KS3 Long Term Curriculum Plan: Design and Technology Year 7,8&9 2025-26

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 three fifty minute periods per fortnight for a term for each technology subject- Food, product Design and Textiles.*

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-nutrients - Quiz ● Micro-nutrients - Quiz ● Food Choice- Quiz Assessment fortnight: Year 7 fortnight beginning 2nd Feb, 2026 Year 7 fortnight beginning 8th June 2026

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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 fortnight beginning 2nd Feb, 2025 Year 7 fortnight beginning 8th June 2026

Textiles	Design Brief: Design and make a monster/fugly using hand sewing techniques	• **Iterative design process** • Develop an understanding of hand sewing techniques • Develop knowledge of a range of finishing techniques- decorative stitch, applique, pattern making • Understand the knowledge and skills required to engage in an iterative process of designing and making. • select from and use specialist tools, techniques, processes, equipment and machinery precisely • Demonstrate appropriate health & safety practices within the textile classroom • Develop knowledge and understanding of fibre origins and the properties of fabrics	These topics will be assessed in a written assessment during assessment week • Health & Safety in the textiles • Moodboard creation • Fibre origins • Fabric properties • Hand sewing techniques Assessment fortnight: Year 7 fortnight beginning 2nd Feb, 2025 Year 7 fortnight beginning 8th June 2026

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Link to prior learning: *We build on the Year 7curriculum 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 Textiles.*

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 • 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 fortnight beginning 13th October, 2025 Year 8 fortnight beginning 8th June 2026
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 solutions	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. • Quality Control and Quality Assurance

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		• Iterative Design Process	Assessment fortnight: Year 8 fortnight beginning 13th October, 2025 Year 8 fortnight beginning 8th June 2026

Textiles	Design Brief: Design and make an environmentally friendly bag which is an alternative to a disposable supermarket bag.	• **Iterative design process** • Develop an understanding of sustainability and the environment. • Develop knowledge of a range of sewing techniques- use of the sewing machine, iron on transfer, hemming, seams, pattern making, use of tailor's chalk • Understand the knowledge and skills required to engage in an iterative process of designing and making. • select from and use specialist tools, techniques, processes, equipment and machinery precisely • Demonstrate appropriate health & safety practices within the textile classroom • Logo design	These topics will be assessed in a written assessment during assessment week • Health & Safety in the textiles • Iterative design process- Moodboard creation, research • Sewing machine test • Logo design • Iterative design process Assessment fortnight: Year 8 fortnight beginning 13th October, 2025 Year 8 fortnight beginning 8th June 2026

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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 - quizzes • Food Science- practical work and self-assessment • Food Safety- practical work • Food Choice- quizzes Assessment fortnight: Year 9 fortnight beginning 2nd February 2026 Year 9 fortnight beginning 8th June 2026
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 fortnight beginning 2nd February 2026

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			Year 9 fortnight beginning 8th June 2026

Textiles	Design Brief: Design and make an environmentally friendly bag which is an alternative to a disposable supermarket bag.	• **Iterative design process** • Develop an understanding of sustainability and the environment. • Develop knowledge of a range of finishing techniques- applique, batik, tie dye • Understand the knowledge and skills required to engage in an iterative process of designing and making. • select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture • Demonstrate appropriate health & safety practices within the textile classroom • Understand and use the properties of materials to achieve functioning solutions. (Fibre Classification: Natural and manufactured fibres)	These topics will be assessed in a written assessment during assessment week • Health & Safety in the textile industry • Fibre Classification. Natural and manufactured fibres • Fabric properties • Sustainability • Wash codes • Research • Evaluation • Maths in technology Assessment fortnight: Year 9 fortnight beginning 2nd February 2026 Year 9 fortnight beginning 8th June 2026

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further Information

- Each group rotates between four different subjects over two years forming a carousel. The year group is split into four bands by the school (E, F, G and H). These are sub- divided into mixed ability Technology sets and are timetabled for three fifty minute periods per fortnight. The subjects in the rota are Food Preparation and Nutrition, Product Design and Textiles Technology. 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:
- Skills needed 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