

Discovering STEM Program

Kit name: Amazing Area (Grades: 2-4)

Description: Have you ever wondered how to measure the surface of something? With this game of comparative measuring you can use your amazing area squares to test your measuring powers.



Alignment for Amazing Area (Grades: 2-4) to the Common Core State Standards Mathematics <http://www.corestandards.org>

This kit addresses the following standards:

- 2.G.A.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.
- 3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.
 - 3.MD.C.5a A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
 - 3.MD.C.5b A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
- 3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
- 3.MD.C.7 Relate area to the operations of multiplication and addition.
 - 3.MD.C.7a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
 - 3.MD.C.7b Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
 - 3.MD.C.7c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
 - 3.MD.C.7d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
 - 4.OA.B.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
- 4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*

When reserving kits, please be sure to:

- **Return** the filled out reservation form
- **Review** required kit materials prior to event
- **Return** evaluation forms
- **Replace** the consumables