

Year 7

Te1/ Engineering

Students will learn the basic fundamentals in the following:

Steady Hand Game

Health & Safety, Introduction to electronics. Simple circuits and implementation.

Electronics, Electricity, Components/Resistors, Soldering, Designing.

Energy generation, Energy storage, System approach to designing, Electronic systems processing, Selection of materials and components, Working with electronic components, Commercial manufacturing and quality control, Communication of design ideas, Selection of materials and components,

Specialist tools, Equipment, Techniques and Processes, Surface Treatments and Finishes.

Te2/ Food Preparation and Nutrition

Students will learn the basic fundamentals in the following:

Food Safety

Health & Safety, Food safety, Food storage and Preservation, Methods of cooking, Tools and Equipment Technical Skills in Cooking, Heat Transfer, Demonstrations and Modelling of Food.

Te3/ Product Design

Students will learn the basic fundamentals in the following:

Car Design

Health & Safety, People, Industry and enterprise, Automation, Culture and Society, Sustainability and the environment, Informing Design Decisions, Communication of Design Ideas and Prototype Development, Natural and manufactured timbers; sources, origins and properties, Working with timber based materials, Surface Treatments and Finishes, Metals and alloys; sources, origins and properties, Working with metal based materials, Surface Treatments and Finishes, Ecological and social footprint, Material Management and Marking Out, Specialist Tools, Equipment, Techniques and Processes,

Polymers (Plastic), Aerodynamics, Biomimicry, Forces and stresses on materials and objects, Communication of design ideas and prototype development.

Te4/ Graphics

Students will learn the basic fundamentals in the following:

Cube Construction

Students will learn the basic fundamentals in the following:

Health & Safety, Isometric drawing, Orthographic, Perspective Drawing, Shading and Rendering, Net Templates.



YEAR 8

Te1/ Engineering

Students will learn the basic fundamentals in the following:

Pencil Box Design

Health & Safety, Drawing skills, Rendering, Perspective Drawings, Sustainability and the Environment, Timber: Sources, Origins and Properties, Natural and manufactured timbers, Working with timber based materials, Commercial Manufacturing, Surface Treatments and Finishes. The work of others, Communication of Design Ideas and Prototype Development, Material Management and Marking Out, Specialist Tools, Equipment, Techniques and Processes, Surface Treatments and Finishes.

Te2/ Food Preparation and Nutrition

Students will learn the basic fundamentals in the following:

Special Dietary requirement

Health & Safety, Planning Meals for different groups, vegetarians. Food Nutrient's Micronutrients, Macronutrients

Te3/ Product Design

Students will learn the basic fundamentals in the following:

Game Console Controller

Health & Safety, People, Culture and Society, Informing Design Decisions, Communication of Design Ideas and Prototype Development, Material Management
and Marking out Specialist Tools, Equipment, Techniques and Processes Polymers (Plastic)

Te4/ Graphics

Students will learn the basic fundamentals in the following:

Pop-Up Book

Health & Safety, Papers and boards theory. Card mechanisms. Nets. Packaging



YEAR 9

Te1/ Engineering

Students will learn the basic fundamentals in the following:

Trainer/Sneaker Design

Health & Safety, Textiles fabrics. Origins. Processes. Product Analysis. Client Profile. Designing. Prototyping. Textiles Sources, origins and properties
Working with
textiles based materials and fixings Commercial manufacturing, surface treatments and finishes Investigating, primary and secondary data
Communication of design ideas and prototype development Material management and marking out Specialist tools, equipment, techniques and
processes

Te2/ Food Preparation and Nutrition

Students will learn the basic fundamentals in the following:

The Eatwell Guide.

Health & Safety, Healthy eating and balanced diets. Cultural Foods, Bread making, Raising Agents, cereals

Te3/ Product Design

Students will learn the basic fundamentals in the following:

World Food Festival

Health & Safety, People, Culture and Society, Informing Design Decisions, Communication of Design Ideas and Prototype Development, Material
Management
and Marking out Specialist Tools, Equipment, Techniques and Processes Polymers (Plastic)

Te4/ Graphics

Students will learn the basic fundamentals in the following:

Trainer/Sneaker Box Design

Health & Safety, Papers and boards theory. cardboard mechanisms. Nets. Packaging. Printing



	YEAR 10	YEAR 11
Term	Design and Technology	Design and Technology
September - October	Softwoods and Hardwoods. Manufactured boards. Metals and Alloys. ACCESS FM. JIT. Automation. Planned obsolescence. Ethics and the Environment.	Brainstorming. Mood board. Product Analysis using ACCESS FM. Client Profile and Target Market Research. Plastic Pollution and Deforestation.
November - December	Scales of Production - One off, Batch, Mass and Continuous. Polymers and Material working properties. 6 R's of Sustainability. Sketching and Design Development. Forces. Client Profile. Stock Forms. Prototyping. Enterprise- Crowdfunding, Virtual Marketing, Co-operatives and Fairtrade.	Design Brief. Design Specification. Initial ideas. Initial Prototyping. Ergonomics and Anthropometrics. Manufacturing Processes. Design Development. Developed Prototyping. Materials Research. Orthographic Drawing.
January - February	Life Cycle Assessment. Finite/Non-finite Resources. Waste Disposal. KAIZAN. Pollutions. Global warming. Carbon Offsetting. Consumer Choice. Technology Push and Market Pull. Fashion and Trends. Faiths and Beliefs. Designing for Disabled and Elderly.	Computer Aided Design. Cutting List. Manufacturing Specification. Risk Assessment. Quality Control. Health and Safety. Diary of Making.
March - April	Electronics- Inputs, Processes, Outputs. Mechanical Devices. Ecological and Social Footprint. Sources and Origins.	Evaluation against design specification. Client feedback. Modifications and further improvements.
May - June	Specialist Techniques and Processed. Surface Treatments.	Prep/ Revision of all theory from year 10-11.
June - July	Investigation, Primary and Secondary Data. Work of Others. Design Strategies. Communication of Design Ideas. Tolerances.	Final GCSE Exam.



	YEAR 10	YEAR 11
Term	Food Preparation and Nutrition	Food Preparation and Nutrition
September - October	Introduction to the GCSE Food Preparation and Nutrition Requirements. Assessment Criteria, Food Science, Food Safety.	Introduction to GCSE Food Preparation Task. Research Primary and Secondary. Selecting Suitable Dishes. Demonstrating Technical Skills.
November - December	Food Provenance, Food Preparation Skills, Prepare, Combine and Shape, Food Nutrition and Health, Macronutrients, Micronutrients, The Function, Main Sources, Effects of Deficiency, Dietary Reference Values.	Design Brief. Design Specification. Initial ideas. Initial Prototyping. Ergonomics and Anthropometrics. Manufacturing Processes. Design Development. Developed Prototyping. Materials Research. Orthographic Drawing.
January - February	Food Science, Methods of Heat Transfer, Functional and Chemical Properties of Food, Food Spoilage and Contamination, Microorganisms and Enzymes	Food Preparation Skills, Revision on British and International Cuisines, Food Processing and Production, Sustainability of Food.
March - April	Technical Developments Associated with better Health and Food Production Additives, Genetically Modified Foods.	Final Practicals, Evaluation, Modification, Improvement. Revision
May - June	Food Preparation and Cooking Techniques	Exam Preparation and Revision.
June - July	Food investigation	Final GCSE Exam

