

Design Technology/Construction 2024/25

Long Term Curriculum Plan 2024/25

Throughout our curriculum planning we remain focused on delivering a 21st century curriculum designed to ensure pupils are well prepared for the future.

Subject DT		Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Topic Heading	Acrylic tablet/phone holder	Acrylic tablet/phone holder	Joining techniques	Joining techniques	Corporate Identity Project	Corporate Identity Project	
Year 7 Content (skills and knowledge)	Learners will be gain knowledge into different types of plastic. They will cut, sand and shape acrylic whilst	Learners will be gain knowledge into different types of plastic. They will cut, sand and shape acrylic whilst	Learners will be generating, developing and producing a timber-based project. They will gain knowledge	Learners will be generating, developing and producing a timber-based project. They will	Learners will develop their own Logo with their own Graphical content which will is applied to badges, mugs and T-shirts.	Learners will develop their own Logo with their own Graphical content which will is applied to badges, mugs and T-shirts.	

NC Year _____ PA Stage _____	adhering to Health & Safety guidelines within the workshop. Key words and Computer Aided Design & Manufacturing will be evident within the design process and utilised in their end of unit prototypes.	adhering to Health & Safety guidelines within the workshop. Key words and Computer aided Design & Manufacturing will be evident within the design process and utilised in their end of unit prototypes.	into different types of timber and joining techniques. Their design intention will be developed by producing Isometric drawing and Computer Aided Design.	gain knowledge into different types of timber and joining techniques. Their design intention will be developed by producing Isometric drawing and Computer Aided Design.	They will gain skills and knowledge within CAD/Photoshop in order to apply their design intentions to a range of templates.	They will gain skills and knowledge within CAD/Photoshop in order to apply their design intentions to a range of templates.
Enrichment Opportunities						
Topic Heading	Hand Steady Game Project	Mechanical Toy Project	House Design	Trophy Project	Time Piece Project	Utility Holder Project
Year 8 Content (skills and knowledge) NC Year _____ PA Stage _____	Learners will develop skills and knowledge within Systems & Control in order to generate and develop a hand steady game. They will cut, strip and adhere wires, LED's, buzzers and using wire cutters, strippers and soldering irons. They will follow Health & Safety protocols when using a soldering	Learners will generate, develop and produce a Mechanical Toy of their own design. They will gain knowledge into different types of motion and CAMS in order to create their toy. They will use a mixture of hand and mechanical tools to create the carcass by using Butt joints.	Learners will become of aware and gain skills in rendering & perspective drawing techniques in order to create a house design in-line with their own specification. Surface developments/NETS will be created in order to develop a 3D structure which will be rendered with mixed media.	Learners will generate, develop a Trophy with their own design intentions and outcomes. A range of mixed media will be utilised. Timber, acrylic, metals, smart materials, 3D Filament will be fixed with appropriate techniques. Learners will build upon the skills	Learners will research, evaluate and develop a time piece with their own design criteria. They will expand on their knowledge of CAD-CAM by converting vector images into WMF for cutting and engraving with the laser cutter. They will also apply a variety of decorative techniques from glow in the dark	Learners will build upon their knowledge of Resistant Materials and joining techniques in order to develop a timber-based product of their choice. They will also gain knowledge into Production and joining techniques so as to create a prototype of their choice. This can include a headphone/controller holder, make-up

	iron, profile cutter, vacuum former and glue guns.		This will include CAD, airbrushing, pencil, crayon and vinyl decorations.	base by using a wide range of tools and materials within the workshop in order to realise their design intentions.	vinyl, spray paints and decoupage.	holder, spice rack, desk tidy, trainer holder or memory box.
Enrichment Opportunities						
Topic Heading	LDR Night light Project	Mixed Media Christmas Present	Bespoke Utility Holder Project	Pewter keyring Project	T-Candle holder Project	Own design outcome
Year 9 Content (skills and knowledge) NC Year PA Stage	Learners will develop skills and knowledge into soldering and Systems & Control in order to create a Night light. They will solder a motherboard which has a Light Dependant Resistor and Light Emitting Diode which will light up laser cut/engraved transparent acrylic. They will vacuum a base and profile cutter to generate a base for the light which will powered either by batteries or a USB input.	Learners will explore and develop their own idea for Christmas decoration. Resistant materials such as timber, acrylic and metals will form the shape for the project whilst advanced knowledge into soldering will allow flashing LED decorations.	Learners will expand upon their knowledge of timber based joining techniques and generate, develop and produce a prototype which has a variety of timber joints. These include: mitre, butt, comb and dowel joints. They will also visualise their design by experiencing 1- & 2-point Perspective drawing techniques and use hand tools, such as a chisel, mallet, coping saw	Learners will engage in a metals-based project looking at developing a pewter cast keyring. Learners will gain knowledge into Metals and Alloys and the process of making such materials. They will research and evaluate their own design and either create the cast using hand drawing techniques or CAD. This will then be sent to the laser cutter ready to be	Learners will create a timber-based candle holder. They will use a mixture of joints including: Halving and Housing Joints. They will follow a given specification or develop their own design intention. They will use a chisel, mallet, tenon saw and coping to create their prototype and decorate it with a range of techniques. This includes, paint, vinyl, blow torch, spray paint and decoupage.	Learners will develop and produce a prototype from a given list which will enable them to create their final piece of design and practical work within the KS3 curriculum. They will display the skills base and subject knowledge.

			to cut and join their prototype.	used in the Pewter casting machine. Learners will adhere Health & Safety whilst using the Pewter casting machine.		
Enrichment Opportunities						
Topic Heading City & Guilds level 1 Dip Construction	Constructing Halving Joints H&S/Intro into the Construction Industry	Constructing Housing H&S/Intro into the Construction Industry	Applying Decorative Effects H&S/Intro into the Construction Industry	Constructing Bridle Joints H&S/Intro into the Construction Industry	Removing and refitting waterfilled radiators H&S/Intro into the Construction Industry	Bending and joining copper piping H&S/Intro into the Construction Industry
Year 10 Level 1 Diploma Content (skills and knowledge) NC Year ____10____ PA Stage ____5-7____	<p>The learner will identify and use Personal Protective Equipment (PPE) appropriate to constructing halving joints.</p> <p>They will identify types of halving joints, materials required to construct halving joints state the process required to mark out halving joints.</p> <p>They will identify tools and</p>	<p>The learner will identify and use Personal Protective Equipment (PPE) appropriate to constructing halving joints.</p> <p>They will identify types of housing joints, materials required to construct housing joints state the process required to mark out housing joints.</p> <p>They will identify tools and equipment</p>	<p>The learner will identify and use Personal Protective Equipment (PPE) appropriate to preparing and painting surfaces.</p> <p>They will identify, select and use the materials, tools and materials required to prepare and paint surfaces.</p> <p>They will set up the work area safely maintain a clean and safe working area following</p>	<p>The learner will identify and use Personal Protective Equipment (PPE) appropriate to constructing bridle joints.</p> <p>They will identify types of bridle joints, materials required to construct bridle joints state the process required to mark out bridle joints.</p>	<p>The learner will identify and use Personal Protective Equipment (PPE) appropriate to draining, removing and refitting water-filled radiators.</p> <p>They will identify and use tools, materials required to drain, remove and refit water-filled radiators.</p> <p>They will state reasons for draining, removing and refitting water-filled</p>	<p>The learner will identify and use Personal Protective Equipment (PPE) appropriate for bending and joining copper piping.</p> <p>They will identify types of fittings, materials required to bend and join copper piping.</p> <p>They will state the process required to mark out bridle joints. They will identify and use tools and equipment required</p>

	<p>equipment required to construct halving joints.</p> <p>The learner can use Personal Protective Equipment (PPE) appropriate to constructing halving joints and select tools, equipment to given City & Guilds specifications.</p> <p>They set up the work area safely maintain a clean and safe working area following health and safety guidelines clear work area of surplus materials and debris on completion of the jobs clean all tools and equipment ready for re-use.</p> <p>The learner will complete an end of unit assessment in-line with given City & Guilds specifications.</p>	<p>required to construct housing joints.</p> <p>The learner can use Personal Protective Equipment (PPE) appropriate to constructing housing joints and select tools, equipment and materials to given City & Guilds specifications.</p> <p>They set up the work area safely maintain a clean and safe working area following health and safety guidelines clear work area of surplus materials and debris on completion of the jobs clean all tools and equipment ready for re-use.</p> <p>The learner will complete an end of unit assessment in-line with given City & Guilds specifications.</p>	<p>health and safety guidelines, clear the work area of surplus materials, debris on completion of the jobs and clean all tools and equipment ready for re-use.</p> <p>The learner will complete an end of unit assessment in-line with given City & Guilds specifications.</p> <p>Learners will evident the importance of H&S: COSHH, RIDDOR, PUWER.</p> <p>Knowledge of sustainable materials and different types of construction techniques will also be researched and evident within their learning portfolio.</p>	<p>They will identify tools and equipment required to construct bridle joints.</p> <p>The learner will complete an end of unit assessment in-line with given City & Guilds specifications.</p> <p>They set up the work area safely maintain a clean and safe working area following health and safety guidelines clear work area of surplus materials and debris on completion of the jobs clean all tools and equipment ready for re-use.</p> <p>Learners will evident the importance of H&S: COSHH, RIDDOR, PUWER.</p>	<p>radiators and state the process required to so.</p> <p>Learners will evident the importance of H&S: COSHH, RIDDOR, PUWER.</p> <p>Knowledge of sustainable materials and different types of construction techniques will also be researched and evident within their learning portfolio.</p>	<p>to cut and join copper piping.</p> <p>The learner will complete an end of unit assessment in-line with given City & Guilds specifications.</p> <p>They set up the work area safely maintain a clean and safe working area following health and safety guidelines clear work area of surplus materials and debris on completion of the jobs clean all tools and equipment ready for re-use.</p> <p>Learners will evident the importance of H&S: COSHH, RIDDOR, PUWER.</p> <p>Knowledge of sustainable materials and different types of construction techniques will also be researched and evident within their learning portfolio.</p>
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Topic Heading						
Enrichment Opportunities						
Topic Heading	Assembling a Ring main	Assembling One-way lighting	Applying Painting Techniques	Painting a Door Panel	Own design outcome	Yr 11 leavers meal decorations/gifts
Year 11 24-25 City & Guilds level 1 Dip Construction NC Year PA Stage	The learner will: know how to assemble a 13amp switched sockets wired in ring final circuit. They will identify, use and state the reasons and processes for	The learner will: know how to assemble a one-way lighting circuit. They will identify, use and state the reasons and processes for constructing the one-way circuit.	The learner will identify and use Personal Protective Equipment (PPE) appropriate to preparing and painting surfaces. They will identify, select and use the materials, tools and materials required	The learner will know how to prepare door panels for painting. They will identify and use Personal Protective Equipment (PPE) appropriate to preparing and painting surfaces.	Learners will develop and produce a prototype from a given list which will enable them to create their final piece of design and practical work within the KS4 City & Guilds curriculum. They will display the skills base and	Learners will create and fulfil the design intentions which will reflect the yr11 leavers event. This will include table numbers-decorations-general aesthetics within the given theme.

	<p>constructing the ring main.</p> <p>A 12V continuity test will be used conducted.</p> <p>They will be made aware of Regulations Health & Safety at Work Act, COSHH, BS7671:2008 IET Wiring Regulations, Electricity at Work Regulations 1989.</p> <p>They set up the work area safely maintain a clean and safe working area following health and safety guidelines clear work area of surplus materials and debris on completion of the jobs clean all tools and equipment ready for re-use.</p> <p>The learner will complete an end of unit assessment in-</p>	<p>They will be made aware of Regulations Health & Safety at Work Act, COSHH, BS7671:2008 IET Wiring Regulations, Electricity at Work Regulations 1989.</p> <p>They set up the work area safely maintain a clean and safe working area following health and safety guidelines clear work area of surplus materials and debris on completion of the jobs clean all tools and equipment ready for re-use.</p> <p>The learner will complete an end of unit assessment in-line with given City & Guilds specifications.</p>	<p>to prepare and paint surfaces.</p> <p>They will set up the work area safely maintain a clean and safe working area following health and safety guidelines, clear the work area of surplus materials, debris on completion of the jobs and clean all tools and equipment ready for re-use.</p> <p>The learner will complete an end of unit assessment in-line with given City & Guilds specifications.</p>	<p>They will identify, select and use the materials, tools and materials required to prepare and paint a door panel.</p> <p>They will set up the work area safely maintain a clean and safe working area following health and safety guidelines, clear the work area of surplus materials, debris on completion of the jobs and clean all tools and equipment ready for re-use.</p> <p>The learner will complete an end of unit assessment in-line with given City & Guilds specifications.</p>	<p>subject knowledge gained throughout the course.</p>	<p>They will utilise all the workshop tools, equipment and machinery in order to manufacture the bespoke prototypes for the memorable event.</p> <p>They will also generate and create leavers gifts for peers and members of staff with the school setting.</p>
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		line with given City & Guilds specifications.					