CARLETON HIGH SCHOOL

PONTEFRACT ACADEMIES TRUST

Overall Curriculum Map 2019-2020

Subject: KS3 DESIGN AND TECHNOLOGY and KS4 Engineering

	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
7	**Curriculum Topics** Research, design, planning and manufacture. **Sequencing:** Prior knowledge of making/modelling a product.	**Curriculum Topics** Manufacturing, testing and evaluating. Research, design ideas. **Sequencing:** Measuring and marking out/dimensions Accuracy	**Curriculum Topics** Health and safety in the kitchen Selecting and using appropriate equipment Developing cooking skills and practical application of cooking skills Eat Well guide, healthy eating and nutrition **Sequencing:** Weighing and measuring.	**Curriculum Topics** Health and safety in the kitchen Selecting and using appropriate equipment Developing cooking skills and practical application of cooking skills Eat Well guide, healthy eating and nutrition **Sequencing:** Weighing and measuring.	**Curriculum Topics** Identify electronic components Identify purpose Identify symbols **Sequencing:** Build on practical knowledge of tools and equipment.	**Curriculum Topics** Circuit diagrams, workshop health and safety, joining timber, soldering skills, soldering practice, circuit building, final assembly, evaluation. **Sequencing:** Planning and testing systems and control.
	Assessments: Timber investigation	**Assessments:** Manufacturing skills	**Assessments:** End of unit Assessment X2 WIN assessments on scones.	**Assessments:** End of unit Assessment X2 WIN assessments on fruit crumble	**Assessments:** Component knowledge	**Assessments:** Soldering skills.
	Enrichment: Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club
	Homework:	**Homework:**	**Homework:**	**Homework:**	**Homework:**	**Homework:**
8	**Curriculum Topics** Timber research, joining methods, Production planning, measuring and marking out **Sequencing:** Deepened knowledge of materials and constraints.	**Curriculum Topics** Manufacture, testing and evaluating. Design brief analysis, artist profile, making a stencil Graffiti character research **Sequencing:**	**Curriculum Topics** Demonstrating best practise in line with the 4c's of good food hygiene Identifying and explaining how to store food and key temperatures Developing practical	**Curriculum Topics** Demonstrating best practise in line with the 4c's of good food hygiene Identifying and explaining how to store food and key temperatures Developing practical	**Curriculum Topics** Metals investigation, alloys and pewter, design ideas, CAD designs, **Sequencing:** Complex design idea development.	**Curriculum Topics** Workshop practical lessons, drilling, achieving a quality finish, product presentation, evaluation. **Sequencing:** Build workshop skill level.

		Broader understanding of the design process and practicing taught skills.	skills and building on prior cooking experience Function of ingredients and key skills in handling and preparation Food miles and seasonality and how this links to food choice and personal carbon footprint **<u>Sequencing:</u>** How to measure and weigh ingredients in grams How to work in a safe and hygienic way How to use an oven Appropriate selection and use of equipment	skills and building on prior cooking experience Function of ingredients and key skills in handling and preparation Food miles and seasonality and how this links to food choice and personal carbon footprint **<u>Sequencing:</u>** How to measure and weigh ingredients in grams How to work in a safe and hygienic way How to use an oven Appropriate selection and use of equipment		
	Assessments: Production plan skills	**Assessments:** Manufacturing skills	**Assessments:** End of Year Assessment X1 WIN assessment on short crust pastry.	**Assessments:** End of Year Assessment X1 WIN assessment on bread making.	**Assessments:** CAD drawing skills	**Assessments:** Product finishing skills
	Enrichment: Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club
	Homework:	**Homework:**	**Homework:**	**Homework:**	**Homework:**	**Homework:**
9 BTEC Engineering	**Curriculum Topics** Bottle opener project Working with metal, planning, manufacturing, test and evaluate. **Sequencing:**	**Curriculum Topics** ***<u>Component 2.</u>*** Investigate materials, processes, and engineered components. **Sequencing:**	**Curriculum Topics** *<u>Learning aim A.</u>* In depth investigation into materials, process and proprietary components and product specific components.	**Curriculum Topics** *<u>Learning aim B</u>* Systematic disassembly and analysis of components, **Sequencing:**	**Curriculum Topics** Product design specification. *<u>Learning aim C</u>* Production planning, manufacturing. **Sequencing:**	**Curriculum Topics** Manufacturing, test against recognised standards and evaluation. **Sequencing:**

			Sequencing:			
	Assessments: Practical skills	**Assessments:** Progress assessment	**Assessments:** Progress assessment	**Assessments:** Progress assessment	**Assessments:** Progress assessment	**Assessments:** Progress assessment
	Enrichment: Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club	**Enrichment:** Attend Tech Club
	Homework: Kitchen utensils homework	**Homework:** Component based tasks	**Homework:** Component based tasks	**Homework:** Component based tasks	**Homework:** Component based tasks	**Homework:** Component based tasks
10 BTEC Engineering	**Curriculum Topics** ***Component 3 exam preparation*** Data interpretation, plotting data, carrying out tests, drawing conclusions from observations **Sequencing:**	**Curriculum Topics** ***Component 3 exam preparation*** Redesign, annotation, fault finding, drawing skills **Sequencing:**	**Curriculum Topics** ***Component 3 exam preparation*** Ensuring quality, interpreting technical drawings, **Sequencing:**	**Curriculum Topics** ***Component 1 Learning Aim A*** Exploring Engineering Sectors and Design Applications **Sequencing:**	**Curriculum Topics** ***Component 1 Learning Aim A*** Identifying engineering careers. What a job entails and what products are manufactured and how. **Sequencing:**	**Curriculum Topics** ***Component 1 Learning Aim A*** Engineering sectors. Identifying engineered components from different industries **Sequencing:**
	Assessments: Plotting data	**Assessments:** Annotation skills	**Assessments:** Quality control and assurance.	**Assessments:** Linking products with engineers	**Assessments:** Linking jobs with a range of products	**Assessments:** Component identification
	Enrichment:	**Enrichment:**	**Enrichment:**	**Enrichment:**	**Enrichment:**	**Enrichment:**
	Homework: Mock papers	**Homework:** Mock papers	**Homework:** Mock papers	**Homework:** Component based tasks	**Homework:** Component based tasks	**Homework:** Component based tasks
11 BTEC Engineering	**Curriculum Topics** ***Component 1 Learning Aim A*** Functions in engineering organisations **Sequencing:**	**Curriculum Topics** ***Component 1 Learning Aim B*** Exploring engineering skills through the design process. **Sequencing:**	**Curriculum Topics** ***Component 1 Learning Aim B*** Exploring engineering skills through the design process. **Sequencing:**	**Curriculum Topics** ***Component 1 Learning Aim B*** Modelling design solutions. Presentation of design solutions. **Sequencing:**	**Curriculum Topics** Students complete course. **Sequencing:**	**Curriculum Topics** **Sequencing:**

	Assessments:	**Assessments:** Progress check	**Assessments:** Progress check	**Assessments:** Progress check	**Assessments:**	**Assessments:**
	Enrichment:	**Enrichment:**	**Enrichment:**	**Enrichment:**	**Enrichment:**	**Enrichment:**
	Homework: Component based tasks	**Homework:** Component based tasks	**Homework:** Component based tasks	**Homework:** Component based tasks	**Homework:**	**Homework:**