

KS3 Long Term Curriculum Plan: Design and Technology Year 7,8&9 2026-27

Curriculum Aim:

The national curriculum for design and technology aims to ensure that all pupils: develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users critique, evaluate and test their ideas and products and the work of others. Understand and apply the principles of nutrition and learn how to cook.

Link to prior learning: We build on the KS2 curriculum where through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment. The students will be divided into mixed ability Technology sets and are timetabled for four fifty minute periods per fortnight for a term for each technology subject- Food, Product Design and Computing

Rationale of sequencing: Each group rotates between three different subjects every year forming a carousel following the design process to engage the students in a wide range of design materials. Each subject area will have a unique skill set that students will develop alongside the design process

Active participation strategies:

DO NOW, lesson routines, demonstrations with targeted questioning and helpers, recipe booklets with images and written instructions, cold-call questioning - differentiated and targeted, reading tasks - ask students what next words are, choral response, think pair share, sentence starters, follow-on tasks, pause and connect, thumbs up/down, paraphrase, case studies, DIRT, group work, interactive quizzes, interactive homework tasks.

Year 7	Focus / Topic	Knowledge & Skills	Assessment
Food Preparation and Nutrition	Themes: Principles of nutrition and healthy eating. Food safety, choice and provenance. Evaluation and self-assessment.	- understand and apply the principles of nutrition and health - cook a repertoire of predominantly savoury dishes - become competent in a range of cooking techniques, for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways - understand the factors that influence our food choices.	These topics will be assessed in a written assessment during assessment week - Self-assessment booklet - after each practical lesson - Food Preparation Skills - verbal feedback and self-assessment of a range of dishes - Food Nutrition and Health -EWG quiz, 8 Top tips quiz, macro and micro nutrient quiz - Food Safety - Rules rights and responsibilities quiz, hygiene quiz - Food Choice-food choice quiz Assessment fortnight: Year 7 assessment fortnight Autumn term checking for mastery Year 7 assessment fortnight Summer term checking progress

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Product Design	Design Brief: Design, Develop and Manufacture a LED Polymer desk tidy for a chosen stakeholder.	• Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations • Properties of Polymers • Manufacturing with Polymers • Design Development and Prototyping • Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools • Practical Skills manufacturing with polymers and CAD/CAM • Basic Electronics and Circuit Design • Forming - Vacuum Forming • Forming - Line Bending • Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture • Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions • Quality Control and Quality Assurance • Iterative Design Process	These topics will be assessed in a written assessment during assessment week. • Tools and Machinery processes • Aesthetics and Ergonomics • ACCESSFM • Properties and uses of polymers • CAD/CAM • Adhesives • Responding to Specifications • Prototyping • Basic Electronics • Producing Design Ideas from a specification. • Quality Control and Quality Assurance Assessment fortnight: Year 7 assessment fortnight Autumn term checking for mastery Year 7 assessment fortnight Summer term checking progress
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Link to prior learning: We build on the Year 7 curriculum where through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. The students will be divided into mixed ability Technology sets and are timetabled for three fifty minute periods per fortnight for a term for each for each technology subject- Food, product Design and Computing.

Rationale of sequencing: Each group rotates between three different subjects every year forming a carousel following the design process to engage the students in a wide range of design materials. Each subject area will have a unique skill set that students will develop alongside the design process

Active participation strategies:

DO NOW, lesson routines, demonstrations with targeted questioning and helpers, recipe booklets with images and written instructions, cold-call questioning - differentiated and targeted, reading tasks - ask students what next words are, choral response, think pair share, sentence starters, follow-on tasks, pause and connect, thumbs up/down, paraphrase, case studies, DIRT, group work, interactive quizzes, interactive homework tasks.

Year 8	Focus / Topic	Knowledge & Skills	Assessment
Food Preparation and Nutrition	Themes: Principles of nutrition and healthy eating. Food safety, choice and provenance. Evaluation and self-assessment.	- understand and apply the principles of nutrition and health - cook a repertoire of predominantly savoury dishes - become competent in a range of cooking techniques, for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways - understand the impact of reducing food waste on the environment.	These topics will be assessed in a written assessment during assessment week - Self-assessment booklet - after each practical lesson - Food Preparation Skills - verbal feedback and self-assessment of a range of dishes - Hygiene and safety- food poisoning quiz - Food Nutrition and Health -fibre and sugar quiz, meal analysis - Food Choice- different dietary needs quiz - Food provenance- food waste quiz Assessment fortnight: Year 8 assessment fortnight Autumn term checking for mastery Year 8 assessment fortnight Summer term checking progress
Product Design	Design Brief: Design, Develop and Manufacture a piece of metal jewellery and produce a graphical product to promote it.	- Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations - Properties of Metals and Alloys - Manufacturing with Metals and Alloys - Practical Skills Manufacturing (Pewter Casting) - Practical Skills Manufacturing (Foam Board Modelling) - Practical Skills Manufacturing (Canva Graphical Design) - Fundamentals of Product Design - Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture - Understand and use the properties of materials and the performance of structural elements to achieve functioning	These topics will be assessed in a written assessment during assessment week. - Tools and Machinery processes - Aesthetics and Ergonomics - ACCESSFM - Properties and uses of Metals and Alloys - Casting Process - Graphical Communication - Technical Drawing - Isometric and Orthographic - CAD/CAM - Responding to Specifications - Prototyping using Foam Board - PoS Displays - Producing Design Ideas from a Specification.

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		- solutions - Iterative Design Process	Quality Control and Quality Assurance Assessment fortnight: Year 8 assessment fortnight Autumn term checking for mastery Year 8 assessment fortnight Summer term checking progress
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Curriculum Aim:

The national curriculum for design and technology aims to ensure that all pupils: develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users critique, evaluate and test their ideas and products and the work of others understand and apply the principles of nutrition and learn how to cook.

Link to prior learning: Building on their learning in Year 7&8 the students will be divided into mixed ability Technology sets and are timetabled for four fifty minute periods per fortnight for a term for each. The subjects in the rota are Food Preparation and Nutrition and Product Design:Graphics & Resistant Materials. Each Technology unit is a term in length to build on their learning in Year 7/8 and allow them to develop their skills in depth for KS4.

Rationale of sequencing: We teach a curriculum that ensures that we consistently revisit the key strands of the design process in order to consolidate and develop students' skills in designing, making, evaluating, technical knowledge as well as cooking and nutrition. The design tasks become more challenging and content is developed further as the curriculum progresses.

Active participation strategies:

DO NOW, lesson routines, demonstrations with targeted questioning and helpers, recipe booklets with images and written instructions, cold-call questioning - differentiated and targeted, reading tasks - ask students what next words are, choral response, think pair share, sentence starters, follow-on tasks, pause and connect, thumbs up/down, paraphrase, case studies, DIRT, group work, interactive quizzes, interactive homework platforms/tasks.

Year 9	Focus / Topic	Knowledge & Skills	Assessment
Food Preparation and Nutrition	Principles of nutrition and healthy eating applied in multicultural cuisines and adapting for special dietary requirements.	Iterative design process - Food Preparation Skills: Knife skills, weighing and measuring, testing for readiness, use of the cooker, use of equipment, sauce making, dough making, raising agents, combing and shaping mixtures, marinating, cooking methods - Food Nutrition and Health, macronutrients and micronutrients, nutritional analysis - Food Science, gelatinization, coagulation, maillard reaction - Food Safety, food hygiene - Food Choice, types of cuisine and cultural and religious influences, special diets, costing - Food Provenance	- Self-assessment booklet - completed for all practical tasks - Food Preparation Skills - verbal feedback, self-assessment, project dish - Food Nutrition and Health - diet and health quiz, nutritional needs through life quiz - Food Science- practical work and self-assessment - Food Safety- safety quiz, practical work - Food Choice- religion and food choice quiz

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			Assessment fortnight: Year 9 assessment fortnight Autumn term checking for mastery Year 9 assessment fortnight Summer term checking progress
Product Design	Design Brief: Design, Develop and Manufacture a timber mechanical toy using a range of tools, machines, joining techniques and mechanisms	• Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations • Properties of Timbers • Manufacturing with Timbers • Mechanisms • Practical Skills Manufacturing (Timber joints and Mechanisms) • Fundamentals of Product Design • Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture • Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions • Iterative Design Process	These topics will be assessed in a written assessment during assessment week • Tools and Machinery processes • Aesthetics and Ergonomics • Properties and uses of timbers • Timber Joints • Mechanisms • Adhesives • Responding to Specifications • Prototyping • Producing Design Ideas from a Specification. • Quality Control and Quality Assurance • Iterative Design Process Assessment fortnight: Year 9 assessment fortnight Autumn term checking for mastery Year 9 assessment fortnight Summer term checking progress

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further Information

Each group rotates between the different subjects each year over three years forming a carousel. The year group is split into mixed ability Technology sets and are timetabled for four fifty minute periods per fortnight. The subjects in the rota are Food Preparation and Nutrition, Product Design and Computing. Each unit is a term in length.

website: <https://www.chace.enfield.sch.uk/curriculum-technology/>

In Design and Technology, students will develop the skills to:

to engage in an iterative process of designing and making, working in a range of domestic and local contexts [for example, the home, health, leisure and culture], and industrial contexts [for example, engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion]. Designing, making, evaluating, technical knowledge and understanding, cooking and nutrition.

DFE Subject content: [National Curriculum - Design and technology key stages 3 and 4](#)