

Lesson 31

Spanning a Gap: Beams, Arches and Triangles

engineering

What you need: Card strips (same size, about 40 cm long, three per group plus two spares) · sticky tape · small washers or coins (a pot of about 50) · 30 cm gap marker (a ruler or a strip of paper cut to 30 cm) · two blocks or desk edges set 30 cm apart

Words to use

Span · Arch · Triangle bracing

Our question

Which shape spans the gap and carries the most load: a flat beam, an arch, or a triangle-braced beam?

I predict...because...

How much did each span hold? (in weights)

Span type	Weights held

Draw a bar chart of our results

Which bar is tallest? Which shape carried the most?

Where did the shortest one fail?