

Hands-on
and
Engaging!

Activates
Problem
Solving

Perfect
for Math
Centers

Non-Routine
and
Challenging

Time to Tile!

0

1

2

3

4

5

6

7

8

9

Ways to Divide

$$\boxed{} \overline{) \boxed{} \boxed{}} \quad \boxed{3}$$

$$\boxed{} \overline{) 6} = \boxed{}$$

$$\boxed{}$$

$$\boxed{1} \boxed{} \boxed{8}$$

$$\boxed{1} \boxed{2} = \boxed{}$$

$$\boxed{} \boxed{6} \div \boxed{} = \boxed{6}$$

Time to Tile: Tips for Implementation

Time to Tile: Ways to Divide is a hands-on activity that takes students' thinking beyond procedures and rote memorization. This engaging resource activates critical thinking and problem solving skills, all while developing algebraic thinking. Students must place 10 number tiles (0-9) on the Time to Tile cards in order to correctly solve four division problems that are presented in four different formats: division bracket, fraction, horizontal fraction ($12/4 = 3$), and division symbol ($\div$).

This resource includes:

- 30 different Time to Tile cards
- An "Answer Recording Sheet," where students can record their answers so they can be corrected later. This allows the resource to be used as a perfect independent or center activity.
- Answer keys
- Management and organization tips for successfully implementing Time to Tile in your classroom.

Where can I get number tiles?

You can also purchase these number tiles. You can get 150 of these tiles, which will make 15 student sets, for about \$12 on Amazon. They are made by Eureka. The set also comes with operation signs (+, -, $\times$, $\div$, =), which are nice to have on hand, though you won't use them for the Time to Tile activities. Click on the image to the right for the link.



You can also make your own number tiles for very little money. Using these sheets of craft foam, cut 1 inch x 1 inch squares and then write the digits on them with the a permanent marker. The foam tiles are nice because you can use a variety of colors. However, don't plan on them lasting for more than one school year. They can start to degrade pretty quickly, and some students might start picking at them.



Time to Tile: Tips for Implementation

How should I organize and manage the materials for optimal classroom use?

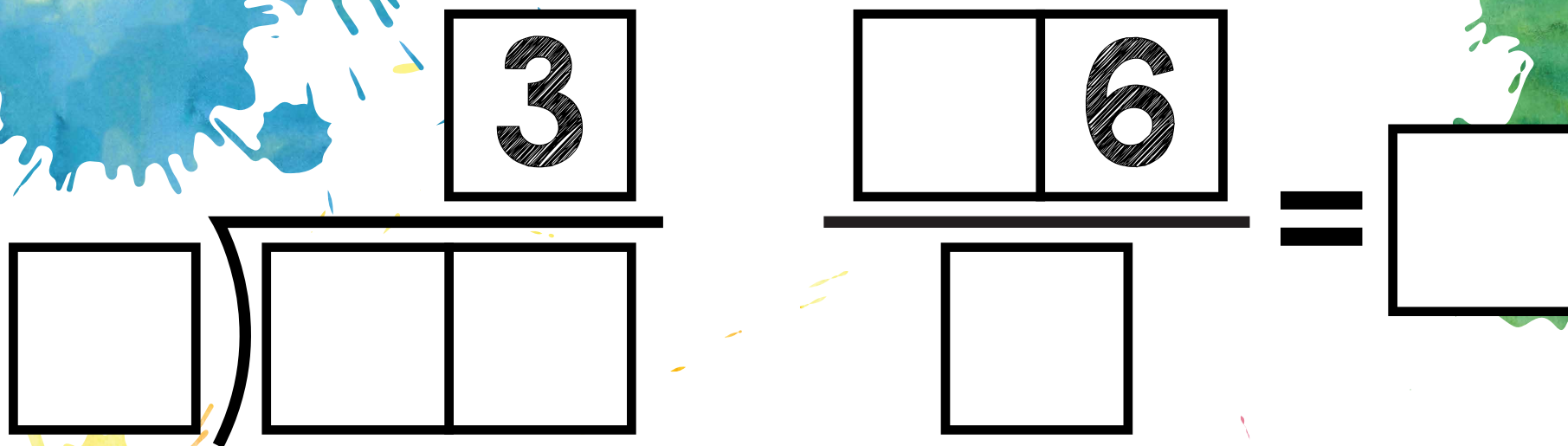
In my class, each student has a set of number tiles in their desks so they are ready to go at a moment's notice. I made sure to label each set of number tiles with student identification numbers (1-36) so that if a missing tile is found, we know who to return it to. I have the students store their number tiles in the smallest reusable food containers that I could find. I also wrote student identification numbers on these.

The Time to Tile cards can be printed on cardstock and laminated. I suggest making multiple sets to make it easy for your students to access them. I actually made a set for each table group and store the cards in a hanging file container at the front of each table. This way if we have an extra few minutes of class time, the students can quickly grab a card and get to work. Of course, if you only plan to use these cards as a center activity, then you could only make just one or two sets of cards.

The Student Answer Recording Sheets are double-sided; problems 1-15 are on one side and problems 16-30 are on the reverse side. Students keep these in a "Works-in-Progress" folder in their desks.

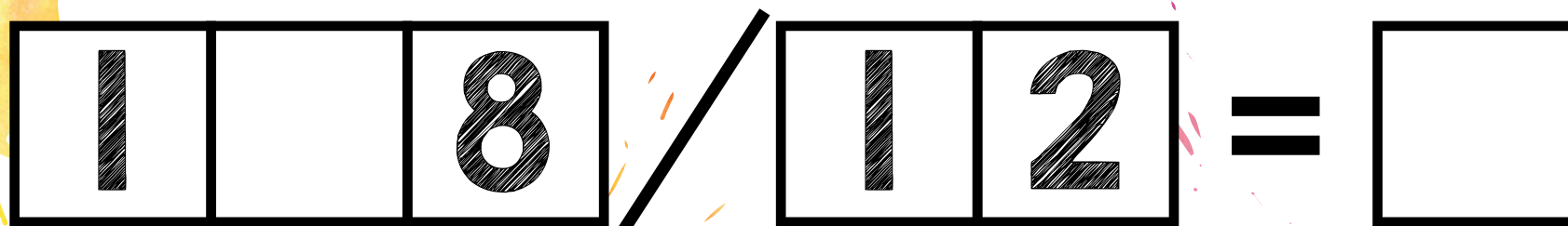
I place the Answer Keys in sheet protectors and store them in a binder. Twice a week I collect student answer sheets to correct. The answer sheets do not have to be complete to be corrected. If a student gets a card correct, I star it. If one is incorrect, I simply write a small dot near it. The student then knows that he/she needs to revisit that one. He/she can then resubmit the answer sheet and if the proper corrections have been made, I simply draw a star right over the dot.

Ways to Divide



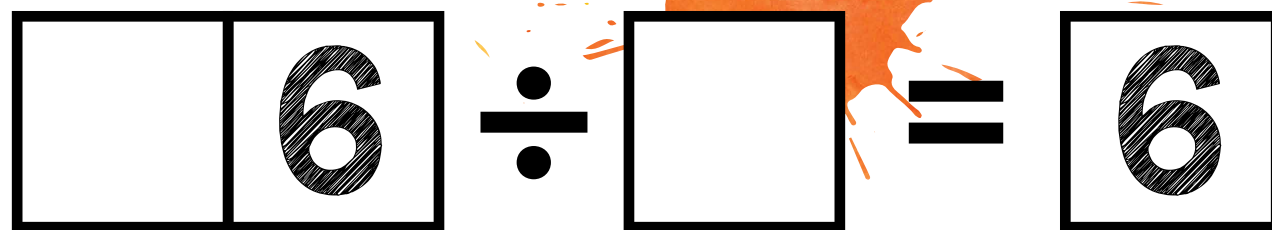
A long division problem. The divisor is 3, placed in a box above a horizontal line. The dividend is 6, placed in a box to the right of the line. Below the line is a large empty box for the quotient. To the left of the line is a small empty box for the remainder.

$$\begin{array}{r} 3 \overline{) 6} \\ \end{array}$$



A division problem. The dividend is 18, placed in a box to the left of a diagonal line. The divisor is 12, placed in a box to the right of the line. To the right of the line is an equals sign followed by an empty box for the quotient.

$$18 \div 12 = \square$$



A division problem. The dividend is 6, placed in a box to the left of a division symbol. To the right of the division symbol is an empty box for the divisor. To the right of the empty box is an equals sign followed by a box containing the number 6.

$$\square 6 \div \square = 6$$

Ways to Divide



3

6

=

Black & White
Versions
Included

1

2

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6

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=

6

Ways to Divide Answer Recording Sheet

1 $\frac{3}{\square) \square \square} \frac{\square \square}{\square} = \square$ $\frac{1 \square 8}{1 \square 2} = \square$ $\square 6 \div \square = \square$	2 $\frac{\square 0}{8} = \square$ $\frac{1 \square 2}{1 \square 1) 1 \square \square} = \square$ $\square 2 \div \square = \square$ $\square 0 \div 6 = \square$	3 $\frac{\square \square}{\square) 5 \square} \frac{\square \square}{5} = 7$ $\square 1 \div \square = 3$ $\square 0 \div \square = 8$
4 $\frac{6}{\square) \square 4} \frac{4 \square}{\square} = \square$ $\square \square \div 6 = \square$ $\square \square \div 3 = \square$	5 $\frac{5}{\square) \square \square} \frac{5 \square}{\square} = \square$ $\square 0 \div 1 \square = 9$ $2 \square \div \square = \square$	6 $\frac{\square 8}{5) \square 5} \frac{\square \square}{6} = \square$ $3 \square \div \square 0 = \square$ $\square 3 \div \square = \square$
7 $\frac{\square}{4) \square 2} \frac{\square \square}{\square} = \square$ $\frac{7 \square}{\square} \div \square = 12$ $\square 0 \div \square = 7$	8 $\frac{\square \square}{\square) 2 \square} \frac{1 \square}{2} = \square$ $\frac{1 \square}{\square} \div \square = \square$ $\square \square \div 2 = \square$	9 $\frac{\square 0}{\square) \square 6} \frac{\square \square}{\square \square} = 5$ $\square 8 \div \square = 4$ $\square \square \div \square = 8$
10 $\frac{\square \square}{2) \square \square} \frac{\square \square}{\square} = \square$ $\square 2 \div 7 = \square$ $\square \square \div 9 = \square$	11 $\frac{\square \square}{\square) \square 5} \frac{1 \square}{1 \square 2} = \square$ $\square \square \div 5 = 1 \square$ $\square \square \div \square = 3$	12 $\frac{\square \square}{\square) \square \square} \frac{7 \square}{7} = \square$ $4 \square \div \square = 10$ $5 \div 7 = \square$
13 $\frac{1 \square}{\square) 4 \square} \frac{6 \square}{\square} = \square$ $\frac{6 \square}{1 \square} \div 1 \square = 6$ $2 \square \div \square = 4$	14 $\frac{4 \square}{1 \square 2) \square \square} \frac{2 \square}{\square} = \square$ $\frac{5 \square}{\square} \div \square = 8$ $\square \square \div 6 = \square$	15 $\frac{\square 2}{8) 4 \square} \frac{\square \square}{\square} = \square$ $\square \square \div 4 = \square$ $5 \square \div 9 = \square$

DIGITAL Version

Hands-on
and
Engaging!

Activates
Problem
Solving

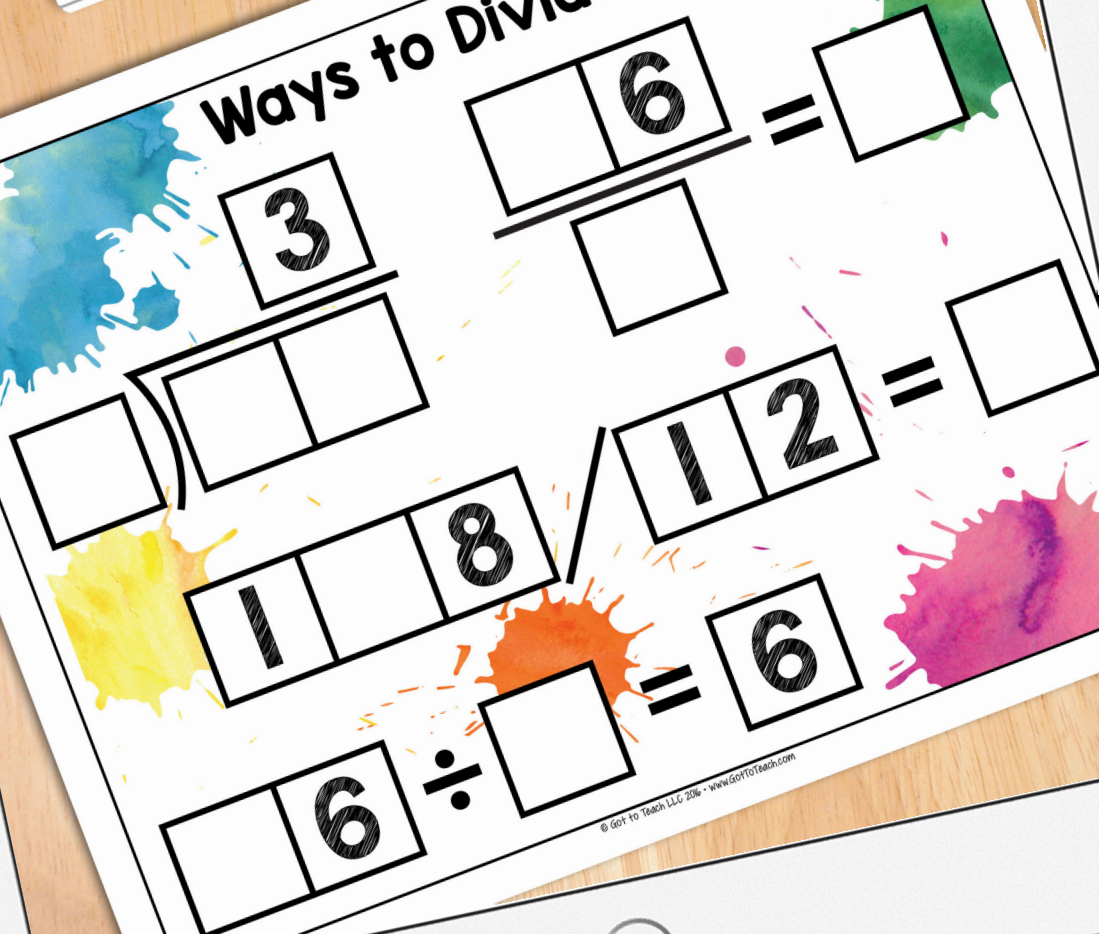
Perfect
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Centers

Non-Routine
and
Challenging

Time to Tile!



Ways to Divide



Paperless
&
No-Prep



1 Ways to Divide

$\frac{3}{\square} = \square$

$\frac{108}{12} = 9$

$\frac{6}{\square} = 6$

1 2 3 4 5 6 7 8

2 Ways to Divide

$\frac{0}{8} = \square$

$\frac{12}{\square} = \square$

$\frac{2}{\square} = \square$

$\frac{0}{6} = \square$

0 1 2 3 4 5 6 7 8 9

3 Ways to Divide

$\frac{\square}{5} = 7$

$\frac{1}{\square} = 3$

$\frac{0}{\square} = 8$

0 1 2 3 4 5 6 7 8 9

4 Ways to Divide

$\frac{6}{4} = 7$

$\frac{\square}{6} = \square$

$\frac{\square}{3} = \square$

0 1 2 3 4 5 6 7 8 9

5 Ways to Divide

$\frac{\square}{5} = 1$

$\frac{0}{1} = 9$

$\frac{2}{\square} = \square$

0 1 2 3 4 5 6 7 8 9

6 Ways to Divide

$\frac{5}{5} = \frac{8}{6} = \square$

$\frac{3}{\square} = \frac{\square}{0} = \square$

$\frac{3}{\square} = \square$

0 1 2 3 4 5 6 7 8 9

7 Ways to Divide

$\frac{\square}{4} = \frac{\square}{2} = \frac{\square}{5} = \square$

$\frac{7}{\square} = \frac{\square}{12} = \square$

$\frac{0}{\square} = \frac{\square}{7} = \square$

0 1 2 3 4 5 6 7 8 9

Ways to Divide

$\frac{3}{\square} = \square$

$\frac{\square}{6} = \square$

$\frac{108}{12} = 9$

$\frac{6}{\square} = 6$

1 2 3 4 5 6 7 8

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1 Ways to Divide

$\square \square \square \div \square \square = \square$

$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

0 1 2 3 4 5 6 7 8

2 Ways to Divide

$\square \square \square \div \square \square = \square$

$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

0 1 2 3 4 5 6 7 8 9

3 Ways to Divide

$\square \square \square \div \square \square = \square$

$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

0 1 2 3 4 5 6 7 8 9

4 Ways to Divide

$\square \square \square \div \square \square = \square$

$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

0 1 2 3 4 5 6 7 8 9

5 Ways to Divide

$\square \square \square \div \square \square = \square$

$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

0 1 2 3 4 5 6 7 8 9

6 Ways to Divide

$\square \square \square \div \square \square = \square$

$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

0 1 2 3 4 5 6 7 8 9

7 Ways to Divide

$\square \square \square \div \square \square = \square$

$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

0 1 2 3 4 5 6 7 8 9

Ways to Divide

$\square \square \square \div \square \square = \square$

$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

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$\square \square \square \div \square \square = \square$

$\square \square \div \square \square = \square$

0 1 2 3 4 5 6 7 8 9

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1 Ways to Divide

$\frac{3}{6} = \frac{1}{2}$

$\frac{10}{12} = \frac{5}{6}$

$\frac{6}{6} = 1$

0 1 2 3 4 5 6 7 8

2 Ways to Divide

$\frac{0}{8} = \frac{1}{2}$

$\frac{11}{13} = \frac{1}{2}$

$\frac{2}{6} = \frac{1}{3}$

$\frac{0}{6} = 0$

0 1 2 3 4 5 6 7 8 9

3 Ways to Divide

$\frac{5}{5} = 1$

$\frac{1}{3} = \frac{1}{3}$

$\frac{0}{8} = 0$

0 1 2 3 4 5 6 7 8 9

4 Ways to Divide

$\frac{6}{4} = \frac{3}{2}$

$\frac{4}{6} = \frac{2}{3}$

$\frac{0}{3} = 0$

0 1 2 3 4 5 6 7 8 9

5 Ways to Divide

$\frac{5}{5} = 1$

$\frac{4}{5} = \frac{4}{5}$

$\frac{0}{1} = 0$

$\frac{2}{2} = 1$

0 1 2 3 4 5 6 7 8 9

6 Ways to Divide

$\frac{5}{5} = 1$

$\frac{3}{6} = \frac{1}{2}$

$\frac{3}{3} = 1$

$\frac{0}{0} = 0$

0 1 2 3 4 5 6 7 8 9

7 Ways to Divide

$\frac{4}{2} = 2$

$\frac{7}{12} = \frac{7}{12}$

$\frac{0}{7} = 0$

0 1 2 3 4 5 6 7 8 9

Ways to Divide

3

$\frac{\boxed{}}{\boxed{}} = \boxed{7}$

$\boxed{} \overline{) 5 }$

$\frac{\boxed{}}{5} = \boxed{3}$

$\boxed{0} \div \boxed{} = \boxed{8}$

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0 1 2 3 4 5 6 7 8 9

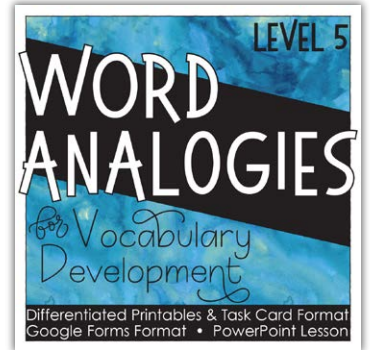
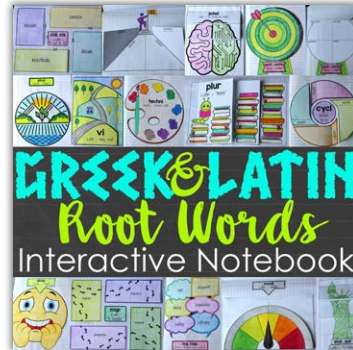
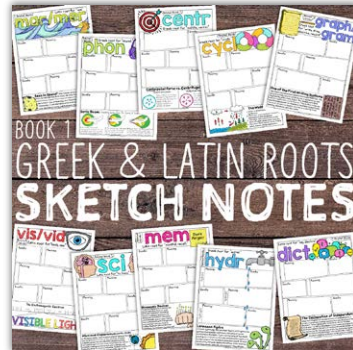
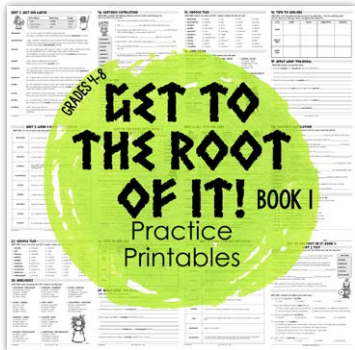


Helping teachers thrive, not just survive, in education

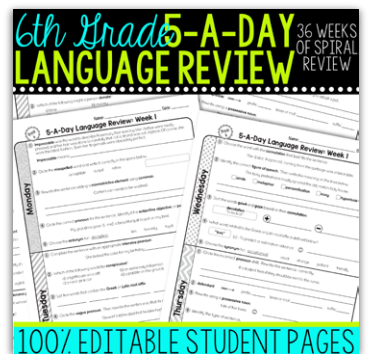
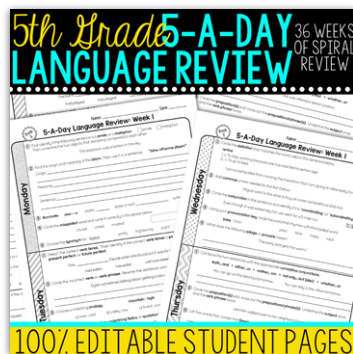
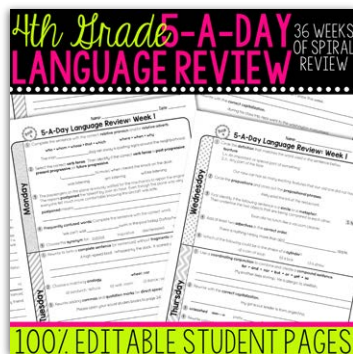
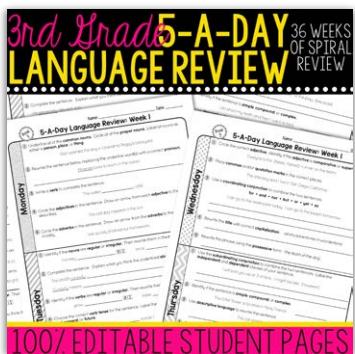


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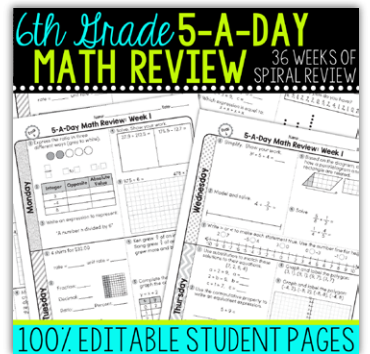
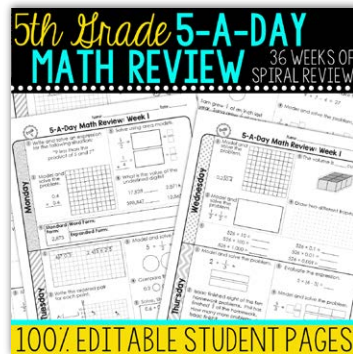
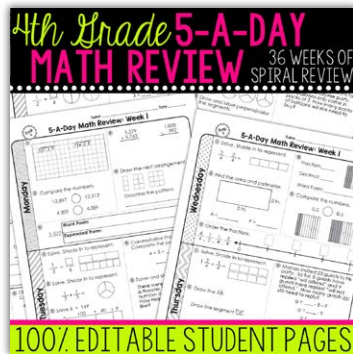
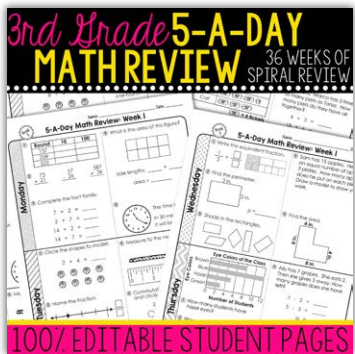
VOCABULARY RESOURCES



DAILY LANGUAGE REVIEWS (GRADES 3-8)



DAILY MATH REVIEWS (GRADES 3-6)



HANDS-ON MATH TILES

