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Charlene Morrow* (cmorrow@mtholyoke.edu) and **James Morrow** (jmorrow@mtholyoke.edu). *Geometry Meets Algebra in Making Simple Origami Cubes and a Carrying Box for Them.*

We will describe a set of origami models that motivate exploration of geometric ideas, mathematical language, and connections between algebra and geometry. These exercises were developed for an Origami and Mathematics course in which students ranged from pre-service teachers to mathematics majors to art majors. These exercises deepened students' ability to draw on ideas they probably had already learned, but were not easily called up in a broader problem-solving context. Our emphasis was not on following a set of directions to make beautiful paper objects, but rather, having made these objects, studying the inherent geometry that can be seen. Students were first taught to make two differently sized origami cubes each folded from six sheets of the same size paper. Students then investigated sizing an origami box to hold a set of three cubes based on the edge length of the cubes. Finally, for each of the two different kinds of cubes, students were asked to form an expression for the paper size needed for a three-cube-box based both on the paper size used for each cube and on the folding sequence used to make the cubes. Learning objectives, connections to core curriculum standards, and sample student outcomes will be discussed. (Received September 11, 2015)