Design and Technology Curriculum Overview
Year 7

Fareham Academy | Unlocking Potential Creating Opportunity

	Design and Technology Carousel (Approx. 14 lessons per subject)			
	Textiles	Resistant Materials	STEAM	Graphics
Unit(s)	Mini Monsters	Acrylic Key Fob	Maritime	Pop-up eCards
Unit Summary	Students design and create a unique "Mini Monster" using fabric. The project introduces design principles, annotation techniques, basic sewing methods, and finishing skills. It encourages creativity, precision, and reflection while fostering technical and artistic growth.	Students design and create an acrylic key fob, focusing on workshop health and safety, material properties, and the environmental impact of plastics. Through designing, rendering, and manufacturing, they develop technical skills using tools like coping saws, files, and the pillar drill. The unit emphasises accuracy, creativity, and sustainability while fostering independence and problem-solving. Students finish by evaluating their work and designing packaging for their product.	Students explore the intersection of Science, Technology, Engineering, Art, and Mathematics (STEAM) through a maritime-themed project. They investigate historical and artistic concepts like Dazzle Art and Edward Wadsworth's work, apply principles of buoyancy and material properties, and develop problem-solving skills in boat design. The unit culminates in creating a model ship and mixed-media artwork, encouraging creativity, innovation, and real-world application.	Explore the world of pop-up eCards by investigating typography, mark-making, and electrical circuits. Develop technical skills in card construction, integrating simple circuits into designs. Students will create a personalised pop-up eCard, showcasing their ideas, technical skills, and creativity in composition and functionality.
Unit Objectives	• Research and evaluate a chosen artist. • Generate and annotate unique monster designs using ACCESS FM. • Understand and apply seam allowance to create patterns. • Use templates to cut fabric pieces accurately.	• Identify health and safety hazards in the workshop. • Understand materials used in Resistant Materials and their environmental impact. • Develop concept sketches and detailed design specifications using ACCESS FM.	• Understand the concept of STEAM and its real-world applications. • Analyse the historical use of Dazzle Art in WWI and Edward Wadsworth's Vorticism. • Apply art techniques such as monoprinting and collage.	• Identify and analyse design briefs and existing products. • Research relevant artists and their techniques. • Create and replicate different typography styles. • Explore mark-making techniques and use them in drawings.

	• Learn and apply running stitch and hand embroidery techniques. • Refine, assemble, and finish the Mini Monster. • Reflect and evaluate the final outcome.	• Master safe and accurate use of tools like coping saws, files, and pillar drills. • Create and assemble a key fob to a high standard. • Evaluate the product and suggest improvements. • Design and create packaging for the finished product.	• Explore scientific concepts, including buoyancy, material properties, and hull design. • Develop engineering skills by designing and building a model boat. • Use evaluation techniques to reflect on artistic and technical outcomes.	• Develop and construct a pop-up eCard using electrical circuits.
Acquired Knowledge/ Skills	• Artist research and evaluation • Design generation and annotation • Pattern making and seam allowance • Running stitch and hand embroidery • Sewing and finishing techniques • Self-evaluation and reflection	• Health and safety in the workshop • Knowledge of plastics and sustainability (6Rs) • Design techniques: ACCESS FM, rendering, and sketching • Tool use: coping saws, hand files, pillar drills • Surface finishing techniques (wet and dry paper) • Adhesive use and product assembly • Product evaluation and packaging design	• Historical and artistic analysis (Dazzle Art, Vorticism) • Geometric design and monoprinting • Mixed-media composition and collage • Scientific concepts: buoyancy, material properties • Engineering skills: hull shapes, propulsion, and prototyping • Mathematical problem-solving: isometric and orthographic drawing • Health and safety in tool use	• Typography and personalised design creation • One-point perspective drawing • Mark-making and rendering • Composition and design development • Pop-up card construction techniques • Electrical circuits and labelling simple circuits • Evaluation of designs and technical execution
Assessments	Continuous assessment focuses on the four key objectives: investigating, designing, creating, and evaluating, ensuring students develop and refine their skills throughout each project.			
Other Links (e.g. SMSC, FBV, Greener Curriculum)	Greener Curriculum: Use of sustainable materials and repurposed fabrics. Fundamental British Values: Creativity, teamwork, and perseverance. Pride in the Solent: Incorporating local culture or marine-inspired designs.	Greener Curriculum: Understanding plastic use and sustainability through the 6Rs. Fundamental British Values: Promoting responsibility, resilience, and teamwork. Pride in the Solent: Connecting to local industry by highlighting practical applications of design.	Greener Curriculum: Exploring sustainable materials in shipbuilding and art. Fundamental British Values: Promoting creativity, problem-solving, and teamwork. Pride in the Solent: Connecting to local maritime heritage.	Greener Curriculum: Emphasise sustainable materials and eco-friendly design. British Values: Encourage creativity and individual expression in design. Pride in the Solent: Link pop-up card themes to local events and celebrations. UNCRC: Support the right to play and artistic creation (Article 31).

	UNCRC: Right to creative expression and skill development.	UNCRC: Supporting the right to education and skills development.	UNCRC: Supporting students' right to education and cultural expression.	

Design and Technology Curriculum Overview
Year 8

Fareham Academy | Unlocking Potential Creating Opportunity

	Design and Technology Carousel (Approx. 14 lessons per subject)			
	Textiles	Resistant Materials	STEAM	Graphics
Unit(s)	Sweet Treats	Wooden Note Holder	Maritime	#BETRUE
Unit Summary	Students create textile pieces inspired by cakes and sweet treats, combining illustration, applique, and embroidery techniques. They explore artist Mary Corbett and apply their skills to produce a personalised drawstring bag. This unit enhances technical sewing skills, artistic expression, and independent project management.	Students design and manufacture a wooden note holder, focusing on workshop health and safety, accurate measuring, and understanding the properties of wood. They explore design concepts using orthographic and rendered drawings, CAD/CAM, and traditional woodworking techniques. The unit promotes independent working, creativity, and precision, culminating in the assembly, finishing, and evaluation of a high-quality product.	Students explore the intersection of Science, Technology, Engineering, Art, and Mathematics (STEAM) through a maritime-themed project. They investigate historical and artistic concepts like Dazzle Art and Edward Wadsworth's work, apply principles of buoyancy and material properties, and develop problem-solving skills in boat design. The unit culminates in creating a model ship and mixed-media artwork, encouraging creativity, innovation, and real-world application.	Students explore branding and product design through the Nike #BETRUE campaign. They develop skills in typography, one-point perspective, and packaging design while learning how to analyse and evaluate designs. The unit focuses on inclusivity and celebrating individuality through creative outcomes.
Unit Objectives	• Create illustrations inspired by sweet treats. • Set up and practice using a sewing machine. • Research and analyse artist Mary Corbett's work. • Apply applique and basic embroidery stitches. • Use satin stitch to finish edges.	• Recall and apply workshop health and safety practices. • Analyse existing products and use research to create design ideas. • Understand and apply orthographic and rendered drawings.	• Understand the concept of STEAM and its real-world applications. • Analyse the historical use of Dazzle Art in WWI and Edward Wadsworth's Vorticism. • Apply art techniques such as monoprinting and collage.	• Identify key details in a design brief. • Use ACCESSFM to create success criteria. • Analyse pre-existing products. • Collect and present research on a chosen artist. • Develop typography and logo design skills.

	• Design, assemble, and evaluate a personalised drawstring bag.	• Use tools, machines, and CAD/CAM safely and accurately. • Develop a specification based on research using ACCESS FM. • Identify and explain wood properties and categories. • Assemble and finish a high-quality product. • Evaluate the final product and suggest improvements.	• Explore scientific concepts, including buoyancy, material properties, and hull design. • Develop engineering skills by designing and building a model boat. • Use evaluation techniques to reflect on artistic and technical outcomes.	• Understand and create a 'net' in Graphic Design. • Apply designs to products and evaluate outcomes.
Acquired Knowledge/ Skills	• Machine setup and control • Applique techniques • Basic and satin embroidery stitches • Artist research and analysis • Sewing and finishing a textile product • Independent project completion and evaluation	• Workshop health and safety • PPE identification and use • Measuring and marking accurately • Understanding wood properties and sustainability • Orthographic and 3D rendering techniques • CAD/CAM: vectorisation and laser cutting • Tool and machine use: cutting, assembling, and refining • Product evaluation and specification writing	• Historical and artistic analysis (Dazzle Art, Vorticism) • Geometric design and monoprinting • Mixed-media composition and collage • Scientific concepts: buoyancy, material properties • Engineering skills: hull shapes, propulsion, and prototyping • Mathematical problem-solving: isometric and orthographic drawing • Health and safety in tool use	• Design brief analysis • Product evaluation using ACCESS FM • Typography replication • One-point perspective drawing • Net design and application • Branding and logo development • Packaging design skills • Product evaluation techniques
Assessments	Continuous assessment focuses on the four key objectives: investigating, designing, creating, and evaluating, ensuring students develop and refine their skills throughout each project.			
Other Links (e.g. SMSC, FBV, Greener Curriculum)	Greener Curriculum: Sustainable use of materials and promoting reuse. Fundamental British Values: Creativity, independence, and perseverance.	Greener Curriculum: Emphasis on sustainable wood use and reducing waste. Fundamental British Values: Promoting independence, resilience, and teamwork.	Greener Curriculum: Exploring sustainable materials in shipbuilding and art. Fundamental British Values: Promoting creativity, problem-solving, and teamwork.	Greener Curriculum: Sustainable design practices in packaging. Fundamental British Values: Promoting diversity and inclusivity. Pride in the Solent: Celebrating individual expression and local creativity.

	Pride in the Solent: Opportunities to reference local inspirations in designs. UNCRC: Right to creative expression and skill development.	Pride in the Solent: Showcasing local craftsmanship and design applications. UNCRC: Supporting skills development and the right to quality education.	Pride in the Solent: Connecting to local maritime heritage. UNCRC: Supporting students' right to education and cultural expression.	UNCRC: Right to education and expression through art and design.

Design and Technology Curriculum Overview
Year 9

Fareham Academy | Unlocking Potential Creating Opportunity

	Design and Technology Carousel (Approx. 14 lessons per subject)			
	Textiles	Resistant Materials	Food and Nutrition	Graphics
Unit(s)	Adinkra Cloth	LED Desk Lamp	World Food	Fish and Chips
Unit Summary	Students design and create an Adinkra-inspired cloth pouch, exploring traditional African symbols and applying the batik technique. They enhance their sewing skills through free-motion and satin stitching, culminating in a functional, decorative textile piece. Reflection and evaluation are integrated to develop critical thinking.	Students design and manufacture an LED desk lamp inspired by the theme of nature. This project integrates research, design, and practical skills, focusing on product analysis, isometric drawing, and understanding materials like metals and plastics. Students develop safe workshop practices while assembling a working lamp, incorporating electronics and soldering. The unit concludes with an evaluation of the final product, reflecting on design and functionality.	Students explore global food cultures, sustainable practices, and the science behind food preparation. They develop practical cooking skills by creating dishes from various cultures while understanding the role of macronutrients, additives, and raising agents. The unit promotes reflection on food sustainability and cultural diversity.	Students explore branding and design concepts by creating a logo and merchandise for a fictional fish and chip shop. They learn about logo rules, isometric drawing, and rendering techniques while developing digital design skills in Photoshop. The unit encourages creativity and professional presentation.
Unit Objectives	• Research and analyse Adinkra patterns. • Develop unique initial ideas and refine into a final design. • Practise and apply the batik technique and Procion dye. • Learn and use free-motion and satin stitching.	• Recall and apply workshop health and safety. • Understand the design brief and create a mind map of ideas based on the theme of nature. • Analyse existing lamps using ACCESS FM and develop a detailed specification. • Use tools and machines safely to construct a lamp stand.	• Revise the components of a healthy diet and macronutrient roles. • Understand the effects of macronutrient deficiencies. • Explore food sustainability and food miles. • Investigate global food cultures.	• Identify a design brief and highlight key information. • Use ACCESSFM to create a success criteria. • Understand key branding and logo design principles. • Develop initial and refined logo designs.

	• Construct a functional pouch and evaluate the completed project.	• Create and render a 3D isometric drawing of the lamp. • Understand the properties and uses of metals and plastics. • Use the strip heater, vacuum former, and die accurately and safely. • Assemble and solder a working circuit. • Evaluate the final product and suggest improvements.	• Understand the science of additives and raising agents. • Prepare and evaluate culturally significant and sustainable dishes.	• Apply isometric drawing and rendering techniques. • Create digital logo designs and merchandise using Photoshop. • Evaluate outcomes and present work effectively.
Acquired Knowledge/ Skills	• Cultural research (Adinkra patterns) • Batik technique with procion dye • Free-motion and satin stitching • Sewing machine setup and operation • Product assembly and finishing • Critical evaluation of creative work	• Workshop safety and tool use • ACCESS FM for product analysis • Specification writing • Isometric drawing and rendering • Plastic bending (strip heater) and shaping (vacuum former) • Metal threading with a die • Understanding material properties • Circuit assembly and soldering • Product assembly and evaluation	• Nutritional knowledge and balanced diets • Sustainable food practices • Global food culture appreciation • Understanding food miles and their impact • Additives and raising agents in food science • Practical cooking techniques for dishes like Chow Mein and Blueberry Muffins	• Design brief analysis • ACCESS FM for product evaluation • Logo design principles (composition, colour theory, typography) • Isometric drawing and rendering • Photoshop skills for logo creation and merchandise design • Branding and professional presentation techniques • Critical evaluation and mood board creation
Assessments	Continuous assessment focuses on the four key objectives: investigating, designing, creating, and evaluating, ensuring students develop and refine their skills throughout each project.			
Other Links (e.g. SMSC, FBV, Greener Curriculum)	Greener Curriculum: Use of sustainable materials and traditional methods. Fundamental British Values: Appreciation of global cultural heritage and personal responsibility in crafting.	Greener Curriculum: Exploring sustainable material use and energy-efficient LED lighting. Fundamental British Values: Encouraging individual creativity and teamwork.	Greener Curriculum: Focus on sustainability and food miles. Fundamental British Values: Cultural appreciation and respect. Pride in the Solent: Local and global culinary influences.	Greener Curriculum: Sustainable product and packaging design considerations. Fundamental British Values: Individual creativity and respecting diverse ideas.

	Pride in the Solent: Local connections to multicultural influences. UNCRC: Right to cultural exploration and skill development.	Pride in the Solent: Highlighting local innovation in design and manufacturing. UNCRC: Supporting skills development and the right to quality education.	UNCRC: Right to cultural education and developing life skills.	Pride in the Solent: Celebrating the local heritage of fish and chips. UNCRC: Right to education and creative expression through design.