

EXPLORING ORIGAMI BOXES

Making Predictions

Let's begin by making some predictions about the dimensions of the box.

1) How much volume do you think your box can hold? How can you measure this without a formula?

2) How much surface area do you think your box has? How could you measure this?

Exploring Volume Without Formulas

3) Using 1 cm or 1 in. cubes, determine how much volume your box has.

4) Similarly, can you come up with a way to measure your box's surface area?

Exploring Volume with Formulas

- 5) How many dimensions does your box have? Can you list them?
- 6) What happens if you multiply the lengths of each of these dimensions together? Is your answer close to what you came up with when you measured using the cubes?
- 7) How close was your estimate to the actual volume?

Developing Formulas

Measurement	What Did You Measure?	How Did You Measure?	Formula
Perimeter of the Base			
Area of the Base			
Volume of the Paper Box			
Surface Area of the Paper Box			