

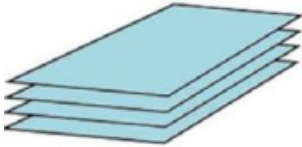


Y3 Thinking like a Designer

Shell Structures

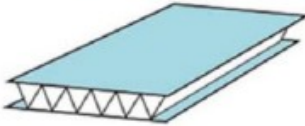
Key Knowledge:

Stiffening and strengthening



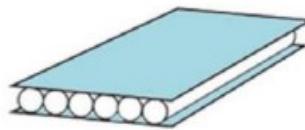
Laminating

Glue together several layers of card



Corrugating

Zig-zag a piece of paper or card and glue in-between two layers or card.



Ribbing

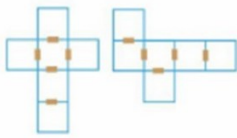
Glue layers of straws between layers of card.

Scoring

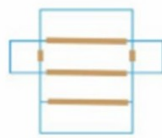
When a fold is needed, press a line into your paper to make it easier to fold accurately



Nets



Nets for cubes



Cuboid net



Hexagonal prism net



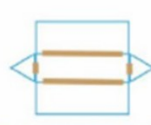
Tetrahedron net



Hexagonal based pyramid net



Square based pyramid net



Triangular prism net

Shell

Structure



A shell structure has a thin curved outer layer and is hollow. These structures often are used to hold or protect something. They usually have only a small number of joins or no joins at all.



Learning Questions

What is the difference between shell structures and packaging?

How is packaging used?

How could you strengthen your packaging?

What are tabs used for in a net

Key Vocabulary

Shell Structures	A hollow structure with a thin outer covering
Strengthen	To make something stronger and able to withstand force.
Net	The flat or opened out shape of a 3D object such as a box.
Tab	A flap of paper that is used to join two edges.
Assemble	To fit all the components and parts together to create an object.
2D Shape	A flat shape that has two dimensions, length and width.
3D Shape	A solid shape that has three dimensions, length, width and height.