Triangular prisms

Annotation

Jamie identifies an object as a triangular prism and he understands that, to determine the volume, he must calculate the area of the triangular base first and then multiply this area by the prism's height.

Problem: Triangular prisms

The teacher places a triangular prism with whole-number dimensions in front of the student and asks the student to identify the shape and to measure its volume.
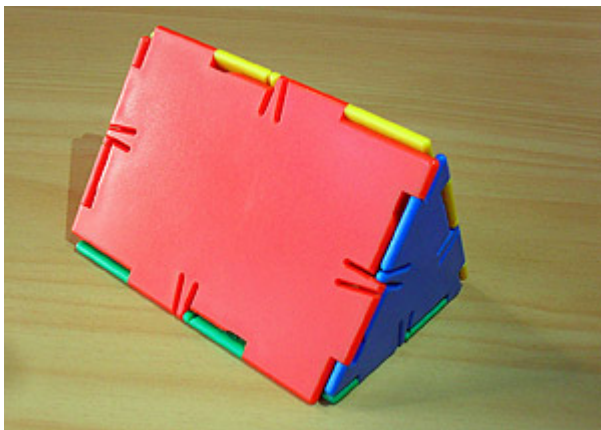
Student Response

Teacher: What is this shape?
Jamie: A triangular prism?
Teacher: Could you calculate its volume?

Jamie turns the prism so that it sits on one of its triangular ends. He measures the base and the height of the triangular face that is now at the top of the prism. He records these measurements and calculates the area of the triangle (half base x height). He measures the height of the standing prism and multiplies the area of the triangle by the height of the prism to work out its volume in cubic centimetres.

1. Length of bottom of triangle
x height of triangle 7x6=42
2. half of 42=21
3. Height of prism 10x21=210 cm³