



Year 7 Design Technology – Product Design Curriculum Map

Overview	12 week carousel, 2 x workshop based projects as well as 2 x Homework projects. Key Product Design theory is introduced and taught within allocated workshop time alongside practical projects. Homework projects allow an extension to learning linked to key design knowledge.	
Year 7	First Half of Term	Second Half of Term
Topic	Flashing Light Project	CAD/CAM Project
Knowledge	Workshop manufacturing tools / equipment Workshop safety Electronic components Design Brief Target market Polymers Sustainability Isometric drawing Timbers Finishes Homework project - Materials	Computer aided design Computer aided manufacture 2D Design Laser cutter Properties of Paper and Board Iterative process Homework project - Mechanisms
Skills	<p>Classroom based skills: Analysis of Product designs that make us safe Product Analysis/Research of existing products Classification of plastics (polymers), Initial ideas - Isometric drawing Electronic components Soldering a PCB Safe use of workshop equipment and hand tools</p> <p>Homework based skills: Sketching & Drawing Analysing (ACCESSFM) Research – Material properties Modelling products Sustainability</p>	<p>Classroom based skills: Analysis of existing designs Initial ideas - their own basic specification written incorporating ACCESSFM. Developing the final idea 2D Design (CAD) Making using CAM Laser Cutter Materials - paper and board Evaluating</p> <p>Homework based skills: Research Movement and Motion (Liner, Rotary, Reciprocation, Oscillation) Identifying motions within everyday life Mechanisms – CAMs and Cranks Modelling mechanisms Designing a mechanical toy</p>