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Box full of mathematics.

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Summary: The purpose of this paper is to describe the mathematics that emanates from the construction of an origami box. The design of this box was inspired by the design of a traditional origami masu box. We first construct a simple origami box from a rectangular sheet and then discuss some of the mathematical questions that arise in the context of geometry and algebra. The activity can be used as a context for illustrating how algebra and geometry, like other branches of mathematics, are interrelated.

Classification: G43 H23 U63 M80

Keywords: paper folding; origami; art; elementary geometry; elementary algebra; functions; student activities; cuboids; volume