


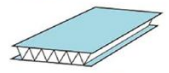
Year 3	Year 4	Year 5	Year 6
<p>I CAN explore and describe how everyday packaging and containers are made.</p> <p>I CAN use simple drawings to show my ideas for a shell structure.</p> <p>I CAN choose and use tools safely to cut, fold, and join paper or card.</p> <p>I CAN test my model to see if it is strong and make changes to improve it.</p>	<p>I CAN Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas.</p> <p>I CAN Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy</p> <p>I CAN Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used.</p> <p>I CAN Develop and use knowledge of how to construct strong, stiff shell structures</p>	<p>I CAN research and analyse existing shell structures to inspire my own designs.</p> <p>I CAN produce detailed annotated sketches, diagrams, and prototypes to show how my structure will be made and reinforced.</p> <p>I CAN use tools and equipment accurately and safely to measure, mark out, cut, and assemble precise shell structures.</p> <p>I CAN test and refine my product to ensure it meets my design criteria for strength, stability, and appearance.</p>	<p>I CAN use research and analysis to develop a detailed design specification for a strong and functional shell structure.</p> <p>I CAN plan and produce high-quality shell structures using accurate measuring, marking, and construction techniques.</p> <p>I CAN apply advanced techniques to strengthen, stiffen, and reinforce my product.</p> <p>I CAN evaluate my structure against my design specification and explain how it could be improved further.</p>

Skills and techniques

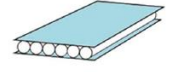
Stiffening and strengthening sheet materials:



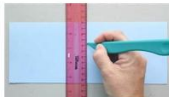
Laminating – glue together several layers of card



Corrugating – zig-zag a piece of paper or card and glue in between two layers of card




Ribbing – glue layers of straws between layers of card



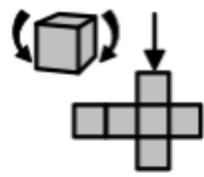
Scoring – press a line into your paper to make it easier to fold accurately

Create the net for the product you are designing:




Draw the faces and stick them together


Add tabs, glue your paper net onto card and cut out



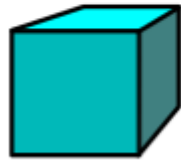
shape net



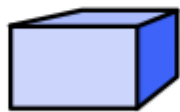
structure




3D




cube



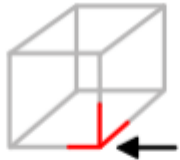
cuboid




prism




scoring




vertex




face



design



prototype



packaging