



I'm crushed!

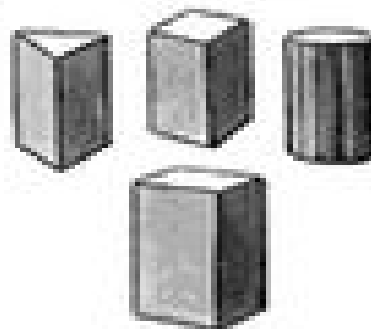
Background knowledge

Force can change the shape of an object as it pushes or pulls on it. Some shapes can withstand greater forces than others. For example, you can easily crush a metal can cap by squeezing its sides, but it is more difficult to crush the cap by squeezing it from top to bottom.

Science activity

A scientist tested how much force differently shaped pillars could withstand before they collapsed. Here are her results.

Shape of pillar base	Weight supported before collapsing
triangular	350 N
square	450 N
circular	600 N
rectangular	480 N



Which shape of pillar would best support the roof of a building?

Explain how you worked out the answer to the question.

Science investigation

Use three pieces of paper and 30 cm of clear tape to build a support for a cup filled with plain chocolate M&M candies. How many M&Ms can your support take before it collapses? (Each candy has a mass of 1 gram.) Describe the design you used.