

Hands-on  
and  
Engaging!

Activates  
Problem  
Solving

Perfect  
for Math  
Centers

Non-Routine  
and  
Challenging

# Time to Tile!

Area Model  
Multiplication



$$\begin{array}{r} 86 \\ \times 27 \\ \hline \end{array}$$

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$$\begin{array}{r} 93 \\ \times 15 \\ \hline \end{array}$$

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# Time to Tile: Tips for Implementation

Time to Tile: Area Model Multiplication 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 complete the area multiplication problems.

## **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 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?

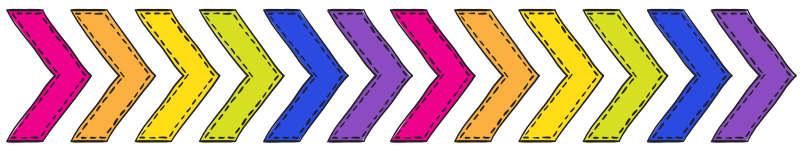
In my class, each student has a set of number tiles in their desks so they are ready to go at a moment's notice. I made sure to label each set of number tiles with student identification numbers (1-36) so that if a missing tile is found, we know who to return it to. I have the students store their number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

# Area Model Multiplication



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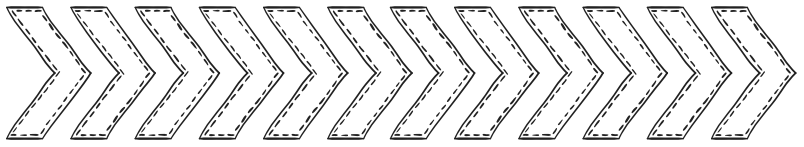
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# Area Model Multiplication



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Black & White  
Versions  
Included

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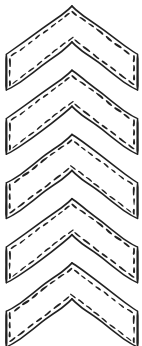
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# Area Model Multiplication Answer Recording Sheet

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| <p>1</p> $\begin{array}{r} \square\square \cdot \square \\ \square 0 \quad 1,600 \quad 120 \\ * \\ \square \quad 560 \quad 42 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 900 \quad 30 \\ * \\ 5 \quad \square \quad 0 \quad 15 \\ \hline \end{array}$                 | <p>2</p> $\begin{array}{r} \square 0 \cdot \square \\ \square \quad 3,500 \quad 400 \\ * \\ \square \quad 420 \quad 48 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ 2 \quad 0 \quad 800 \quad 180 \\ * \\ \square \quad \square \quad 0 \quad 27 \\ \hline \end{array}$            | <p>3</p> $\begin{array}{r} \square\square \cdot \square \\ \square 0 \quad 1,800 \quad 270 \\ * \\ \square \quad 60 \quad 9 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 1,000 \quad 140 \\ * \\ \square \quad \square \quad 0 \quad 0 \quad 56 \\ \hline \end{array}$   | <p>4</p> $\begin{array}{r} \square 0 \cdot \square \\ \square \quad 4,500 \quad 350 \\ * \\ \square \quad 180 \quad 14 \\ \hline \end{array}$ $\begin{array}{r} 4 \quad 0 \cdot \square \\ \square 0 \quad 1,200 \quad 240 \\ * \\ \square \quad \square \quad 0 \quad 32 \\ \hline \end{array}$       | <p>5</p> $\begin{array}{r} \square\square \cdot \square \\ \square 0 \quad 200 \quad 70 \\ * \\ \square \quad 180 \quad 63 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 2,400 \quad 180 \\ * \\ \square \quad \square \quad 0 \quad 0 \quad 30 \\ \hline \end{array}$    |
| <p>6</p> $\begin{array}{r} \square\square \cdot \square \\ \square 0 \quad 800 \quad 140 \\ * \\ \square \quad 120 \quad 21 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 7,200 \quad 80 \\ * \\ \square \quad \square \quad 4 \quad 0 \quad 6 \\ \hline \end{array}$    | <p>7</p> $\begin{array}{r} \square 0 \cdot \square \\ \square \quad 1,000 \quad 160 \\ * \\ \square \quad 150 \quad 24 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 900 \quad 40 \\ * \\ \square \quad \square \quad 3 \quad 0 \quad 28 \\ \hline \end{array}$     | <p>8</p> $\begin{array}{r} \square\square \cdot \square \\ \square 0 \quad 2,100 \quad 120 \\ * \\ \square \quad 420 \quad 24 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 1,800 \quad 100 \\ * \\ 9 \quad \square \quad \square \quad 0 \quad 45 \\ \hline \end{array}$ | <p>9</p> $\begin{array}{r} \square 0 \cdot \square \\ \square \quad 600 \quad 40 \\ * \\ \square \quad 480 \quad 32 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 3,500 \quad 450 \\ * \\ \square \quad \square \quad 1 \quad 0 \quad 27 \\ \hline \end{array}$  | <p>10</p> $\begin{array}{r} \square 0 \cdot \square \\ \square \quad 1,200 \quad 240 \\ * \\ \square \quad 280 \quad 56 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 4,500 \quad 300 \\ * \\ \square \quad \square \quad 8 \quad 0 \quad 12 \\ \hline \end{array}$       |
| <p>11</p> $\begin{array}{r} \square\square \cdot \square \\ \square 0 \quad 1,000 \quad 180 \\ * \\ \square \quad 50 \quad 9 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 1,800 \quad 240 \\ * \\ \square \quad \square \quad 2 \quad 0 \quad 56 \\ \hline \end{array}$ | <p>12</p> $\begin{array}{r} \square 0 \cdot \square \\ \square \quad 2,700 \quad 210 \\ * \\ \square \quad 450 \quad 35 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 2,400 \quad 320 \\ * \\ \square \quad \square \quad 2 \quad 0 \quad 16 \\ \hline \end{array}$ | <p>13</p> $\begin{array}{r} \square\square \cdot \square \\ \square 0 \quad 3,500 \quad 150 \\ * \\ \square \quad 70 \quad 3 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 7,200 \quad 160 \\ * \\ \square \quad 3 \quad \square \quad 0 \quad 8 \\ \hline \end{array}$   | <p>14</p> $\begin{array}{r} \square 0 \cdot \square \\ \square \quad 600 \quad 180 \\ * \\ \square \quad 210 \quad 63 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 4,000 \quad 200 \\ * \\ 2 \quad \square \quad \square \quad 0 \quad 8 \\ \hline \end{array}$ | <p>15</p> $\begin{array}{r} \square\square \cdot \square \\ \square 0 \quad 2,000 \quad 80 \\ * \\ \square \quad 400 \quad 16 \\ \hline \end{array}$ $\begin{array}{r} \square 0 \cdot \square \\ \square 0 \quad 4,200 \quad 540 \\ * \\ \square \quad 2 \quad \square \quad 0 \quad 27 \\ \hline \end{array}$ |

# DIGITAL Version

Hands-on  
and  
Engaging!

Activates  
Problem  
Solving

Perfect  
for Math  
Centers

Non-Routine  
and  
Challenging

## Time to Tile!

Area Model  
Multiplication

$$\begin{array}{r} 86 \\ \times 27 \\ \hline \end{array}$$

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$$\begin{array}{r} 93 \\ \times 15 \\ \hline \end{array}$$

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Paperless  
&  
No-Prep



Area Model  
Multiplication

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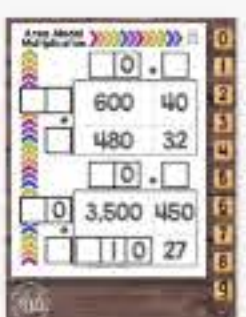
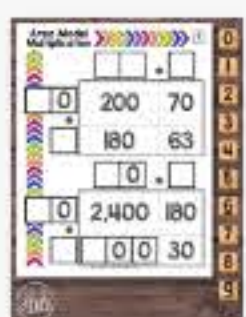
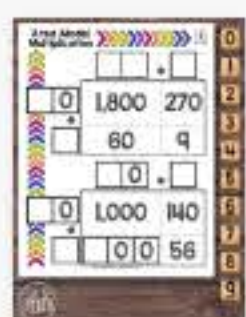
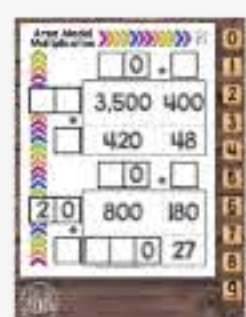
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# Area Model Multiplication



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$$\begin{array}{|c|c|} \hline 5 & 0 \\ \hline \end{array} +$$

$$\begin{array}{|c|} \hline 6 \\ \hline \end{array}$$

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$$\begin{array}{|c|c|} \hline & 0 \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \end{array}$$

$$\begin{array}{|c|c|} \hline 2 & 0 \\ \hline \end{array} +$$

$$\begin{array}{|c|} \hline \\ \hline \end{array}$$

800

180

$$\begin{array}{|c|c|c|} \hline & & 0 \\ \hline \end{array} 27$$

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1

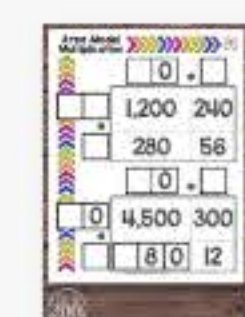
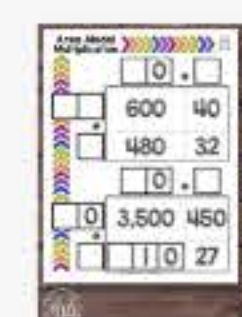
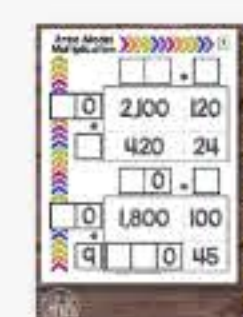
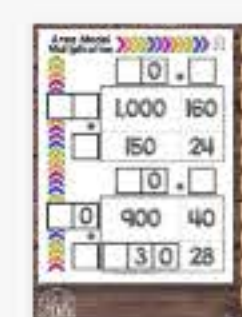
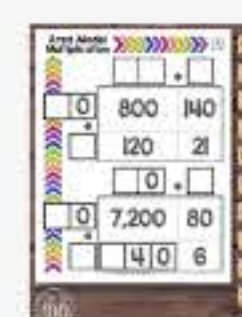
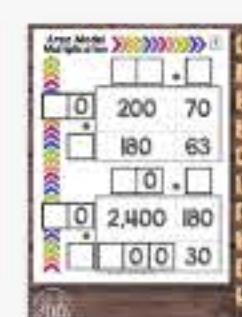
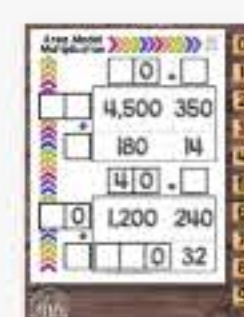
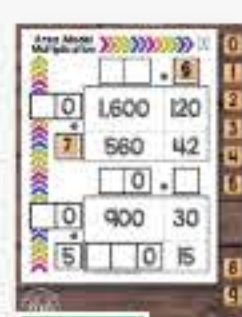
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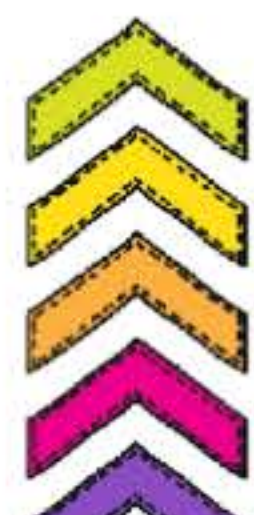




# Area Model Multiplication



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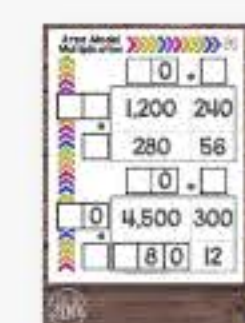
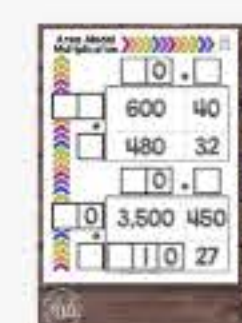
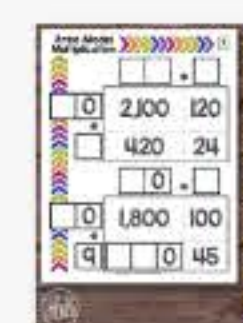
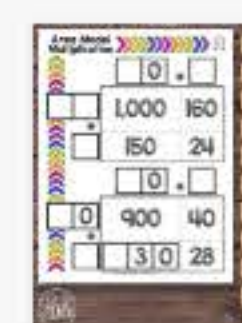
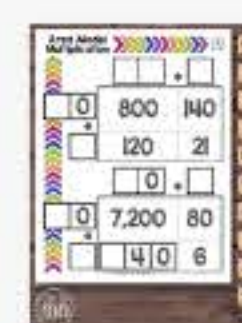
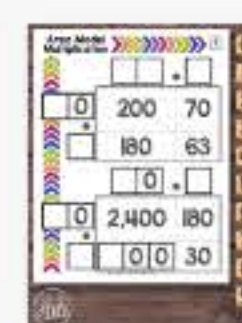
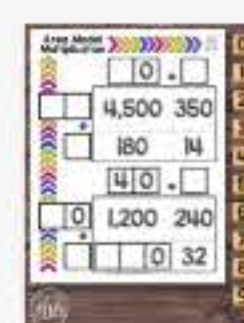
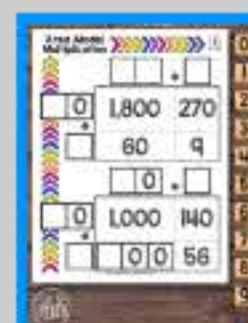
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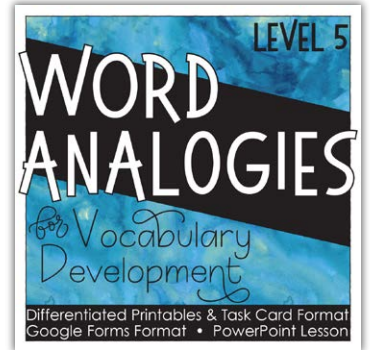
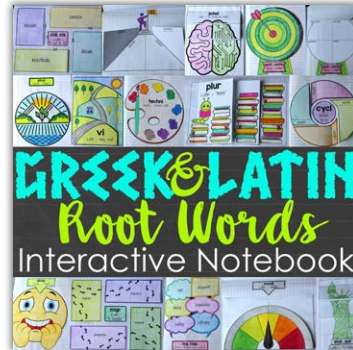
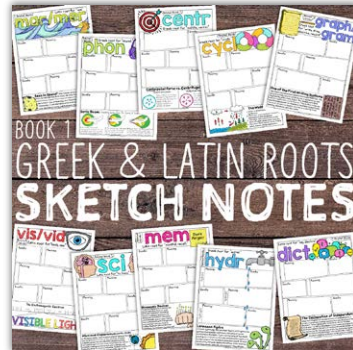
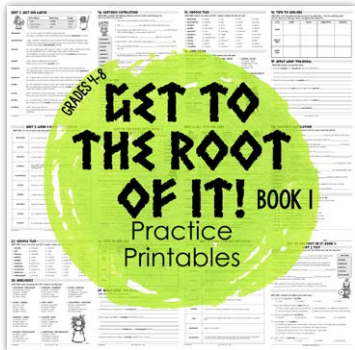


Helping teachers thrive, not just survive, in education

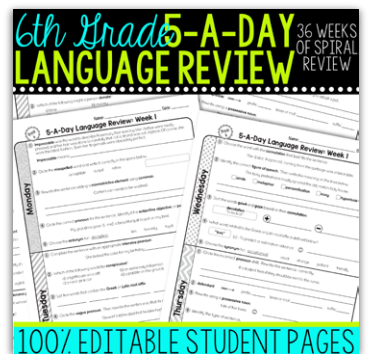
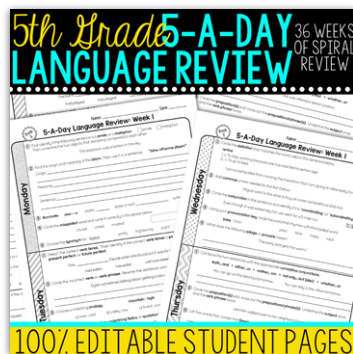
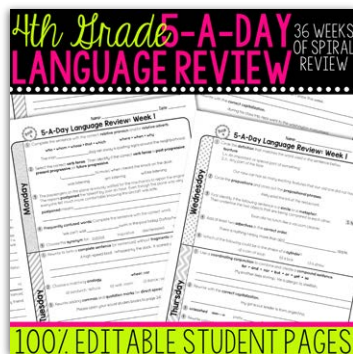
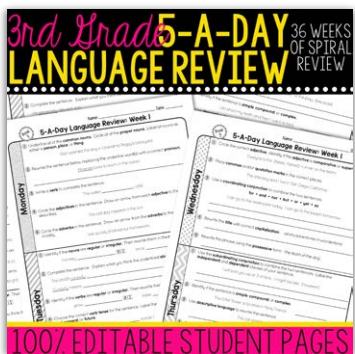


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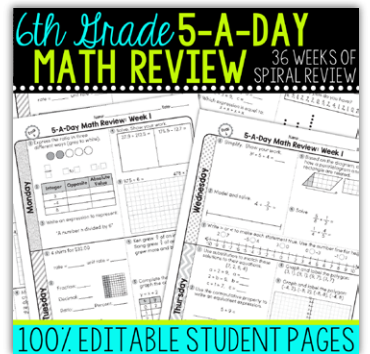
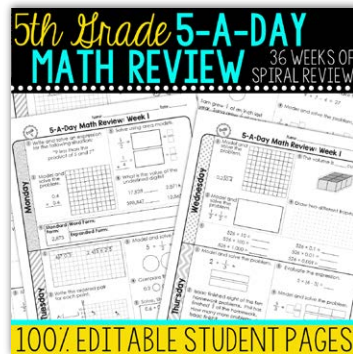
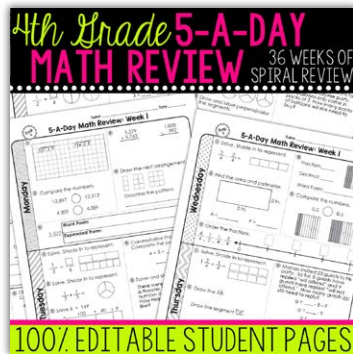
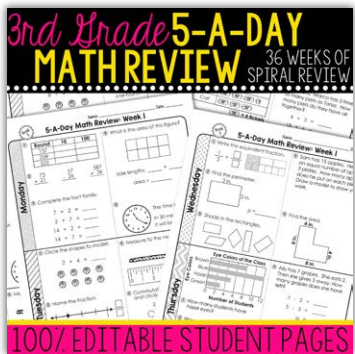
## VOCABULARY RESOURCES



## DAILY LANGUAGE REVIEWS (GRADES 3-8)



## DAILY MATH REVIEWS (GRADES 3-6)



## HANDS-ON MATH TILES

