



Year 3 Design and Technology: Structures using CAD

How can we use computer software to design and make packaging?

Prior Learning

- I have used different joining, cutting and finishing techniques with paper and card.
- I have a basic understanding of 2-D and 3-D shapes and the properties of some materials.
- I have some experience of using software to draw accurate shapes, such as Microsoft Word.

Sticky Knowledge

- I can investigate and evaluate a range of shell structures including the materials, components and techniques that have been used.
- I can develop my knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.
- I can develop and use knowledge of how to construct strong, stiff shell structures.
- I can talk about and show my ideas, focusing on the needs of the user, what the product will look like and how it will function.
- I can develop my ideas through the analysis of existing shell structures and use computer-aided design to model and communicate ideas.
- I can plan the order of the main stages of making.
- I can select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with some accuracy.
- I can use computer-generated finishing techniques suitable for the product I am creating.
- I can test and evaluate my own product against design criteria and the intended user and purpose.

Vocabulary

Product*	What you are making.
User*	Who is going to use the product.
Purpose*	What the product is going to be used for.
Function*	What does your product need to do to work.
CAD	Computer-Aided Design. The use of computer software to create part of a design.
Shell Structure	A hollow structure with a thin outer covering.
Net	The flat or opened-out shape of a object, such as a box.
Edge	Where two surfaces meet at an angle.
Face	A surface of a 3D (three dimensional) shape.
Vertex (vertices)	The corners of a 3D shape where edges meet.
Flap	An extra section of paper or cardboard used to glue a shell structure together.
Scoring	Scratch or cut a line on a surface.



Font—letters and symbols that are written in the same style.

Text—writing that is seen on packaging.

Graphics—an image or picture included on the packaging. 

Logo—an image that represents the people or company who have made the product.

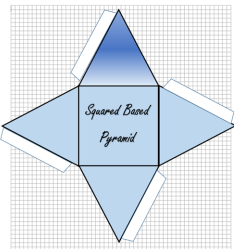
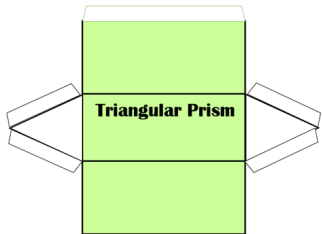
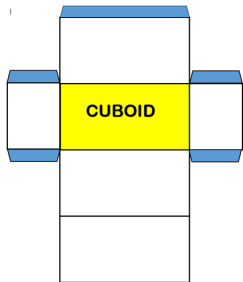
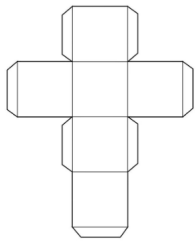




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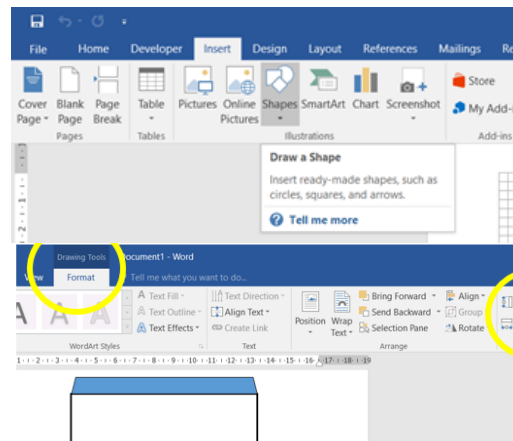
How can we use computer software to design and make packaging?

What shape do I want my net to make?

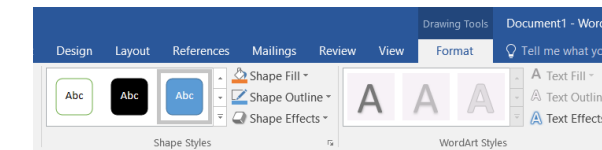


How can I use Microsoft Word to create my packaging design?

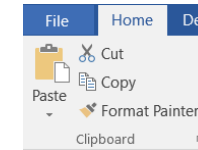
Help Video: [Creating Nets with Microsoft Word - YouTube](#)



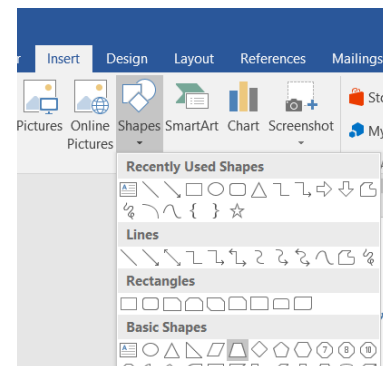
1. Insert your first **face** shape into Microsoft



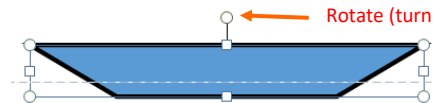
2. Change the side lengths (or dimensions) if you need a certain size.



3. Use **copy** and **paste** to create more shapes that are exact same.



5. Insert **tabs** to make gluing your net together later easier.



6. Hold **ctrl** (don't let go) and click on all of the shapes. Group them together.

