Year 3: D&T Structures and Mechanisms

Does packaging make a product more appealing?

Situation

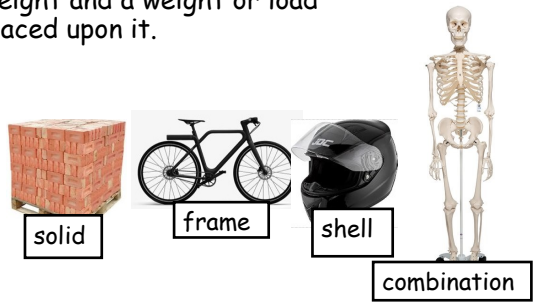
A local business has received a lot of toys from a manufacturer in China, but the toys are not packaged. The owner is looking for ideas to package the toys to make them appeal to young children.

Design Brief

Design, make and evaluate a prototype for sustainable packaging to appeal to children that will attract them to the toy.

Structures

A structure is a series of parts that have been arranged to support the structure's own weight and a weight or load placed upon it.



Design Specification

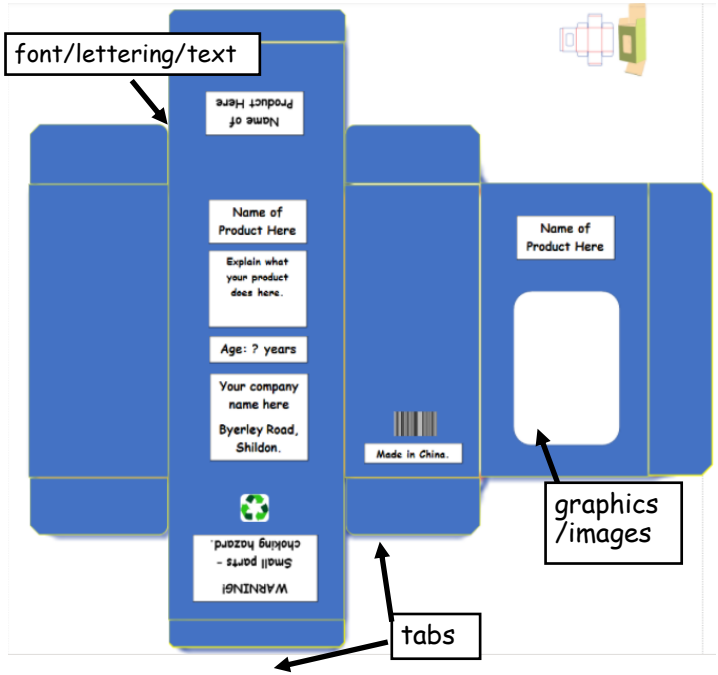
You need to consider:

- appearance/aesthetics - *how will it look?*
- cost - *how much money will it cost?*
- customer - *who is it for?*
- environment - *can it be recycled?*
- size - *how big or small is it?*
- safety - *is it safe to use by everyone?*
- function/purpose - *how does it work?*
- materials - *what materials will you use?*
- manufacture - *how will you make it?*

Ernö Rubik

Ernö Rubik is well known for the creation of the Rubik's Cube. He used a combination of small cubes and colours to create a puzzle.

What should be on your net?



Evaluate

Does your prototype meet your design specification?

CRC Article 29: All children have the right to develop their skills and talents.

RIGHTS RESPECTING SCHOOLS

Vocabulary

3D	Three-dimensional - not flat.
accurate	To be spot on / correct.
adhesive	Something used to stick parts or objects together.
CAD	Computer-Aided Design
corporate identity	How a business presents itself to the public.
cube	A 3D shape with 6 square faces, 8 vertices and 12 edges.
cuboid	A 3D shape with 6 rectangular faces (or square and rectangular faces), 8 vertices and 12 edges.
edge	The part of a shape where 2 faces connect.
face	The flat part of a 3D shape.
innovative	New ideas or creations.
length	A measurement of how long something is.
linear	To be shown in a straight line.
linkage	A system of links or joins.
net	A flat shape that can be folded to make a 3D box.
oscillating	To move or swing back in a regular motion.
reciprocating	Moving backwards and forwards in a straight line.
rotary	Moving around an axis or centre.
score	To cut a slight groove into a material before cutting or to add design.
shape	The 2D outline of something, such as a triangle, circle or square.
stiff	Something hard and solid.
strong	Something that is hard to break.
surface	The outside part of something.
vertices	Where edges of a shape come to a point.
width	How wide something is.