

Design and Technology Key Stage Three Curriculum Map – Carre’s Grammar School

Subject – Design and Technology						
	Autumn 1	Autumn 2	Spring 3	Spring 4	Summer 5	Summer 6
Year 7	<p>Boat Project</p> <ul style="list-style-type: none"> ➤ Correctly use marking out tools. ➤ Correct wasting of materials using hand tools, the pillar drill and belt finisher. ➤ Finishing techniques of a piece of timber. ➤ Sketching with the isometric method of sketching. ➤ Correct selection of tools and equipment for the correct purpose. <p>Clock Design</p> <ul style="list-style-type: none"> ➤ Sketching in 1 point and 2-point perspective ➤ 3D Isometric representation of designs ➤ CAD – Solidworks ➤ Use of scissors to produce templates for their clocks <p>Electronics Module 1</p> <ul style="list-style-type: none"> ➤ Introduction to procedures when working practically in room 29. ➤ Components, circuit symbols and function. ➤ Resistor colour bands ➤ Circuit design software and use of gallery’s 	<p>Electronics Module 1</p> <ul style="list-style-type: none"> ➤ Introduction to procedures when working practically in room 29. ➤ Components, circuit symbols and function. ➤ Resistor colour bands ➤ Circuit design software and use of gallery’s ➤ Use of basic tools and equipment in electronics ➤ Use of Solidworks to communicate design ideas ➤ Breadboarding and its purpose ➤ Health and safety when working practically <p>Boat Project</p> <ul style="list-style-type: none"> ➤ Correctly use marking out tools. ➤ Correct wasting of materials using hand tools, the pillar drill and belt finisher. ➤ Finishing techniques of a piece of timber. ➤ Sketching with the isometric method of sketching. ➤ Correct selection of tools and equipment for the correct purpose. <p>Clock Design</p> <ul style="list-style-type: none"> ➤ Sketching in 1 point and 2-point perspective 	<p>Clock Design</p> <ul style="list-style-type: none"> ➤ Sketching in 1 point and 2-point perspective ➤ 3D Isometric representation of designs ➤ CAD – Solidworks ➤ Use of scissors to produce templates for their clocks <p>Electronics Module 1</p> <ul style="list-style-type: none"> ➤ Introduction to procedures when working practically in room 29. ➤ Components, circuit symbols and function. ➤ Resistor colour bands ➤ Circuit design software and use of gallery’s ➤ Use of basic tools and equipment in electronics ➤ Use of Solidworks to communicate design ideas ➤ Breadboarding and its purpose ➤ Health and safety when working practically <p>Boat Project</p> <ul style="list-style-type: none"> ➤ Correctly use marking out tools. ➤ Correct wasting of materials using hand tools, the pillar drill and belt finisher. ➤ Finishing techniques of a piece of timber. 	<p>Clock Manufacture</p> <ul style="list-style-type: none"> ➤ Understand workshop procedures ➤ Correct selection of tools and equipment when working with acrylic ➤ Correct finishing techniques on acrylic ➤ Understand the purpose of files ➤ Use of adhesive to join pieces of acrylic <p>Electronics Module 2</p> <ul style="list-style-type: none"> ➤ Tools and equipment familiarisation ➤ Different types of solder joints ➤ Correct soldering techniques ➤ Develop a wider understanding of electronic production <p>USB</p> <ul style="list-style-type: none"> ➤ Image Vectorisation and editing of images in 2D Design ➤ Designing to size and scale using 2D Design as a result of constraints ➤ Assembly of acrylic to create prototypes 	<p>USB</p> <ul style="list-style-type: none"> ➤ Image Vectorisation and editing of images in 2D Design ➤ Designing to size and scale using 2D Design as a result of constraints ➤ Assembly of acrylic to create prototypes <p>Clock Manufacture</p> <ul style="list-style-type: none"> ➤ Understand workshop procedures ➤ Correct selection of tools and equipment when working with acrylic ➤ Correct finishing techniques on acrylic ➤ Understand the purpose of files ➤ Use of adhesive to join pieces of acrylic <p>Electronics Module 2</p> <ul style="list-style-type: none"> ➤ Tools and equipment familiarisation ➤ Different types of solder joints ➤ Correct soldering techniques ➤ Develop a wider understanding of electronic production 	<p>Electronics Module 2</p> <ul style="list-style-type: none"> ➤ Tools and equipment familiarisation ➤ Different types of solder joints ➤ Correct soldering techniques ➤ Develop a wider understanding of electronic production <p>USB</p> <ul style="list-style-type: none"> ➤ Image Vectorisation and editing of images in 2D Design ➤ Designing to size and scale using 2D Design as a result of constraints ➤ Assembly of acrylic to create prototypes <p>Clock Manufacture</p> <ul style="list-style-type: none"> ➤ Understand workshop procedures ➤ Correct selection of tools and equipment when working with acrylic ➤ Correct finishing techniques on acrylic ➤ Understand the purpose of files ➤ Use of adhesive to join pieces of acrylic

Design and Technology Key Stage Three Curriculum Map – Carre’s Grammar School

	<ul style="list-style-type: none"> ➤ Use of basic tools and equipment in electronics ➤ Use of Solidworks to communicate design ideas ➤ Breadboarding and its purpose ➤ Health and safety when working practically 	<ul style="list-style-type: none"> ➤ 3D Isometric representation of designs ➤ CAD – Solidworks ➤ Use of scissors to produce templates for their clocks 	<ul style="list-style-type: none"> ➤ Sketching with the isometric method of sketching. ➤ Correct selection of tools and equipment for the correct purpose. 				
	<p>Assessment</p> <p>Assessment using the Assessment Sticker Review of any practical outcomes</p>		<p>Assessment</p> <p>Assessment using the Assessment Sticker Review of any practical outcomes</p> <p>*****</p> <p>Year 7 Socratic Interim Assessment at the beginning of Spring 4</p> <p>USB use of Assessment sticker USB practical outcome</p> <p>Clock Manufacture practical Outcome</p> <p>Electronics Module 2 use of Assessment sticker Electronics Module 2 practical outcome</p>		<p>Assessment</p> <p>End of Year Examination in Summer 6</p> <p>USB use of Assessment sticker USB practical outcome</p> <p>Clock Manufacture practical Outcome</p> <p>Electronics Module 2 use of Assessment sticker Electronics Module 2 practical outcome</p>		
Year 8	<p>Pendant</p> <ul style="list-style-type: none"> ➤ Metal classification, identification and associated processes ➤ Further opportunity to sketch 	<p>Electronics Module 1</p> <ul style="list-style-type: none"> ➤ Knowledge of programming ➤ Wider understanding of components and circuits symbols 	<p>Vase Project</p> <ul style="list-style-type: none"> ➤ Non-Verbal Skills ➤ Translating 2D to 3D images ➤ Sketching 	<p>Technical Textiles Project</p> <ul style="list-style-type: none"> ➤ Use of templates ➤ Knowledge of textiles and their uses ➤ Stock forms of textiles 	<p>Electronics Module 2</p> <ul style="list-style-type: none"> ➤ Research into tools and equipment associated with PCB production ➤ Component identification 	<p>Presentation Module</p> <ul style="list-style-type: none"> ➤ Sketching and rendering techniques: to include: perspective, isometric and oblique sketching 	

Design and Technology Key Stage Three Curriculum Map – Carre’s Grammar School

<ul style="list-style-type: none"> ➤ Further opportunity to use Solidworks to produce a developed outcome ➤ Use of traditional methods to create a prototype to inform a final design ➤ Casting process in school ➤ Finishing of metals <p><u>Vase Project</u></p> <ul style="list-style-type: none"> ➤ Non-Verbal Skills ➤ Translating 2D to 3D images ➤ Sketching ➤ Knowledge of design movements/existing products ➤ Use of tools and equipment to create 3D iterations of designs <p><u>Electronics Module 1</u></p> <ul style="list-style-type: none"> ➤ Knowledge of programming ➤ Wider understanding of components and circuits symbols ➤ Designing within a context, to include sketching and CAD 	<ul style="list-style-type: none"> ➤ Designing within a context, to include sketching and CAD <p><u>Pendant</u></p> <ul style="list-style-type: none"> ➤ Metal classification, identification and associated processes ➤ Further opportunity to sketch ➤ Further opportunity to use Solidworks to produce a developed outcome ➤ Use of traditional methods to create a prototype to inform a final design ➤ Casting process in school ➤ Finishing of metals <p><u>Vase Project</u></p> <ul style="list-style-type: none"> ➤ Non-Verbal Skills ➤ Translating 2D to 3D images ➤ Sketching ➤ Knowledge of design movements/existing products ➤ Use of tools and equipment to create 3D iterations of designs 	<ul style="list-style-type: none"> ➤ Knowledge of design movements/existing products ➤ Use of tools and equipment to create 3D iterations of designs <p><u>Electronics Module 1</u></p> <ul style="list-style-type: none"> ➤ Knowledge of programming ➤ Wider understanding of components and circuits symbols ➤ Designing within a context, to include sketching and CAD <p><u>Pendant</u></p> <ul style="list-style-type: none"> ➤ Metal classification, identification and associated processes ➤ Further opportunity to sketch ➤ Further opportunity to use Solidworks to produce a developed outcome ➤ Use of traditional methods to create a prototype to inform a final design 	<ul style="list-style-type: none"> ➤ Use of tools and equipment ➤ Evaluating products <p><u>Presentation Module</u></p> <ul style="list-style-type: none"> ➤ Sketching and rendering techniques: to include: perspective, isometric and oblique sketching ➤ Development and enrichment of designs using Solidworks ➤ Translation of views from Solidworks into 2D Design ➤ Presentation of designs to class <p><u>Electronics Module 2</u></p> <ul style="list-style-type: none"> ➤ Research into tools and equipment associated with PCB production ➤ Component identification ➤ Designing using 2D Design ➤ Isometric sketching ➤ Soldering ➤ Programming of a PCB 	<ul style="list-style-type: none"> ➤ Designing using 2D Design ➤ Isometric sketching ➤ Soldering ➤ Programming of a PCB <p><u>Technical Textiles Project</u></p> <ul style="list-style-type: none"> ➤ Use of templates ➤ Knowledge of textiles and their uses ➤ Stock forms of textiles ➤ Use of tools and equipment ➤ Evaluating products <p><u>Presentation Module</u></p> <ul style="list-style-type: none"> ➤ Sketching and rendering techniques: to include: perspective, isometric and oblique sketching ➤ Development and enrichment of designs using Solidworks ➤ Translation of views from Solidworks into 2D Design ➤ Presentation of designs to class 	<ul style="list-style-type: none"> ➤ Development and enrichment of designs using Solidworks ➤ Translation of views from Solidworks into 2D Design ➤ Presentation of designs to class <p><u>Electronics Module 2</u></p> <ul style="list-style-type: none"> ➤ Research into tools and equipment associated with PCB production ➤ Component identification ➤ Designing using 2D Design ➤ Isometric sketching ➤ Soldering ➤ Programming of a PCB <p><u>Technical Textiles Project</u></p> <ul style="list-style-type: none"> ➤ Use of templates ➤ Knowledge of textiles and their uses ➤ Stock forms of textiles ➤ Use of tools and equipment ➤ Evaluating products 	<ul style="list-style-type: none"> ➤ Development and enrichment of designs using Solidworks ➤ Translation of views from Solidworks into 2D Design ➤ Presentation of designs to class <p><u>Electronics Module 2</u></p> <ul style="list-style-type: none"> ➤ Research into tools and equipment associated with PCB production ➤ Component identification ➤ Designing using 2D Design ➤ Isometric sketching ➤ Soldering ➤ Programming of a PCB <p><u>Technical Textiles Project</u></p> <ul style="list-style-type: none"> ➤ Use of templates ➤ Knowledge of textiles and their uses ➤ Stock forms of textiles ➤ Use of tools and equipment ➤ Evaluating products
--	---	--	--	---	--	--

Design and Technology Key Stage Three Curriculum Map – Carre’s Grammar School

	Assessment Assessment using the Assessment Sticker Review of any practical outcomes		Assessment Assessment using the Assessment Sticker Review of any practical outcomes ***** <hr/> Year 8 Socratic Interim Assessment at the beginning of Spring 4 Lamination practical Outcome Presentation Module Q&A session – Peer Feedback - AFL Electronics Module 2 use of Assessment sticker Electronics Module 2 practical outcome		Assessment End of Year 8 Examination Assessment using the Assessment Sticker Review of any practical outcomes ***** <hr/> Year 8 Socratic Interim Assessment at the beginning of Spring 4 Lamination practical Outcome Presentation Module Q&A session – Peer Feedback - AFL Electronics Module 2 use of Assessment sticker Electronics Module 2 practical outcome	
Year 9	Year 9 Desk Lamp Project Core – Exploration of Contexts Product Analysis Environmental Study Research – Processes and Biomimicry Generation of Brief and Specification Initial Designs	Year 9 Desk Lamp Project Systems Investigate Electronic Products through Primary and Secondary research. Virtual breadboarding	Year 9 Desk Lamp Project Manufacturing Use of hand tools Brazing Finishing techniques Timbers, Metals, Polymers Modern methods of manufacturing	Year 9 Desk Lamp Project Design Sketching Annotation Rendering 2D Working Drawing Careers	Year 9 Desk Lamp Project Evaluation and Final Assembly Reflection on strengths and Weaknesses Modifications and improvements Testing and client feedback	Year 9 Structures Static and dynamic loads Stresses Reinforcing and strengthening techniques Modelling structures
	Assessment AFL Verbal Continuous Students as teachers Assessment Stickers		Assessment AFL Verbal Continuous Students as teachers Assessment Stickers Year 9 Examination		Assessment AFL Verbal Continuous Students as teachers	

Design and Technology Key Stage Three Curriculum Map – Carre’s Grammar School

Subject - Cookery					
	Fruit Salad	Pasta Dish	Scone	Pizza	Theory
	Food safety Kitchen procedures Sequence of making Knife skills Peeling skills Bridge Grip Claw Grip Tidy and sanitation of work area Reduce Bacterial Risk Oxidisation Heat Transference Segmentation (Flesh/Pith/Skin/Membrane)	Use of a hob Safety Movement with Hot pans Use of hot water to boil pasta Knife skills Peeling skills Food aesthetics Finishing/Dressing Hygiene Cross contamination Reduce Bacterial Risk Oxidisation Segmentation (Flesh/Pith/Skin/Membrane) Heat Transference	Food Safety Measuring/Weighing Regulating hand temperature (Palm hot-Fingers cold) Making dough Oven Safety Greasing release agent post cook Glazing Hygiene Raising agent Temperature Oven gloves Rubbing in method	Food Safety Measuring /Weighing Independent dough making Knife skills Topping selection aesthetics Topping selection tastes Flouring release agent pre cook Oven safety tray rotation Food presentation Hygiene Cleaning Raising agent Temperature Oven gloves Rubbing in method	Food miles Economic use of food Food groups Healthy Diet Seasonal foods Equipment H&S

Additional explanation if required.

Year 8 Curriculum – The order of the completion of units may be amended due to timetabling.

Year 7 Food Curriculum – 4 practical dishes completed in Term 2 of Year 7. Theory is completed throughout the year. This is due to availability fo resources.