D&T Tier 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	Rotation 1 First half Autumn D&T 7 weeks **Food packaging** Introducing the concept of legal requirements on a food package, to include the ingredients and allergies and then 'inventing' a food that needs a box. Students come up with 2 ideas for a food package that include all of the requirements, plus any marketing graphics. Students learn to draw the net for the box on card using measurements and technical equipment and transfer their design over to it, cut out and assemble. Assessment: Completed food package and accompanying booklet with ideas and developments.	Rotation 2 second half Autumn D&T 7 Weeks **Food packaging** Introducing the concept of legal requirements on a food package, to include the ingredients and allergies and then 'inventing' a food that needs a box. Students come up with 2 ideas for a food package that include all of the requirements, plus any marketing graphics. Students learn to draw the net for the box on card using measurements and technical equipment and transfer their design over to it, cut out and assemble. Assessment: Completed food package and accompanying booklet with ideas and developments.	Rotation 3 First half Spring D&T 7 Weeks **Food packaging** Introducing the concept of legal requirements on a food package, to include the ingredients and allergies and then 'inventing' a food that needs a box. Students come up with 2 ideas for a food package that include all of the requirements, plus any marketing graphics. Students learn to draw the net for the box on card using measurements and technical equipment and transfer their design over to it, cut out and assemble. Assessment: Completed food package and accompanying booklet with ideas and developments.	Rotation 4 Second half Spring D&T 7 Weeks **Mechanical toy** Students cover basic mechanical systems, to include cams, levers and linkages. Introduction to workshop tools and machines and safety. Making a timber based mechanical display with cams/linkages/crank slider, cutting sanding and finally assembling to create a working model. Assessment: Final mechanical product with accompanying booklet of ideas and demonstrating understanding of the systems.	Rotation 5 First half Summer D&T 7 Weeks **Mechanical toy** Students cover basic mechanical systems, to include cams, levers and linkages. Introduction to workshop tools and machines and safety. Making a timber based mechanical display with cams/linkages/crank slider, cutting sanding and finally assembling to create a working model. Assessment: Final mechanical product with accompanying booklet of ideas and demonstrating understanding of the systems.	Rotation 6 Second half Summer D&T 7 Weeks **Mechanical toy** Students cover basic mechanical systems, to include cams, levers and linkages. Introduction to workshop tools and machines and safety. Making a timber based mechanical display with cams/linkages/crank slider, cutting sanding and finally assembling to create a working model. Assessment: Final mechanical product with accompanying booklet of ideas and demonstrating understanding of the systems.
7	Rotation 1 second half Autumn Textiles 7 Weeks **Sweet Treats - Hand sewing tasks** To follow on and build up from any knowledge and skills learnt from KS2 and introduce year 7 students to the sewing machines and surface decoration techniques. To learn to navigate the sewing machine using the sewing road map. All students will gain their sewing machine passport once they have passed the H&S assessments. The students will make a hand sewn pincushion based on the theme of sweet treats. The pin cushion will incorporate a variety of embroidery stitches.	Rotation 2 second half Autumn Textiles 7 Weeks **Sweet Treats - Hand sewing tasks** To follow on and build up from any knowledge and skills learnt from KS2 and introduce year 7 students to the sewing machines and surface decoration techniques. To learn to navigate the sewing machine using the sewing road map. All students will gain their sewing machine passport once they have passed the H&S assessments. The students will make a hand sewn pincushion based on the theme of sweet treats. The pin cushion will incorporate a variety of embroidery stitches.	Rotation 3 First half Spring Textiles 7 Weeks **Sweet Treats - Hand sewing tasks** To follow on and build up from any knowledge and skills learnt from KS2 and introduce year 7 students to the sewing machines and surface decoration techniques. To learn to navigate the sewing machine using the sewing road map. All students will gain their sewing machine passport once they have passed the H&S assessments. The students will make a hand sewn pincushion based on the theme of sweet treats. The pin cushion will incorporate a variety of embroidery stitches.	Rotation 4 second half Autumn Textiles 7 Weeks **DRAWSTRING BAG CONTINUED SECOND ROTATION** Complete second piece based on the theme sweet treats. Focusing on surface decoration,, edge stitching, pattern drafting. Evaluating success and function of both pieces. Sewing machine theory recap. Theory focus on synthetic and natural fibres, fabric production and manufacturing. Textiles based workshops. Batik and printing. Covering both traditional and modern techniques.	Rotation 5 First half Summer Textiles 7 Weeks **DRAWSTRING BAG CONTINUED SECOND ROTATION** Complete second piece based on the theme sweet treats. Focusing on surface decoration,, edge stitching, pattern drafting. Evaluating success and function of both pieces. Sewing machine theory recap. Theory focus on synthetic and natural fibres, fabric production and manufacturing. Textiles based workshops. Batik and printing. Covering both traditional and modern techniques.	Rotation 6 Second half Summer Textiles 7 Weeks **DRAWSTRING BAG CONTINUED SECOND ROTATION** Complete second piece based on the theme sweet treats. Focusing on surface decoration,, edge stitching, pattern drafting. Evaluating success and function of both pieces. Sewing machine theory recap. Theory focus on synthetic and natural fibres, fabric production and manufacturing. Textiles based workshops. Batik and printing. Covering both traditional and modern techniques.
8	Rotation 1 First half Autumn D&T 7 weeks **Pewter Keyring & Presentation Box**	Rotation 2 second half Autumn D&T 7 Weeks **Pewter Keyring & Presentation Box**	Rotation 3 First half Spring D&T 7 Weeks **Pewter Keyring & Presentation Box**	Rotation 4 Second half Spring D&T 7 Weeks **CAD Lamp** Introducing CAD to students and	Rotation 5 First half Summer D&T 7 Weeks **CAD Lamp** Introducing CAD to students and	Rotation 6 Second half Summer D&T 7 Weeks **CAD Lamp** Introducing CAD to students and

	Introducing H&S in the workshop, marking and cutting timber (hardwoods). Learning about different types of timber and metals, designing a keyring to create from pewter, cutting the mould by hand and casting the pewter. Final assembly of the presentation box to include lapjoints and MDF lid. Pewter to be filed, sanded and polished, with keyring hole drilled Assessment: Completed practical work with step by step production diary in booklet.	Introducing H&S in the workshop, marking and cutting timber (hardwoods). Learning about different types of timber and metals, designing a keyring to create from pewter, cutting the mould by hand and casting the pewter. Final assembly of the presentation box to include lapjoints and MDF lid. Pewter to be filed, sanded and polished, with keyring hole drilled Assessment: Completed practical work with step by step production diary in booklet.	Introducing H&S in the workshop, marking and cutting timber (hardwoods). Learning about different types of timber and metals, designing a keyring to create from pewter, cutting the mould by hand and casting the pewter. Final assembly of the presentation box to include lapjoints and MDF lid. Pewter to be filed, sanded and polished, with keyring hole drilled Assessment: Completed practical work with step by step production diary in booklet.	using Techsoft design. Students to research a design era (memphis or art deco) and design a 2D lamp based on this. Silhouettes will be laser cut from acrylic. Solder LED strip with USB cable and test Cut and drill hardwood base to attach to the acrylic. Sand and assemble, test and present the final USB lamp.	using Techsoft design. Students to research a design era (memphis or art deco) and design a 2D lamp based on this. Silhouettes will be laser cut from acrylic. Solder LED strip with USB cable and test Cut and drill hardwood base to attach to the acrylic. Sand and assemble, test and present the final USB lamp.	using Techsoft design. Students to research a design era (memphis or art deco) and design a 2D lamp based on this. Silhouettes will be laser cut from acrylic. Solder LED strip with USB cable and test Cut and drill hardwood base to attach to the acrylic. Sand and assemble, test and present the final USB lamp.
8	Rotation 1 First half Autumn Textiles 7 weeks TOTE BAG ROTATION 1 The first rotation of textiles in year 8 focuses on making a Tote bag, Selecting materials and techniques suitable for their designs. Students will develop ideas through research to inform the design of innovative, functional, appealing product. Looking at other cultures as a starting point. Theory will be covered that looks at all the areas needed for GCSE including robots, market push, designers and the design make process.	Rotation 2 second half Autumn Textiles 7 Weeks TOTE BAG ROTATION 1 The first rotation of textiles in year 8 focuses on making a Tote bag, Selecting materials and techniques suitable for their designs. Students will develop ideas through research to inform the design of innovative, functional, appealing product. Looking at other cultures as a starting point. Theory will be covered that looks at all the areas needed for GCSE including robots, market push, designers and the design make process.	Rotation 3 First half Spring Textiles 7 Weeks TOTE BAG ROTATION 1 The first rotation of textiles in year 8 focuses on making a Tote bag, Selecting materials and techniques suitable for their designs. Students will develop ideas through research to inform the design of innovative, functional, appealing product. Looking at other cultures as a starting point. Theory will be covered that looks at all the areas needed for GCSE including robots, market push, designers and the design make process.	Rotation 4 Second half Spring Textiles 7 Weeks TOTE BAG ROTATION 2 Complete the construction of the tote bag. Focus on fishing seams, edge stitching, pattern drafting. Adding surface decorations to tote bag. Evaluating success and function. Sewing machine theory recap. Theory focus is sustainability, sustainable fashion and mass production. Textiles based workshops. Batik and printing. Covering both traditional and modern techniques.	Rotation 5 First half Summer Textiles 7 Weeks TOTE BAG ROTATION 2 Complete the construction of the tote bag. Focus on fishing seams, edge stitching, pattern drafting. Adding surface decorations to tote bag. Evaluating success and function. Sewing machine theory recap. Theory focus is sustainability, sustainable fashion and mass production. Textiles based workshops. Batik and printing. Covering both traditional and modern techniques.	Rotation 6 Second half Summer Textiles 7 Weeks TOTE BAG ROTATION 2 Complete the construction of the tote bag. Focus on fishing seams, edge stitching, pattern drafting. Adding surface decorations to tote bag. Evaluating success and function. Sewing machine theory recap. Theory focus is sustainability, sustainable fashion and mass production. Textiles based workshops. Batik and printing. Covering both traditional and modern techniques.
9	Rotation 1 First half Autumn D&T 7 weeks **Pewter Keyring & Presentation Box** Introducing H&S in the workshop, marking and cutting timber (hardwoods). Learning about different types of timber and metals, designing a keyring to create from pewter, cutting the mould by hand and casting the pewter. Final assembly of the presentation box to include lapjoints and MDF lid. Pewter to be filed, sanded and polished, with keyring hole drilled Assessment: Completed practical work with step by step production diary in booklet.	Rotation 2 second half Autumn D&T 7 Weeks **Pewter Keyring & Presentation Box** Introducing H&S in the workshop, marking and cutting timber (hardwoods). Learning about different types of timber and metals, designing a keyring to create from pewter, cutting the mould by hand and casting the pewter. Final assembly of the presentation box to include lapjoints and MDF lid. Pewter to be filed, sanded and polished, with keyring hole drilled Assessment: Completed practical work with step by step production diary in booklet.	Rotation 3 First half Spring D&T 7 Weeks **Pewter Keyring & Presentation Box** Introducing H&S in the workshop, marking and cutting timber (hardwoods). Learning about different types of timber and metals, designing a keyring to create from pewter, cutting the mould by hand and casting the pewter. Final assembly of the presentation box to include lapjoints and MDF lid. Pewter to be filed, sanded and polished, with keyring hole drilled Assessment: Completed practical work with step by step production diary in booklet.	Rotation 4 Second half Spring D&T 7 Weeks **CAD Lamp** Introducing CAD to students and using Techsoft design. Students to research a design era (memphis or art deco) and design a 2D lamp based on this. Silhouettes will be laser cut from acrylic. Solder LED strip with USB cable and test Cut and drill hardwood base to attach to the acrylic. Sand and assemble, test and present the final USB lamp.	Rotation 5 First half Summer D&T 7 Weeks **CAD Lamp** Introducing CAD to students and using Techsoft design. Students to research a design era (memphis or art deco) and design a 2D lamp based on this. Silhouettes will be laser cut from acrylic. Solder LED strip with USB cable and test Cut and drill hardwood base to attach to the acrylic. Sand and assemble, test and present the final USB lamp.	Rotation 6 Second half Summer D&T 7 Weeks **CAD Lamp** Introducing CAD to students and using Techsoft design. Students to research a design era (memphis or art deco) and design a 2D lamp based on this. Silhouettes will be laser cut from acrylic. Solder LED strip with USB cable and test Cut and drill hardwood base to attach to the acrylic. Sand and assemble, test and present the final USB lamp.

9	Rotation 1 First half Autumn Textiles 7 weeks PENCIL ROLL ROTATION 1 The first rotation of textiles in year 8 focuses on making a Pencil Roll, Selecting materials and techniques suitable for their designs. Students will develop ideas through research to inform the design of innovative, functional, appealing product. Looking at other cultures as a starting point. Theory will be covered that looks at all the areas needed for GCSE including robots, market push, designers and the design make process.	Rotation 2 second half Autumn Textiles 7 Weeks PENCIL ROLL ROTATION 1 The first rotation of textiles in year 8 focuses on making a Pencil Roll, Selecting materials and techniques suitable for their designs. Students will develop ideas through research to inform the design of innovative, functional, appealing product. Looking at other cultures as a starting point. Theory will be covered that looks at all the areas needed for GCSE including robots, market push, designers and the design make process.	Rotation 3 First half Spring Textiles 7 Weeks PENCIL ROLL ROTATION 1 The first rotation of textiles in year 8 focuses on making a Pencil Roll, Selecting materials and techniques suitable for their designs. Students will develop ideas through research to inform the design of innovative, functional, appealing product. Looking at other cultures as a starting point. Theory will be covered that looks at all the areas needed for GCSE including robots, market push, designers and the design make process.	Rotation 4 Second half Spring Textiles 7 Weeks PENCIL ROLL ROTATION 4 Complete the construction of the pencil roll. Focus on fishing seams, edge stitching, pattern drafting. Adding surface decorations to their pencil rolls. Evaluating success and function. Sewing machine theory recap. Theory on SMART textiles. Textiles based workshops tie-dye. Covering both traditional and modern techniques.	Rotation 5 First half Summer Textiles 7 Weeks PENCIL ROLL ROTATION 4 Complete the construction of the pencil roll. Focus on fishing seams, edge stitching, pattern drafting. Adding surface decorations to their pencil rolls. Evaluating success and function. Sewing machine theory recap. Theory on SMART textiles. Textiles based workshops tie-dye. Covering both traditional and modern techniques.	Rotation 6 Second half Summer Textiles 7 Weeks PENCIL ROLL ROTATION 4 Complete the construction of the pencil roll. Focus on fishing seams, edge stitching, pattern drafting. Adding surface decorations to their pencil rolls. Evaluating success and function. Sewing machine theory recap. Theory on SMART textiles. Textiles based workshops tie-dye. Covering both traditional and modern techniques.
10	**Level 2 Construction** **Unit 1** introduction to the built environment, the sectors and life cycle of the built environment.(1.1) **Unit 3** Introduction to constructing with timber, using power tools and the need for accurate marking out, cutting and assembling. Planter project. Assessment: Practical planter project, end of unit 1.1 written test	**Unit 1** The built environment life cycle focussing on each stage of a buildings' life especially operations and maintenance stages. (1.2) Types of building and structure (1.3) classifications and examples of commercial and residential buildings. **Unit 3** Model stud wall, with noggins, header and sole plate. Adding roofing battens and support stud walling, measuring and cutting timber at awkward angles. Assessment: End of unit written test and completed wall model	Unit 1 Technologies and materials, students will learn about the main elements of low rise buildings, tools, processes and materials used. Construction of walls, internal and external and the use of new technologies and renewables. (1.4) Unit 3 Electrical - wiring, installation of sockets on a ring main, lighting, 2 way switching and isolator switching Assessment: Completed electrical board, fully working.	Unit 1 building structures and form, students will learn about cellular and modular constructional methods, portal frames and compare to heritage and traditional methods (1.5) Trades in the industry, qualifications, skills and pay (1.7) Unit 3 Plumbing - pushfit waste for a kitchen sink, copper hot and cold feed, plastic push fit combined with soldering and pressure test the system Assessment: Completed plumbing board with working sink and waste. End of unit 1.4, 1.5 test.	Unit 1 Sustainable construction methods. Students will learn about sustainable materials, waste disposal and the planning system, brownfield vs greenfield sites and the benefits of sustainable construction to society.(1.6) Unit 3 - skills refining - using previously learnt skills to create a new product that showcases their working practices in a job that could be completed by a tradesman. Assessment - End of year 10 test	Unit 1 Health and Safety on site, risk assessing, COSHH, PPE, working at height and enclosed spaces, working with gas, electricity and water. Unit 3 - Carpentry NEA1 - understanding the construction job given by the exam board and producing written documentation and a practical outcome. (also assessment)
11	Level 2 Construction - 1 year course **Unit 3** Planter project - skills building of measuring, marking, cutting and sanding. Introduction to use of drills, pilot holes and impact driver. Start NEA1 - Carpentry project. Demo of practical, notes in booklet.	**Unit 3** Finish NEA1 - evaluations Introduce electrics, demonstrate the circuitry, with exams - students to draw the diagrams and write notes in booklet, Start written electrical NEA (project brief and spec) Mock exams - first onscreen exam for Unit 1	**Unit 3** Finish Electrical NEA, practical and evaluations Introduce Plumbing - demonstration and notes in booklets. Start written plumbing	**Unit 3** - finish written plumbing and practical. Unit 1 - Key aspects of exam content - different types of buildings, different trades and responsibilities on site, H&S and management of risks.	Unit 1 - revision for written exam in June - trades, building structures and risk management. Exam technique.	Unit 1 exam