

## Area Model Online Resources

Below are several resources for working with area models and includes all links provided in the Area Model workshop.

### WHOLE NUMBERS

- For further practice using an area model to break up a multiplication problem (Students can put in their own problem up to  $50 \times 50$ .)  
<https://apps.mathlearningcenter.org/partial-product-finder/>
- For further practice representing and partitioning multiplication with area models  
<https://phet.colorado.edu/en/simulation/area-model-introduction>
- For further practice with measured area models (no grids) (Note: The models without grids are not drawn to scale.)  
<https://phet.colorado.edu/en/simulation/area-model-multiplication>

### FRACTIONS

- For further practice using an area model to multiply proper fractions  
<https://www.geogebra.org/m/RqRdUusq>
- For further practice using an area model to multiply proper, improper, and mixed number fractions (Note: This tool can be confusing for students new to area modeling with fractions. It is suggested that you use the other Geogebra tool for proper fractions first and use the other tool if students want to see how it looks with improper/mixed number fractions.)  
<https://www.geogebra.org/m/bcudeQAe>

### POLYNOMIALS

- For further practice using an area model with algebra tiles to build and factor polynomials (Note: Illuminations Algebra Tiles - You may find the “Expand” and “Factor” modes useful in your own exploration and instruction.)  
<https://www.oercommons.org/courses/algebra-tiles>

### MISCELLANEOUS

- Virtual dice (random number generator)  
<https://www.random.org/dice/>
- Curriculum for Adults Learning Math (CALM)  
<https://www.terc.edu/calm/>
- Cover the Field - The entire lesson plan for this activity (Big Idea 7: Illustrating Multiplication and Division) can be found in [Mindset Mathematics: Visualizing and Investigating Big Ideas, Grade 4.](#)
- Adult Numeracy Network (ANN) Math and Numeracy Resources  
<https://www.adultnumeracynetwork.org/Math-and-Numeracy-Resources>
- Visualizing and Factoring Polynomials Curriculum Guide - This curriculum guide offers a list of Open Educational Resources (OER) that are arranged in a logical sequence for introducing polynomials with visual models, particularly using arrays and area models.  
<https://www.oercommons.org/authoring/29043-visualizing-and-factoring-polynomials>