

Name: _____

Unit 3 Lesson 18 Problem Set

Directions: Use the table to list the Factor pairs for each number and label as prime or composite.

Number	Factors
12	
31	
50	
25	

Name: _____

Unit 3 Lesson 12 Homework

Directions: Use the area model to solve for each product.

2. $24 \times 51 =$ _____

4. $36 \times 42 =$ _____

6. $50 \times 66 =$ _____

Name: _____

Unit 3 Lesson 2 Exit Ticket

Directions: Read and solve the problem.

1. Hilda spent 4 hours on her science fair project throughout the week. Over

Name: _____

Unit 3 Lesson 15 Exit Ticket

Directions: Find each product using the standard algorithm.

1. $22 \times 25 =$ 2. $25 \times 29 =$

Name: _____

Unit 3 Lesson 19 Exit Ticket

Directions: Use the table to list the factor pairs for each number and label as prime or composite.

Number	Factors	Prime or Composite

3.

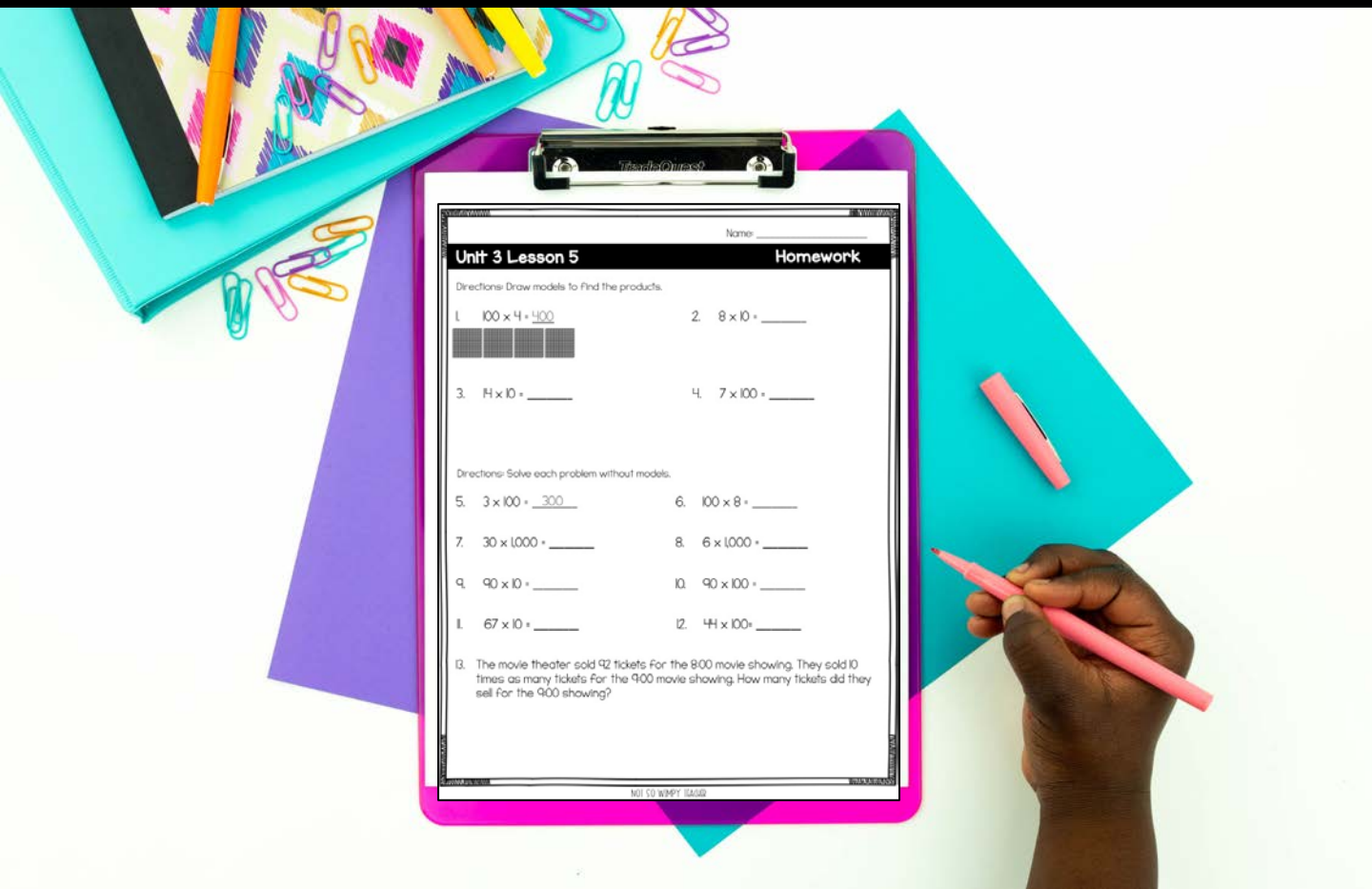
5.

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INCLUDES PROBLEM SETS, HOMEWORK, AND EXIT TICKETS FOR EACH DAY



3.8 Partial Products

Fact Fluency

I can multiply 1 digit by 1 digit
4-digit numbers

SPEED ROUND

Partial Products

Vocabulary Review:

Multiplication: to add equal
quantities



Partial Products

Vocabulary Review:

Partial products: parts of an
equation that lead to a multiplication
problem

Partial Products

Write the partial products.

$$3 \times 4,034 = \underline{\hspace{2cm}}$$

thousands	hundreds	tens	ones
●●●●		●●●●	●●●●
●●●●		●●●●	●●●●

Exit Ticket

Directions: Use the place value chart to solve the problem using partial products.

1. $6 \times 3,285 = \underline{\hspace{2cm}}$

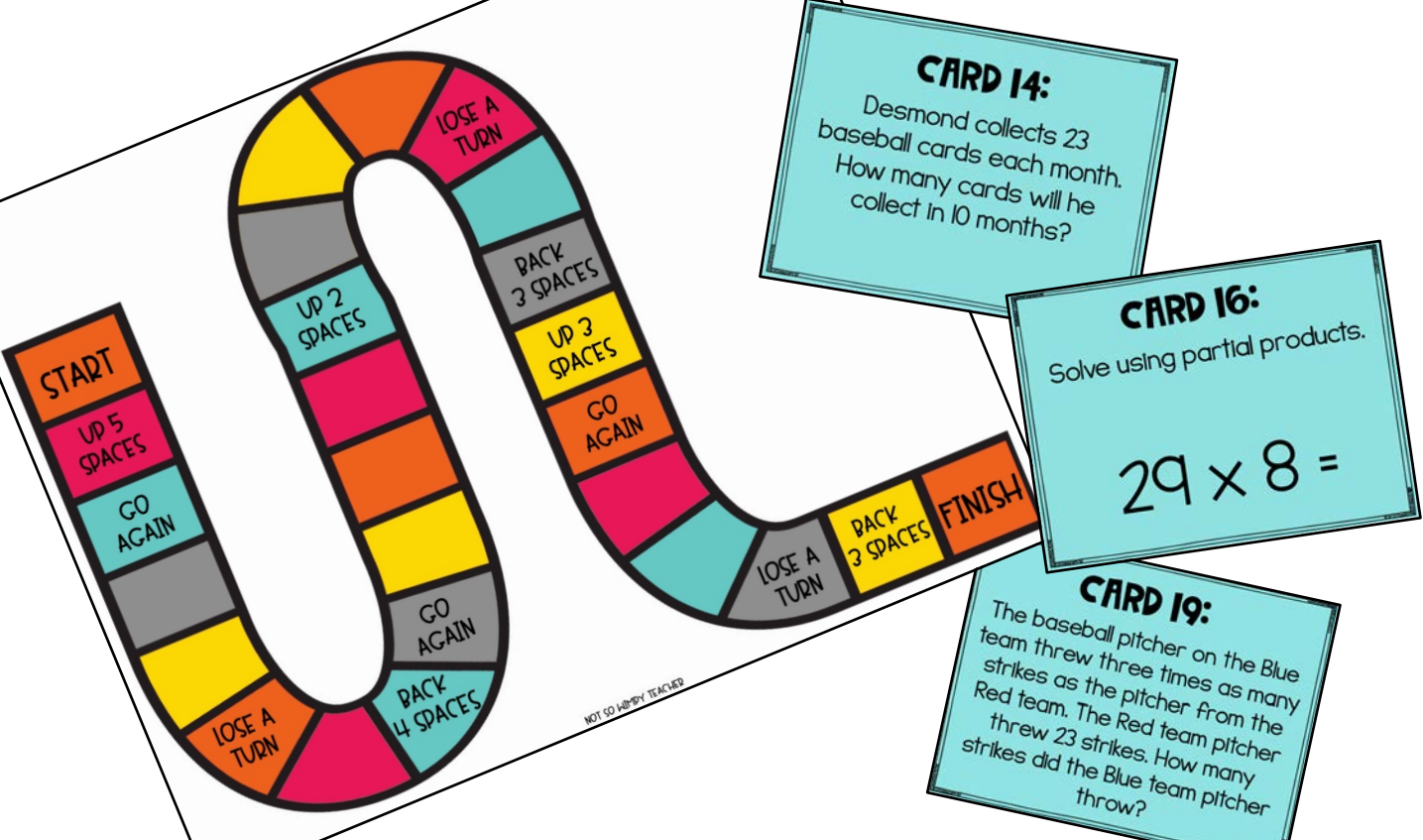
thousands	hundreds	tens	ones

Centers

	MON.	TUES.	WED.	THURS.
GROUP 1	Meet the Teacher Technology	Independent Math Facts	Meet the Teacher Technology	Independent Math Facts
GROUP 2	Independent Math Facts	Meet the Teacher Technology	Independent Math Facts	Meet the Teacher Technology
GROUP 3	Technology Meet the Teacher	Math Facts Independent	Technology Meet the Teacher	Math Facts Independent
GROUP 4	Math Facts Independent	Technology Meet the Teacher	Math Facts Independent	Technology Meet the Teacher

NOT SO WIMPY TEACHER

INCLUDES DAILY POWERPOINTS FOR TEACHING MATH SKILLS.



games and task cards are INCLUDED FOR END OF UNIT REVIEW

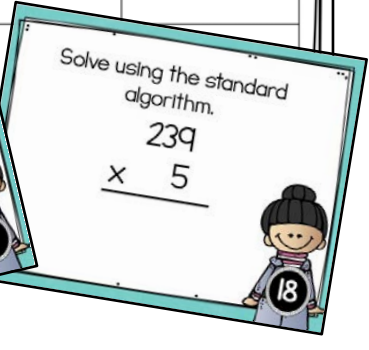
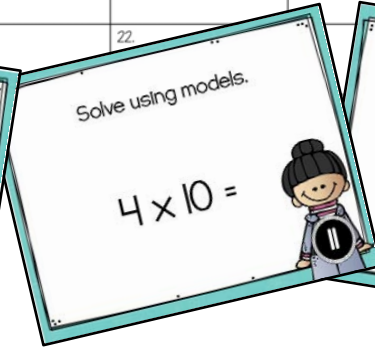
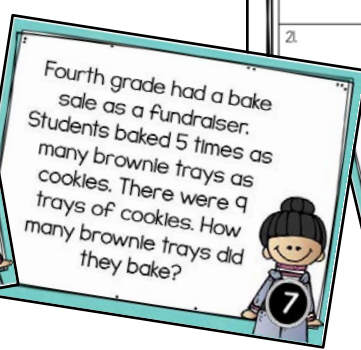
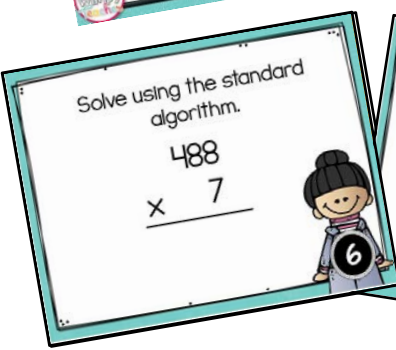


Name: _____

MULTIPLICATION

Directions: Read each card and record your answer in the box.

1.	2.	3.	4.
5.	6.	7.	8.
9.	10.	11.	12.
13.	14.	15.	16.
17.	18.	19.	20.
21.	22.		



INCLUDES PRE- AND POST-ASSESSMENTS, ANSWER KEYS AND A RUBRIC FOR TRACKING STUDENT PROGRESS

Unit 3

Directions: Read and solve each problem.

1. Lydia has 8 strawberries in her lunchbox. How many blueberries in her lunchbox. How many...

2. Ruger has 12 spots on his coat. How many spots on his coat. How many...

3. Joseline read 32 books in this month. She needs to read 7 times as many books next month. How many books does she need to read to reach her goal?

Unit 3

Directions: Use the place value chart and the work space to find the partial products.

12. $4 \times 73 = \underline{\quad}$

hundreds	tens	ones

Unit 3

Directions: Use the area model to solve for each product.

15. $14 \times 39 = \underline{\quad}$

16. $27 \times 58 = \underline{\quad}$

Unit 3

Directions: Use the place value chart and the work space to find the partial products.

12. $4 \times 73 = \underline{292}$

hundreds	tens	ones
	●●●●●●●●	●●●●●●●●

13. $2 \times 307 = \underline{614}$

hundreds	tens	ones
●●●●		●●●●●●●●

14. $3 \times 3,735 = \underline{11,205}$

thousands	hundreds	tens	ones
●●●●	●●●●●●●●	●●●●	●●●●●●●●

Skill	Multiplicative comparisons	Multiplying by 10, 100, and 1,000	Partial products	Area model	1 by 2 Standard algorithm	1 by 3 Standard algorithm	1 by 4 Standard algorithm	2 by 2 Standard algorithm
Student	1-3	4-11	12-14	15-20	21-23	23-26	27-29	30-32
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3
	___/3	___/8	___/3	___/6	___/3	___/3	___/3	___/3

Unit 3

Directions: Use the place value chart and the work space to find the partial products.

12. $4 \times 73 = \underline{292}$

hundreds	tens	ones
	●●●●●●●●	●●●●●●●●

13. $2 \times 307 = \underline{614}$

hundreds	tens	ones
●●●●		●●●●●●●●

14. $3 \times 3,735 = \underline{11,205}$

thousands	hundreds	tens	ones
●●●●	●●●●●●●●	●●●●	●●●●●●●●

NOT SO WIMPY TRADER

$\begin{array}{r} 3,808 \\ 30 \times 56 \\ \hline 282 \\ + 2,350 \\ \hline 2,632 \end{array}$	$\begin{array}{r} 10,260 \\ 31 \times 67 \\ \hline 58 \\ + 4,980 \\ \hline 5,561 \end{array}$
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38. Emerson played 8 games at the arcade. She scored a 736 points in each game. How many total points did she score at the arcade?

$\begin{array}{r} 680 \\ + 680 \\ \hline 1,360 \end{array}$	$\begin{array}{r} 736 \\ \times 8 \\ \hline 5,888 \end{array}$ <p>Emerson scored 5,888 points.</p>
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Name: _____

Unit 3 **Assessment**

Directions: Use the area model to solve for each product.

15. $14 \times 39 = \underline{\quad}$

16. $27 \times 58 = \underline{\quad}$

17. $22 \times 32 = \underline{\quad}$

Name: _____

Assessment Answer Key

1. The word problem solving strategy.

2. park. How many miles would Louie

3. would walk miles.

4. chairs for a wedding. Each row had 23

5. d he set out for the wedding?

6. hi set out 782 chairs.



PARTIAL PRODUCTS

$$4 \times 128$$

hundreds	tens	ones

4 x 1 hundreds 4 x 2 tens

MULTIPLICATION: STANDARD ALGORITHM

STEP 1:

Line up the numbers vertically by their place value

$$\begin{array}{r} 64 \\ \times 3 \\ \hline \end{array}$$

STEP 2:

Multiply the ones place

$$\begin{array}{r} 64 \\ \times 3 \\ \hline \end{array}$$

STEP 3:

Regroup! Move tens to the tens place. Keep the ones in the ones place

$$\begin{array}{r} 1 \\ 64 \\ \times 3 \\ \hline 2 \end{array}$$

STEP 4:

Multiply the tens place

$$\begin{array}{r} 1 \\ 64 \\ \times 3 \\ \hline 2 \end{array}$$

STEP 5:

Add the extra ten you regrouped

$$\begin{array}{r} 1 \\ 64 \\ \times 3 \\ \hline 192 \end{array}$$

NOT SO WIMPY TEACHER

FOR USE WITH LESSONS 29-31

VOCABULARY CARDS AND ANCHOR CHARTS FOR TEACHER AND STUDENTS TO REFERENCE THROUGHOUT THE UNIT

AREA MODEL



STANDARD ALGORITHM

the common step-by-step process to solve a math

$$\begin{array}{r} 42 \\ \times 3 \\ \hline 126 \end{array}$$

MULTIPLES

the result of a number being multiplied by other numbers

$$\begin{array}{l} 4 \times 1 = 4 \\ 4 \times 2 = 8 \\ 4 \times 3 = 12 \end{array}$$

NOT SO WIMPY TEACHER

Unit 3 Lesson 21

Directions: Use the table to list five multiples for each number.

Number	Multiples
2	2, 4, 6, 8, 10
8	
100	

Directions: List three multiples greater than 25 for each number.

Number	Multiples
14	42, 56, 70
20	
50	

3. The number of students in the class is a factor of 36. The number is greater than 10. How many students are in the class?

3.5 MULTIPLY BY 10, 100, AND 1,000

I CAN STATEMENT

I can multiply numbers by 10, 100, and 1,000.

MATERIALS

3.5 PowerPoint
3.5 printouts

VOCABULARY

multiplication
factors
product

MINI LESSON

Spend the first five minutes of the lesson completing the fact fluency slides. The students will be challenged to whisper shout the difference of Facts within 10.

Using the PPT, complete the warm-up question with the students. This question is a quick review of multiplicative comparisons.

Review the following vocabulary terms: multiplication, factors, and product.

Using the PPT, review how to use models to find products when multiplying by 10, 100, and 1,000. Allow time for you and the students to discuss the pattern they see when multiplying by these numbers.

Use the pattern to find the products without using models. Demonstrate how to multiply numbers that are not multiples of 10 by 10, 100, and 1,000.

INTERVENTION

Allow students to use base ten blocks to model the problems while solving. Once students start noticing the pattern, stop using the blocks.

EXTENSION

Challenge students to complete the Level Up sheet to allow an opportunity to solve more rigorous problems using the multiplicative comparisons and multiplying by 10, 100, and 1,000.

WRAP UP

Complete the exit ticket. After everyone is finished, discuss the answers together, and allow time for student feedback.

Homework

Solve using the word problem solving strategy.

See her dad on the weekends. How many miles will she drive in one year? (52 weekends)

2,000
400
80
16
2,496

Ingrid will drive 2,496 miles to see her dad in one year.

Warm-up for track practice. During practice, he ran 100 meters. How many total meters did he run during practice?

She has ever scored in a basketball game. The number is also less than 100. How many points did she score?

Partial Products

Partial Products

Write the partial products.

$$3 \times 4,034 = \underline{\hspace{2cm}}$$

thousands	hundreds	tens	ones

$$\begin{array}{r} 4,034 \\ \times 3 \\ \hline \end{array}$$

PRODUCT

the answer to a

$$7 \times 6 = 42$$

AREA MODEL

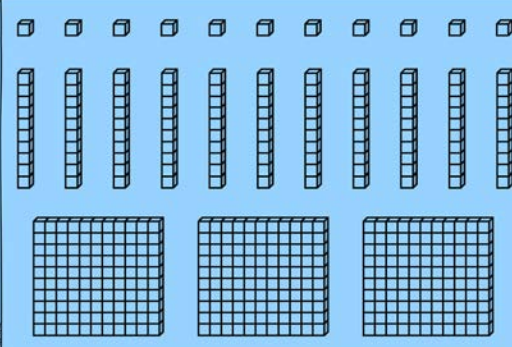
a strategy that uses expanded form

40	5
40 × 40 = 1,600	40 × 5 = 200
5 × 40 = 200	5 × 5 = 25

FACTORS

numbers being multiplied

Base Ten Blocks



MULTIPLICATION Partial Products

$$\begin{array}{r} 3,284 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 5,372 \\ \times 5 \\ \hline \end{array}$$

Multiplication Table

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

each day of math is fully planned for you with all the tools you'll need!