

# Curriculum Overview |



## What will my child learn in Design and Technology

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>Year 7</b>	Wood work project, the passive amplifier. How to work safely in the workshop and use tools and equipment: Marking out, cutting and shaping, drilling and sanding. Understand timber products- sources, properties, categorisation.	Amplifier continued: Learning about the work of others and designing: What is a design movement, De Stijl, Piet Mondrian, drawing techniques, creative designing, producing and developing design ideas.	Complete amplifier project. Learn about fixing and finishing methods- screws and adhesives, undercoat, painting and waxing.	Tote Bag project. Learning about textiles including categorisation, sources, environmental concerns and ethical considerations in the textile industry. Design development and block printing.	Tote Bag project continued... Learning production techniques for textiles, pinning, tacking, overlocking and the use of the sewing machine.	Tote Bag project continued... Finish manufacturing their product and learn to drawing quality diagrams to record how we make products.
<b>Year 8</b>	Plastics project- the chocolate mould What is plastic, how we categorise it and the environmental concerns. New tools and equipment and manufacturing methods including production aids and vacuum forming and adhesives.	Plastics continued- pencil holder design task Learning about plastic alternatives. Learning about designing techniques- technical drawing, drawing enhancements, modelling, prototyping and testing ideas.	Plastics continued. Cutting and shaping, acrylic, the use of the line bender to thermoform plastic, finishing methods- wet and dry paper and polishing plastic.	Pewter Casting Project Learning about metals and metal working including sourcing, categorisation, properties and environmental concerns. Creative design strategies including scruffiti and biomimicry	Pewter casting continued. Developing ideas into final designs and products using CAD- 2D designer, CAM- the laser cutter and metal casting. Developing production and finishing techniques- sawing, drilling, polishing metal.	Architecture Project Critically analyse the work Of Sir Norman Foster. Design sustainable living solutions. Creative design development through modelling techniques.
<b>Year 9</b>	Design project- Memphis clock design task Learning about significant design movements of the 20 <sup>th</sup> Century and post modernism. Designing techniques including modelling, perspective drawing and designing through making.	Memphis clock design task continued...  Developing ideas though creative designing and materials selection.	Memphis clock design task continued...  Working with a range of tools to make a quality prototype. Finishing methods- painting and decoupage.	Textiles project- Identity Project  In this project the students will study the work of Alexander McQueen and creatively explore the notion of personal identity.	Identity project continued...  The students develop their ability to work creatively with fabric to construct a self-portrait.	Identity project continued...

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<b>Year 10</b>	Salad Server and bottle opener Project. Students develop their drawing techniques and understanding of design- and the needs of the user and ergonomics. Students have an opportunity to work in wood and metal and experience laminating and plastic dip coating.	Phone stand project. Students are introduced the iterative design process of design development through investigation, testing and analysis. Students develop their understanding of plastic and plastic manufacturing techniques.	Chair design project  Learn about significant designers, and develop more sophisticated designing techniques- scale models, using anthropometric data, CAD/CAM and finishing techniques to make high quality prototypes.	Lamp Project. Students develop their ability to work in a range of materials to make a high quality product including rolling aluminium, laminating, use of production aids, pop riveting and construction of electronic circuits.	Lamp Project continued with an extension to work with timber and develop carpentry workshop skills.	Students s Students start on the Non Examined Exam (this is the coursework element of the course). Analysing the design context, investigation and research including: product analysis, market research, producing a design brief and design criteria.
<b>Year 11</b>	The students continue to work on the NEA. Creating design ideas inspired by their research, biomimicry and the work of others. Modelling, testing and evaluating ideas created.	The students are now developing their ideas using more advanced modelling techniques, iterative designing processes, testing and analysis and ongoing investigation.	Students now produce a manufacturing specification (plan, cutting list and technical drawing) and manufacturing commences.	Practical work continues to complete their final designs. These are then evaluated and NEA is complete.	The focus of lesson time shifts to revision before the exam in June.	