# Connecting Common Core Math Standards to a Gingerbread House
STEAM ACTIVITY

Grade	CC Standard	Description of Standard	How to Apply to Gingerbread House Project
1	1G3	Partition rectangles into equal parts	Create window panes in windows
2	2G2	Identify polygons and circles	The rectangle and triangle that compose the house form a pentagon. Create doors, windows, roof tiles, and other features that are certain shapes
2	2G3	Partition shapes into equal parts	Create window panes or other house features from various shapes
2	2MD1	Measure	Measure the sides of the house using inches or centimeters, using whole units
2	2OA3	Odd and even numbers	Require the use of designs with odd or even number of elements
2	2OA4	Beginning arrays	Use arrays of up to 5 x 5 to create windows on the house
3	3G2	Partition shapes into equal parts	Create window panes or other house features from various shapes
3	3MD4	Measure to 1/2s and 1/4s	Measure the sides of the house using inches marked in halves and fourths
3	3MD8	Find the perimeter	Find the perimeter of the faces of the house and roof panels
3	3OA3	Arrays	Use arrays to create features of the house including doors and windows
4	4G1	Identify parallel and perpedicular lines and different types of angles	There are many right angles, non-right angles, and parallel lines formed in the house
4	4G2	Right triangles	Ask there are any right triangles formed by the house. Require design features that use right triangles
4	4G3	Lines of symmetry	Require designs on the roof or other areas that have line symmetry
4	4MD3	Find the area and perimeter of rectangles	Find the area and perimeter of rectangular faces of the house

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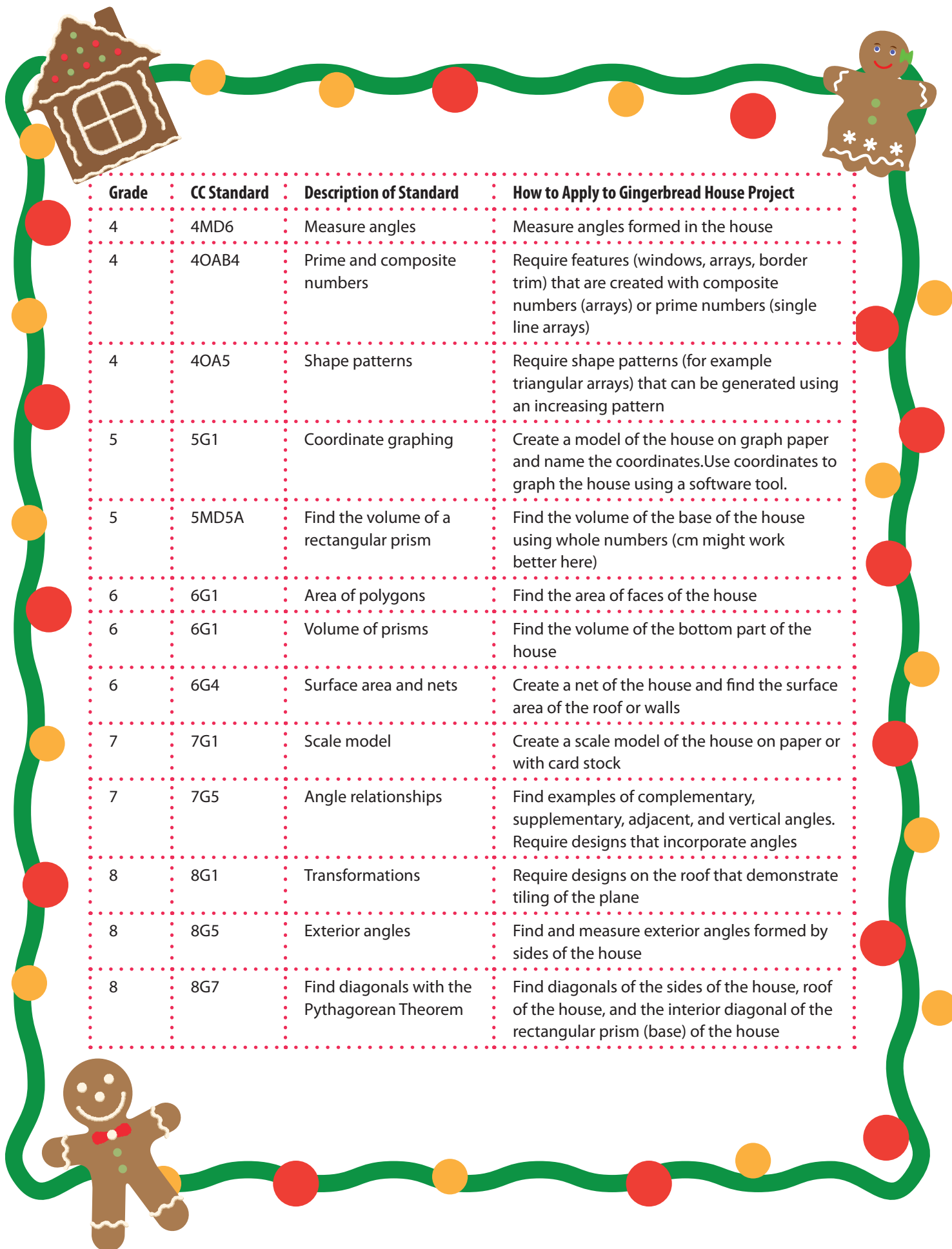
Grade	CC Standard	Description of Standard	How to Apply to Gingerbread House Project
4	4MD6	Measure angles	Measure angles formed in the house
4	4OAB4	Prime and composite numbers	Require features (windows, arrays, border trim) that are created with composite numbers (arrays) or prime numbers (single line arrays)
4	4OA5	Shape patterns	Require shape patterns (for example triangular arrays) that can be generated using an increasing pattern
5	5G1	Coordinate graphing	Create a model of the house on graph paper and name the coordinates.Use coordinates to graph the house using a software tool.
5	5MD5A	Find the volume of a rectangular prism	Find the volume of the base of the house using whole numbers (cm might work better here)
6	6G1	Area of polygons	Find the area of faces of the house
6	6G1	Volume of prisms	Find the volume of the bottom part of the house
6	6G4	Surface area and nets	Create a net of the house and find the surface area of the roof or walls
7	7G1	Scale model	Create a scale model of the house on paper or with card stock
7	7G5	Angle relationships	Find examples of complementary, supplementary, adjacent, and vertical angles. Require designs that incorporate angles
8	8G1	Transformations	Require designs on the roof that demonstrate tiling of the plane
8	8G5	Exterior angles	Find and measure exterior angles formed by sides of the house
8	8G7	Find diagonals with the Pythagorean Theorem	Find diagonals of the sides of the house, roof of the house, and the interior diagonal of the rectangular prism (base) of the house

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