



How Does Your Garden Grow?-Shell frame and structures



DT

Year 3 Summer Term 2

Key Vocabulary

investigate	To look carefully and closely to learn the facts through examining.
strengthen	To make stronger.
finish	Finishing touches added to a product's surface to improve its functionality.
adapt	To change or adjust for a particular use.
three-dimensional (3d)	Appearing in three dimensions; having depth as well as height and width.
adhesive	A sticky substance or a material such as glue.
net	A flat shape which can be folded up into a three-dimensional solid.
score/scoring	Cutting a line or mark into sheet material to make it easier to fold.
stiffen /stiffened	How the material is supported so that it is sturdy.
shell structure	Has a hollow, curved shape which are strong and rigid.

Examples of nets

		4 rectangles (2 squares / rectangles)	Cuboid
		6 squares	Cube
		1 rectangle 2 circles	Cylinder
		4 triangles	Triangular-based pyramid (tetrahedron)
		2 triangles 3 rectangles	Triangular prism
		1 circle 1 sector	Cone
		6 triangles 1 hexagon	Hexagonal pyramid

Frame structure

This is a pair of snow shoes. It is a frame structure, the purpose of a frames structure is to be strong as its together one piece of a frame structure would be weak.



SHELL STRUCTURES

They are made of a thin outer layer of material that surrounds a volume. Natural shell structures: eggs, shellfish. Artificial shell structures: cardboards boxes, balloons, etc.



Ideas for planter box or frame



Techniques to strengthen your structure: folding and shaping, corrugating, ribbing, laminating.

CAD- Computer Aided Design
<https://www.purplemash.com/#app/tools/2dam>

