

Runnymede St. Edwards School - Knowledge Organiser

Subject: Design & Technology

Free Standing Structures

Year: 2

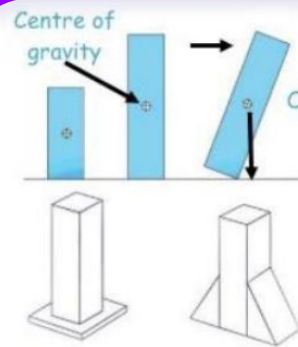
Term: Spring 2

Free Standing Structures in the World



Free Standing Structures

A freestanding structure is a structure that stands on its own foundation or base without attachment to anything else



To keep our structure upright, give it a base or buttress

Plan



Design



Make

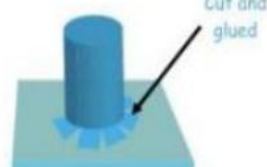
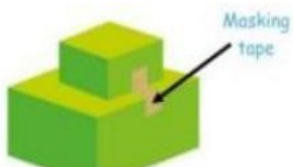


Evaluate

Techniques for assembling freestanding structures

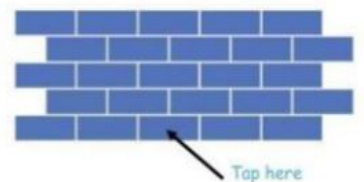


Show children how to join sheet materials and reclaimed boxes together using different tapes and glues.

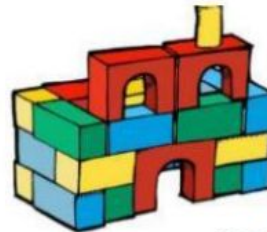


Technical knowledge and understanding

Build walls with these different patterns. Tap away the centre brick in the bottom row of each wall in turn. What happens? Which wall is the strongest?



Tap on the centre brick. Which wall is the strongest?



Vocabulary

Frame structure – a structure made from thin components e.g. tent frame.

Shell structure – a hollow structure with a thin outer covering.

Stability – in relation to a freestanding structure, the extent to which it is likely to fall over if a force is applied.

Buttress – a structure added to a wall, tower or framework to make it more stable and/or reinforce it

Brick bonding – arranging bricks in a wall to improve the performance of the structure or improve its appearance.

Prototype – First 3-D representation of a product.