



[Design and Technology] Curriculum Map

Design and Technology Curriculum Intent Overview

Our Design and Technology curriculum is ambitious, creative and inclusive, it equips pupils with the knowledge, skills and confidence to solve problems, think creatively and respond to real-world challenges through designing and making.

Pupils learn to design, make and evaluate products while considering function, sustainability and the needs of users. Through this, they become resilient, independent and reflective learners.

By the end of Key Stage 4, pupils will be able to:

- Apply the iterative design process independently
- Research and investigate user needs
- Generate and communicate creative design ideas
- Use specialist tools, materials and equipment safely and accurately
- Understand materials, components and manufacturing processes
- Evaluate products against specifications and user needs
- Understand wider issues such as sustainability, ethics and environmental impact
- Apply mathematical and scientific knowledge within practical contexts

The curriculum develops knowledge and skills across four key areas:

Designing

- Researching and identifying user needs
- Developing creative ideas and specifications
- Communicating ideas through sketching, modelling and CAD

Making

- Using tools, machinery and equipment safely
- Selecting appropriate materials and processes

Evaluating

- Analysing existing products and designers
- Testing and refining prototypes
- Evaluating outcomes against specifications

Technical Knowledge

- Materials and their properties

- Manufacturing processes and emerging technologies

How the Curriculum Builds Cultural Capital

The curriculum broadens pupils' understanding of the world through exposure to influential designers, engineers and technological developments from different cultures and time periods. Pupils explore how design impacts society, the environment and everyday life.

Enrichment opportunities, practical experiences and real-world design contexts help pupils develop confidence, creativity and an appreciation of innovation and craftsmanship.

How the Curriculum Prepares Pupils for Next Stages

The curriculum provides pupils with the knowledge and practical skills needed for success at GCSE Design and Technology and related vocational courses. Pupils develop transferable skills including creativity, teamwork, communication, resilience and problem-solving.

The subject also supports future pathways in areas such as engineering, product design, construction, architecture and the creative industries.

A Grade 7 student demonstrates:

- Creative and well-developed design ideas
- Secure understanding of materials, processes and technical principles
- High-quality practical outcomes completed accurately and independently
- Effective use of research and iterative design development
- Detailed evaluation using subject-specific vocabulary
- Strong understanding of sustainability and user needs
- Confident communication through sketches, modelling and annotation

These pupils work independently, solve problems effectively and produce outcomes that are functional, innovative and technically accurate.

	HT1	HT2	HT3	HT4	HT5	HT6	Assessment Criteria
Year 7	Unit: Tangrams	Unit: Tangrams	Unit: Food Technology	Unit: Food Technology	Unit: Monster	Unit: Monster	By end of year pupils can...
National Curriculum • 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	Knowledge: Introducing students to Design and Technology - understanding DT and the different subject areas. Introducing Timbers, material selection, sustainability and material waste. Skills: • Measuring • Cutting • Use of Hand Tools • Workshop Health and safety	Knowledge: Introducing students to Design and Technology - understanding DT and the different subject areas. Introducing Timbers, material selection, sustainability and material waste. Skills: • Measuring • Cutting • Use of Hand Tools • Workshop Health and safety	Knowledge: Introducing students to food technology, healthy eating the basics, cooking methods and raising agents. Skills: • Basic knife skills • Using the hob • Using the cooker • Working safely in the kitchen	Knowledge: Introducing students to food technology, healthy eating the basics, cooking methods and raising agents. Skills: • Basic knife skills • Using the hob • Using the cooker • Working safely in the kitchen	Knowledge: Introducing students to textiles, material categories/fabrics properties. Introducing the iterative design process. Skills: • Hand sewing skills • Introduction to the sewing machine • Designing a product	Knowledge: Introducing students to textiles, material categories/fabrics properties. Introducing the iterative design process. Skills: • Hand sewing skills • Introduction to the sewing machine • Designing a product	Understand the impact that making new products can have on the environment. Be able to design and make products following a design brief. Be able to evaluate their own practical outcomes against a success criteria. Understand the basics of healthy eating. Understand the importance of hygiene in a food setting.
	Prior links :						

products and the work of others understand and apply the principles of nutrition and learn how to cook.	Limited basic knowledge gained at KS2 Future links:	Prior links: Limited basic knowledge gained at KS2 Future Links:	Prior links: Limited basic knowledge gained at KS2 Future Links:	Prior links: Limited basic knowledge gained at KS2 Future Links:	Prior links: Limited basic knowledge gained at KS2 Future links:	Prior links: Limited basic knowledge gained at KS2 Future links:	Be able to show basic knife skills and to work safely with oven/hob.
	Assessment: Autumn 1 end of term assessment. Practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: Autumn 1 end of term assessment. Practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: End of year assessment. practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	
Year 8 National Curriculum - 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	Unit: Textiles (Fibres – Weaving/Felting) Knowledge: Students learn the different processes of how fabrics are made and how these processes can affect the physical and working properties of the materials. Skills: - Weaving - Wet Felting Prior Links : Material categories and properties covered in Y7 Future links:	Unit: Keyrings - Graphic design. Knowledge: Students introduced to graphic design. Students will learn the importance of communicating design ideas and branding. Students will be introduced to CAD/CAM Skills: - Isometric drawing - One point perspective drawing - Using 2D design Prior Links: Designing monster toy at KS3. Future links:	Unit: Acrylic Clocks Knowledge: Students will be introduced to different design movements and their importance in history. Students will focus on the design style ‘Memphis’ Introducing Polymers, material properties/selection and sustainability. Developing knowledge of the iterative design process. Skills: - Designing in the style of - Card modelling/prototyping - Measuring, Marking, Cutting - Quality control - Finishing techniques Prior Links: Measuring, marking, cutting – designing the monster/keyring projects. Future links:	Unit: Acrylic Clocks Knowledge: Students will be introduced to different design movements and their importance in history. Students will focus on the design style ‘Memphis’ Introducing Polymers, material properties/selection and sustainability. Developing knowledge of the iterative design process. Skills: - Designing in the style of - Measuring, Marking, Cutting - Quality control - Finishing techniques Prior Links: Measuring, marking, cutting – designing the monster/keyring projects. Future links:	Unit: Food Technology Knowledge: Students develop knowledge on nutritional needs focusing on macro and micronutrients. Students introduced to staple foods – Wheat and rice. Skills: - Frying - Making a Roux (Cheese sauce) - Baking Prior Links: Eatwell guide and basic nutrition from Y7. Building on skills learned in Y7 (Knife skills, using the cooker/hob) Future Links:	Unit: Food Technology Knowledge: Students develop knowledge on nutritional needs focusing on macro and micronutrients. Students introduced to staple foods – Wheat and rice. Skills: - Frying - Making a Roux (Cheese Sauce) - Baking Prior Links: Eatwell guide and basic nutrition from Y7. Building on skills learned in Y7 (Knife skills, using the cooker/hob) Future Links:	By end of year pupils can... Understand the basics of fabric creation and how this affects the physical and working properties of fabrics. Understand the importance of logos and branding and be able to create a design using 2D design. Students will show knowledge of different design movements and their key characteristics and be able to design and create a product in the style of a design movement. Students understand the properties of and the sustainability issues around the use of polymers in products. Students understand the terms macro and micronutrients, where they come from and how our body uses them. Students understand the importance of staple foods in

							the diets of people around the world. Students can cook a range of dishes using skills – Making a roux, stir frying, and baking using a raising agent.
	Assessment: Autumn 1 end of term assessment. Practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: Autumn 1 end of term assessment. Practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: End of year assessment. practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	
Year 9 National Curriculum - 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	Unit: Graphics - Technical drawing Knowledge: Understanding the importance of technical drawings in the design industry. Skills: - One, two and three point perspective drawing - Isometric drawing - Exploded drawings Prior/Future links:	Unit: Architecture Knowledge: gain knowledge of architects from around the world. Understand challenges faced in the future around population, space, housing. Designing a building for the future. Skills: - Designing and design communication - Cardboard modelling techniques - Material selection Prior Links: Future links:	Unit: Food Technology Knowledge: Students gain knowledge on food choices including; food labelling, allergens, British and international foods. Students will learn about food provenance, where our food comes from and food sustainability. Skills: - Denaturation and coagulation of proteins (meringue and Quiche) - Reduction sauces (bolognaise) Prior Links: Future links:	Unit: Food Technology Knowledge: Students gain knowledge on food choices including; food labelling, allergens, British and international foods. Students will learn about food provenance, where our food comes from and food sustainability. Skills: - Denaturation and coagulation of proteins (meringue and Quiche) - Reduction sauces (bolognaise) Prior Links: Future links:	Unit: Fashion Design Knowledge: Understanding of different illustration techniques used in the fashion industry. The importance of product analysis in the design process. Skills: - Use of iterative design process - Product analysis (bags) - Illustration skills (continuous line, collage) - Design a collection of garments Prior Links: Future Links:	Unit: Fashion Design Knowledge: Understanding of different finishing techniques used on textiles. History of fashion design and textiles design from arounds the world. Skills: - Creating a pattern using a motif - Creating a stamp - Using fabric dyes to create a repeating pattern Prior Links: Future links:	By end of year pupils can.. Students know the importance of technical drawings and design communication. Students can develop design ideas and present them using appropriate communication techniques. Students can show an understanding of where food comes from and the problems faced by climate change and growing populations. Students can identify the functional and chemical properties/changes in foods they have cooked. Students can identify and use a range of illustration techniques Students can identify different finishing techniques used in the textiles industry. Students will research textile history and can identify different clothing/patterns from different cultures. Students will create a motif/repeating pattern to recreate a pattern from a specific culture/time.
	Assessment: Autumn 1 end of term assessment. Practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: Autumn 1 end of term assessment. Practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	Assessment: End of year assessment. practical & homework tasks. Teacher marking Self/peer assessment Whole class feedback	

Year 10	Unit: Core Technical Principles 1.1 1.2 1.3 Knowledge: Core technical principles give pupils an understanding of materials, components, systems and manufacturing processes used in designing and making products. Pupils learn how products function, how materials perform and how design decisions are influenced by factors such as sustainability, ethics, industry and emerging technologies. This knowledge enables pupils to apply scientific and mathematical understanding to solve practical problems and create effective, high-quality design solutions. Skills: - Understanding how new and emerging technologies impact design - Investigating and analysing existing products Prior/Future links: KS3 Material Categories Woodworking/Textiles	Unit: Specialist Technical Principles/Workshop Skills 2.1 2.2 2.3 2.4 2.5 Knowledge: Specialist technical principles develop pupils' deeper understanding of specific materials, processes and manufacturing techniques within their chosen area of study. Pupils learn how specialist materials and components are selected, processed and used to create functional and high-quality products. This knowledge allows pupils to make informed design decisions, apply technical accuracy and understand how industrial practices influence modern product design and manufacture. Skills: - Selecting and using appropriate materials and processes - Applying technical knowledge to solve design problems Prior/Future links: KS3 The 6R's KS3 Specialist tools and processes	Unit: Specialist Technical Principles/Workshop Skills 2.1 2.2 2.3 2.4 2.5 Knowledge: Specialist technical principles develop pupils' deeper understanding of specific materials, processes and manufacturing techniques within their chosen area of study. Pupils learn how specialist materials and components are selected, processed and used to create functional and high-quality products. This knowledge allows pupils to make informed design decisions, apply technical accuracy and understand how industrial practices influence modern product design and manufacture. Skills: - Selecting and using appropriate materials and processes - Applying technical knowledge to solve design problems Prior/Future links: KS3 The 6R's KS3 Specialist tools and processes	Unit: Designing and Making Principles/Mock NEA 3.1 3.2 3.3 3.4 3.5 3.6 Knowledge: Designing and making principles develop pupils' understanding of the processes involved in creating successful products from initial ideas through to manufacture and evaluation. Pupils learn how environmental, social, and economic challenges influence design decisions and how design strategies such as sustainability, inclusive design, and iterative development are applied in practice. This knowledge allows pupils to communicate ideas effectively, plan and manufacture products safely and accurately, and refine outcomes through testing and evaluation to meet the needs of users and clients. Skills: - Applying design strategies to develop and refine ideas - Planning, manufacturing, and evaluating products effectively Prior/Future links: KS3 The 6R's KS3 Specialist tools and processes	Unit: Designing and Making Principles/Mock NEA 3.1 3.2 3.3 3.4 3.5 3.6 Knowledge: Designing and making principles develop pupils' understanding of the processes involved in creating successful products from initial ideas through to manufacture and evaluation. Pupils learn how environmental, social, and economic challenges influence design decisions and how design strategies such as sustainability, inclusive design, and iterative development are applied in practice. This knowledge allows pupils to communicate ideas effectively, plan and manufacture products safely and accurately, and refine outcomes through testing and evaluation to meet the needs of users and clients. Skills: - Applying design strategies to develop and refine ideas - Planning, manufacturing, and evaluating products effectively Prior/Future links: KS3 ACCESS FM KS3 The work of others KS3 Graphics/drawing skills	Unit: NEA 4.1 Skills: Section A Investigating Contexts develops students' knowledge of how existing products, user needs, sustainability, and social, moral, cultural, and environmental factors influence design opportunities. Students learn to research and analyse information to identify realistic design problems. Section B: Producing a Design Brief and Specification helps students understand how to write focused design briefs and measurable specifications based on research findings, client needs, and functional requirements. Section C: Generating Design Ideas develops knowledge of design strategies, creativity, communication techniques, modelling, and iterative design. Students learn how to explore, develop, and justify ideas while considering materials, manufacturing methods, ergonomics, and aesthetics. Prior/Future links: KS3 Design and Make projects KS3 Design strategies	By end of year pupils can... confidently apply knowledge to analyse products, justify design decisions, and solve practical problems. Students should be able to use technical vocabulary accurately, explain the impact of environmental, social, and economic factors on design, and show secure understanding of materials, manufacturing methods, systems, and modern technologies. In NEA work, students should be able to independently investigate contexts and user needs, produce a clear and detailed design brief and specification, and generate a wide range of creative, iterative design ideas using sketches, CAD, modelling, and annotation. They should demonstrate accuracy and independence when selecting materials, tools, equipment, and manufacturing processes, while working safely and efficiently in the workshop or design environment. Students should also be able to test, evaluate, and refine their ideas and prototypes using feedback, research, and technical knowledge to improve functionality, aesthetics, and usability. Students should also show: - Consistent high-quality presentation and communication of ideas - Strong problem-solving and analytical skills - Detailed and justified design decisions - Accurate use of specialist terminology - The ability to link theory knowledge directly to practical outcomes - Independence, organisation, and effective time management

							throughout the NEA process.
	Assessment: AQA Section A exam questions End of Topic Assessment	Assessment: AQA Section B exam questions End of Topic Assessment	Assessment: AQA Section B exam questions End of Topic Assessment	Assessment: AQA Section C exam questions End of Topic Assessment	Assessment: AQA Section C exam questions End of Topic Assessment	Assessment: • Verbal discussions and design reviews • Sketchbook or portfolio checks • Practical observations in the workshop • Peer and self-evaluation activities	Assessment: Mock Exam Assessment
Year 11	Unit: NEA 4.1 Skills: Section D: Developing Design Ideas develops students' knowledge of iterative design, technical drawing, modelling, material selection, and manufacturing methods. Students learn how to refine and improve ideas through testing, feedback, and technical understanding while considering functionality, aesthetics, sustainability, and user needs. Section E: Realising Design Ideas helps students understand practical manufacturing processes, quality control, workshop safety, and the accurate use	Unit: NEA 4.1 Skills: Section F: Analysing and Evaluating develops students' knowledge of testing, evaluation, and critical analysis within the design process. Students learn how to measure the success of a product against the design specification, client needs, and intended purpose. They gain understanding of how user feedback, testing results, and reflection can be used to identify strengths, weaknesses, and potential improvements, helping them recognise the importance of iterative design and continuous development in	Unit: Core Technical Principles (Revision/Exam Prep) 1.4 1.5 1.6 Knowledge: Core technical principles give pupils an understanding of materials, components, systems and manufacturing processes used in designing and making products. Pupils learn how products function, how materials perform and how design decisions are influenced by factors such as sustainability, ethics, industry and emerging technologies. This knowledge enables pupils to apply scientific and mathematical understanding to solve practical problems and create effective, high-quality design solutions.	Unit: Specialist Technical Principles (Revision/Exam Prep) 2.6 2.7 2.8 2.9 Knowledge: Specialist technical principles develop pupils' deeper understanding of specific materials, processes and manufacturing techniques within their chosen area of study. Pupils learn how specialist materials and components are selected, processed and used to create functional and high-quality products. This knowledge allows pupils to make informed design decisions, apply technical accuracy and understand how industrial practices	Unit: Designing and Making Principles (Revision/Exam Prep) 3.7 3.8 3.9 3.10 3.11 Knowledge: Designing and making principles develop pupils' understanding of the processes involved in creating successful products from initial ideas through to manufacture and evaluation. Pupils learn how environmental, social, and economic challenges influence design decisions and how design strategies such as sustainability, inclusive design, and iterative development are applied in practice. This knowledge allows pupils to communicate ideas effectively, plan and manufacture products safely and accurately, and refine outcomes through testing and evaluation to meet the needs of users and clients.	By end of year pupils can... confidently apply knowledge to analyse products, justify design decisions, and solve practical problems. Students should be able to use technical vocabulary accurately, explain the impact of environmental, social, and economic factors on design, and show secure understanding of materials, manufacturing methods, systems, and modern technologies. In NEA work, students should be able to independently investigate contexts and user needs, produce a clear and detailed design brief and specification, and generate a wide range of creative, iterative design ideas using sketches, CAD, modelling, and annotation. They should demonstrate accuracy and independence when selecting materials, tools, equipment, and manufacturing	

	of tools, equipment, and materials. Students gain knowledge of how products are manufactured to meet specifications and how problems are solved during production. These sections strengthen students' understanding of how technical knowledge, practical skills, and evaluation are combined to produce functional and high-quality design outcomes. Prior/Future links:	product design and manufacture. Prior/Future links:	Skills: - Understanding how new and emerging technologies impact design - Investigating and analysing existing products Prior/Future links: KS3 Material Categories Woodworking/Textiles	influence modern product design and manufacture. Skills: - Selecting and using appropriate materials and processes - Applying technical knowledge to solve design problems Prior/Future links: KS3 The 6R's KS3 Specialist tools and processes	Skills: - Applying design strategies to develop and refine ideas - Planning, manufacturing, and evaluating products effectively Prior/Future links: KS3 ACCESS FM KS3 The work of others KS3 Graphics/drawing skills		processes, while working safely and efficiently in the workshop or design environment. Students should also be able to test, evaluate, and refine their ideas and prototypes using feedback, research, and technical knowledge to improve functionality, aesthetics, and usability. Students should also show: - Consistent high-quality presentation and communication of ideas - Strong problem-solving and analytical skills - Detailed and justified design decisions - Accurate use of specialist terminology - The ability to link theory knowledge directly to practical outcomes - Independence, organisation, and effective time management throughout the NEA process.
	Assessment: - Verbal discussions and design reviews - Sketchbook or portfolio checks - Practical observations in the workshop - Peer and self-evaluation activities	Assessment: - Verbal discussions and design reviews - Sketchbook or portfolio checks - Practical observations in the workshop - Peer and self-evaluation activities	Assessment: AQA Section A exam questions	Assessment: AQA Section B exam questions	Assessment: AQA Section C exam questions		Assessment: GCSE Exam NEA Submission