



What should I already know?

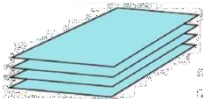
- How to use different joining and cutting methods relating to paper and card.
- The differences between 2D and 3D shapes

What will I know by the end of this unit?

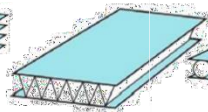
Technical Knowledge

- Packaging is a **shell structure** that is used to contain, protect and present a product.
- Designs can be adapted to meet the needs of the **design brief**.
- Different techniques can affect the strength of the packaging. E.g. folding and shaping, **corrugating, ribbing, laminating**.

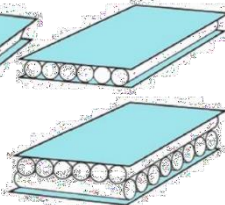
Laminating



Ribbing



Corrugating



Isambard Kingdom Brunel (1806-1859)

An influential English mechanical and civil engineer, who was also famous for his bridge building.



Diagrams and Images

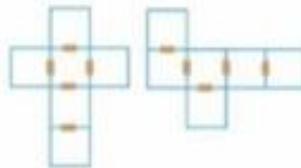
Different **nets** can be used for packaging.



Tetrahedron net



Hexagonal based pyramid net



Nets for cubes



Cuboid net

Vocabulary

design brief	A written description of what a product should do.
net	The flat or opened up shape of an object such as a box.
three dimensional (3D)	Something that has three dimensions of length, width and height.
scoring	Cutting a line into a sheet material to make it easier to fold.
shell structure	hollow structure with a thin outer covering.



Framed Structure



Shell Structure



Natural Structure



Free-standing Structure

What will I be able to do by the end of this unit?

Design:

- Create an appealing design aimed at the correct people using research.

Make:

- Use a wide range of tools and materials to create my own product.

Evaluate:

- Consider strengths of my product and how it could be improved.
- Use design criteria to assess the product.

Design and Technology: Skills and Enquiry

- Explore different **shell structures** to assess their strength. How can we improve the strength of shell structures?
- Evaluate existing packaging designs and identify those which are most effective. Does the design meet the needs of the user?
- Conduct market research to develop ideas and requirements for packaging. Who is the packaging for? What will it contain?