learning focus:

✓ add and subtract whole numbers using the standard algorithm and strategies

✓ multiply and divide whole numbers using the standard algorithm and strategies

✓ apply the order of operations to evaluate expressions including parentheses and brackets

WHOLE NUMBER OPERATIONS UNIT
13 DAY TEKS-ALIGNED UNIT

5th GRADE

WHOLE NUMBER OPERATIONS

5th GRADE

ready-to-go, scaffolded student materials

WHOLE NUMBER OPERATIONS UNIT
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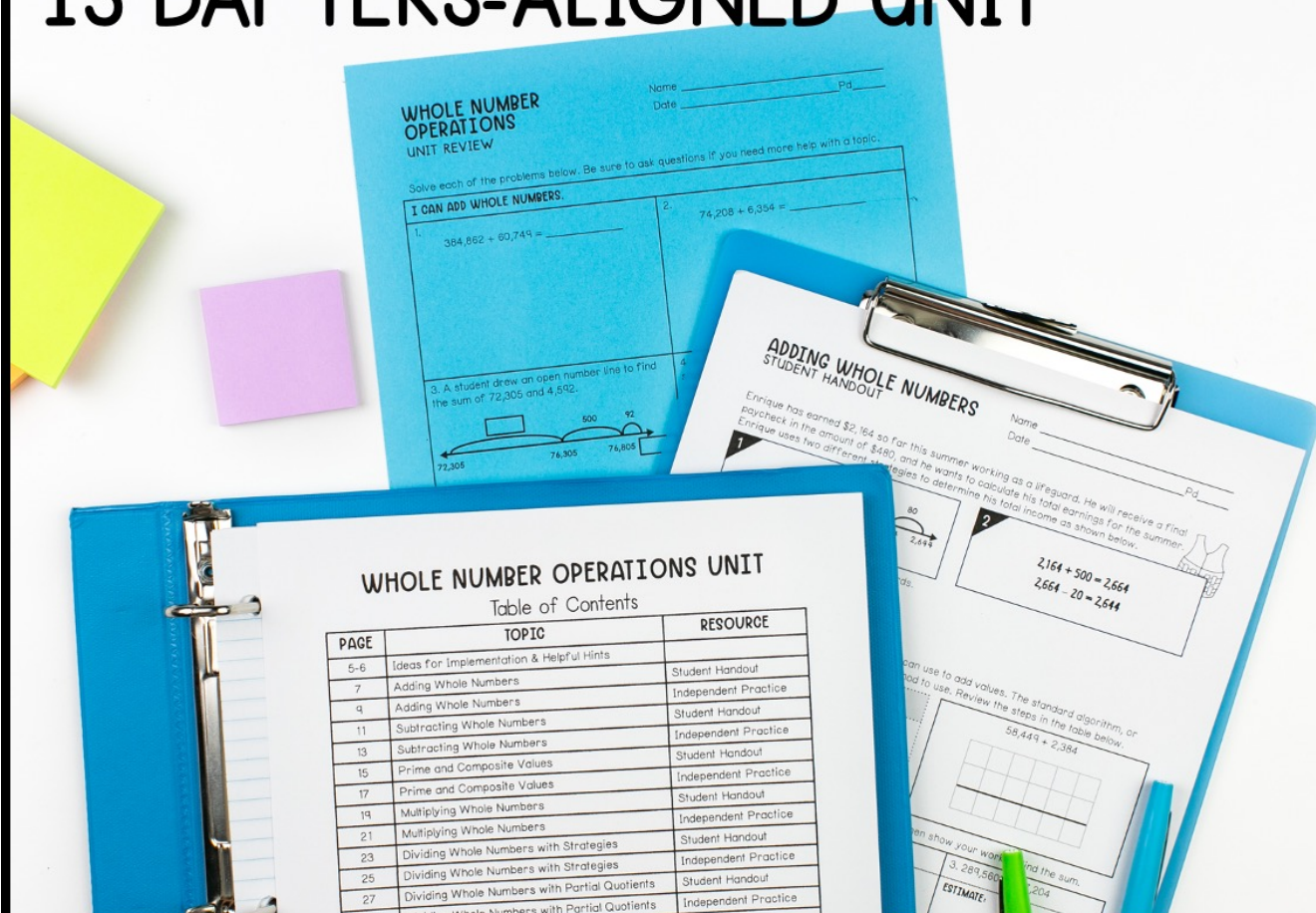
TEKS

A MANEUVERING THE MIDDLE® RESOURCE

WHOLE NUMBER OPERATIONS

5th GRADE

a 13 day TEKS-aligned unit
TEKS: 5.3A, 5.3B, 5.3C. 5.3K, 5.4A, 5.4E, 5.4F

student friendly + real-world application

scaffolded concepts

DIVIDING WHOLE NUMBERS WITH PARTIAL QUOTIENTS
STUDENT HANDOUT

Name _____
Date _____ Pd_____

MJ works at a local Theater Club and is designing a rectangular stage for performances. The stage needs to have an area of 640 square feet and the width must be 20 feet. To determine the length, MJ draws the model shown below. To get close to an area of 640 square feet, he starts by multiplying 20 × 30 which he knows is 600.

a. Describe how to find the missing area labeled A.

	30	B
20	600	A

b. Describe how to find the missing length labeled B.

c. Use the model to complete the division statement: 640 ÷ 20 = _____

In the area model above, the area of the rectangle represents the _____, and the width dimension represents the _____. The partial quotients of 30 and 2 were added to determine the final _____. The area model helps us visualize the proce[ss of] dividing with partial quotients as described below.

DIVIDING USING PARTIAL QUOTIENTS

1. Using the divisor, choose a friendly number of groups that you know will fit into the _____. Record this partial quotient to the right of the problem.

2. _____ the divisor by the partial quotient and subtract this amount from the dividend.

3. Continue this process with the amount remaining until the difference is 0 or less than the divisor.

4. Add the _____ quotients to determine the final _____.

432 ÷ 6

Describe how you can check that your quotient is correct. Then use that process to che[ck] answer.

SUBTRACTING WHOLE NUMBERS
INDEPENDENT PRACTICE

Name _____
Date _____ Pd_____

Solve each problem below. Match your answers in the table to solve the riddle.

1	587,620 − 220,417	2	15,248 − 9,357	3	14,000 − 7,658
4	372,208 − 41,356	5	7,358,490 − 23,527	6	432,800 − 8,652
7	167,364 − 124,557	8	7,203,520 − 82,413	9	7,482,950 − 105,747

A: 367,203	I: 7,334,963	C: 424,148	O: 7,121,107	G: 6,383,217	E: 330,852
N: 43,213	T: 6,342	M: 7,377,203	H: 42,807	S: 5,891	R: 7,658

WHAT IS A BUTTERFLY'S FAVORITE SUBJECT IN SCHOOL?

_9_ _8_ _3_ _7_ _4_ _9_ _1_ _3_ _5_ _6_ _2_

self-checking practice

WHOLE NUMBER OPERATIONS

a 13 day TEKS-aligned unit
TEKS: 5.3A, 5.3B, 5.3C. 5.3K, 5.4A, 5.4E, 5.4F

unit study guide + assessments

✓ quizzes

✓ editable unit test

OPERATIONS WITH WHOLE NUMBERS
QUIZ

Name _____
Date _____ Pd _____

The table shows the number of passengers who flew into different airports on Saturday. Use the table to answer 1-2.

1. The number of passengers who flew into DFW airport was 13,586 more than the number of passengers who flew into JFK. How many passengers flew into DFW?

a. 160,960
b. 171,843
c. 294,117
d. 144,671

Answers
1. _____
2. _____
3.

Airport	# of Passengers

2. The number of passengers who flew in ___ than the number of passengers who flew ___ flew into ATL?

a. 193,089
b. 104,347
c. 213,111
d. 214,605

Answer the questions below. Be sure to

3. A teacher writes a factor pair "2 × 44 the statements shown below. Who is corr

SUZIE

a. Suzie
b. Ron
c. Both
d. Neither

"The numbers in the fa___ pair are composite be___ they are both even.

4. Mrs. Caldwell wrote the following prob___ following is NOT a true statement?

a. The dividend is 3,210 and the divisor is
b. I can think of this a multiplication prob
c. I can estimate that the quotient should
d. The quotient is 214.

WHOLE NUMBER OPERATIONS
UNIT REVIEW

Name _____
Date _____ Pd _____

Solve each of the problems below. Be sure to ask questions if you need more help with a topic.

I CAN ADD WHOLE NUMBERS.

1.	2.
384,862 + 60,749 = _____	74,208 + 6,354 =

3. A student drew an open number li___ the sum of 72,305 and 4,592.

```
   ┌────┐         ┌────┐
◄──┘    └─────────┘    └──────
              500
72,305      76,305      76,
```

a. Fill in any missing blanks on the n___
b. Write the problem and sum below

I CAN SUBTRACT WHOLE NUMBERS

5.
2,384,641 − 573,856 = _____

MULTIPLYING WHOLE NUMBERS
STUDENT HANDOUT

Name **Answer Key**
Date _____ Pd _____

Gabriel drew the area model shown below to multiply 342 × 8.

a. Complete the model to find the solution.

2,400 + 320 + 16 = 2,736

	300	+ 40	+ 2
8	2,400	320	16

b. How could Gabriel use an area model to find the solution to 342 × 18?

Sample answer: He could add another row where he multiplies each place value by 10.

c. Draw an area model to find the solution to 342 × 18.

	300	+ 40	+ 2	
8	2,400	320	16	= 2,400 + 320 + 16 = 2,736
10	3,000	400	20	= 3,000 + 400 + 20 = 3,420

2,736 + 3,420 = 6,156

The area model demonstrates that when multiplying two numbers, you can find partial products and add them together to find the overall product. The standard algorithm follows a similar process and provides an alternate way to organize your work.

MULTIPLYING WITH THE ALGORITHM

1. Line up the numbers by ____place____ ____value____.

2. Multiply each digit in the top number by the ___ones___ place of the bottom number.

3. Put a ___zero___ under the ones place in the first answer line and repeat the process with the ___tens___ digit of the bottom number.

4. ___Add___ the partial products together to find the final product.

*Remember to regroup and carry as necessary

342 × 18

		3	4	2
×			1	8
	2,	7	3	6
	3,	4	2	0
6,	1	5	6	

What other strategies could you use to find 342 × 18? Explain.

Sample answer: Multiply 342 by 20 and then subtract 342 times 2.

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answer keys included

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