

Year 7 Design Technology Curriculum Overview

DT Subjects taught on rotation throughout the year: Design Communication, Textiles, CAD/CAM & Food Science

Year 7

2026/27

CAD/CAM

Rotation Topic: Promotional Products

Computer Aided Design/Computer Aided Manufacture: Introduction to 2D and 3D modelling software, Automation in industry

Investigation

- Pro's and cons of CAD/CAM
- How CAD/CAM is used in industry
- Investigating the work of relevant designers

Design

- Logo design, exploring the use of typography and colour
- Hand rendered and digitally drawn fish designs
- Poster sketches using ideation

Make

- 2D design tools
- Laser cutting
- iPad drawing using brushes/ ibis pro app

Evaluation

- Design development
- Evaluation of final outcome against brief

Learning Objectives

Assessment

Assessment:

- Effort and participation
- Creativity
- Attention to detail
- Presentation of all work
- Completion of extension tasks
- Generation of design ideas
- Annotation
- Development of ideas
- Application of digital skills

Challenge

Challenge

- Complex compositional design
- Creating own typography and key visual
- Apply own logo of aquarium
- Fine attention to detail in both hand and digital format

Exam

Annual Exam Week Topics:

- Pro's and cons of CAD/CAM
- Key topic terminology
- Designing for a specific user
- Colour theory
- Logo design

/OR (second half of term)

End of Rotation Topic Test:

- Typography
- Pro's and cons of CAD/CAM
- Key topic terminology
- Designing using the fundamental elements of graphic design

Further Learning

Homework:

Marked in line with the Kingsdale ESD code

Enrichment

Year 7 iPad club
KS3 Textiles after school club
The Big Draw Competition

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TEXTILES TECHNOLOGY

Rotation Topic: Worry Monster with E-Textiles

Understanding the possibilities of fabric manipulation through hand tools, integration of electronics, impact of technology on society.

Learning Objectives

Investigation

- ACCESS FM
- H&S in the workshop
- Properties of material
- Researching the work of others
- Electronic Systems
- Aesthetics

Design

- Designing a soft toy to a brief
- Illustrating to clearly reflect ideas, along with annotation
- Including a functioning electronic element

Manufacture

- Using correct Textile materials and equipment
- Creating a paper pattern
- Hand stitch and embroidery techniques
- Functionality against set criteria
- QA/QC

Evaluation

- Embroidery and appliqué samples
- Testing LED element
- Outcome: Hand stitched felt monster including electronics

Assessment

- Effort and Participation
- Presentation
- Extension tasks
- Research
- Design Brief & Specification
- Generation of design ideas
- Annotation / Evaluation
- Work of others / emerging technologies / design impact
- Development of ideas
- Tool confidence
- Health & Safety
- Material Knowledge
- Electronics
- Testing & Evaluation

Challenge

Challenge

- More complex design
- Inclusion of more detailed hand embroidery and appliqué
- More complex electronic elements- eg 2 LEDs, complex battery case

Exam

Annual Exam Week Topics:

- Recollection of ACCESS FM and other subject specific terminology
- Understanding of hand sewing and embroidery techniques
- Understanding simple electronic circuits
- Designing to fulfil a brief
- Neat drawing and annotation

/OR (second half of term)

End of Rotation Topic Test:

- Use of subject specific terminology
- Understanding of hand sewing and embroidery techniques
- Understanding simple electronic circuits
- Designing to fulfil a brief
- Neat drawing and annotation

Further Learning

Homework:

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DESIGN COMMUNICATION

Rotation Topic: 3D Paper Craft /Jumping Jack/Cubee Craft

Design communication and Modelling: Understanding possibilities of paper and card modification 2D to 3D, rendering and shading skills, exploring mechanisms and branding through exploration of cultural identity

Learning Objectives

Investigation

- ACCESS FM
- Exploration of different cultures
- Researching the needs of children ages 4-7
- Past and present Puppets and 3D dolls
- Mechanical/ Movement Systems

Design

- Ideation and annotation
- Prototyping of jumping jack mechanisms
- Illustration design that reflects cultural heritage
- 3D net design

Make

- Careful use of colour and illustration using fine liner and watercolour pencils
- Mechanism manufacture using split pins & string
- 3D construction of net designs

Evaluation

- Prototype development
- Evaluation of final outcome against brief

Assessment

Assessment

- Effort and Participation
- Presentation of book work and outcomes
- Fulfilment of Design Brief & Specification
- Development of design ideas
- Annotation / Evaluation
- Material Knowledge
- Testing & Evaluation

Challenge

Challenge

- Applying 3D origami elements
- Adding extra appendages and joints, to refine their 3D outcomes
- More complex drawing skills using tones and textures

Exam

Annual Exam Week Topics:

- Recollection of ACCESS FM and other subject specific terminology
- Understanding of mechanical/ movement systems
- Designing to fulfil a brief
- Neat drawing and annotation

/OR (second half of term) End of Rotation Topic Test:

- Use of subject specific terminology
- Understanding of mechanical/movement systems
- Neat drawing and annotation

Further Learning

Homework:

Marked in line with the Kingsdale ESD code

Enrichment

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Year 7	FOOD SCIENCE Topic: Food and Cooking
Learning Objectives	Outcome: Prepare and Cook a variety of dishes. See Year 7 Food Science Curriculum Map for more info. Design and Technology Skills: - Effort and Participation - Preparation of Food - Kitchen tools - Extension tasks - Research - Design - Health & Safety - Testing & Evaluation
Assessment	Annual exam week beginning 24/03/23 Or End of unit Topic Test Practical Skills: To cook a range of dishes safely and hygienically and to apply their knowledge of healthy eating. Measuring liquids accurately Weighing and measuring accurately Rubbing in method Peeling, slicing and layering ingredients Food safety and hygiene when cooking Theory: The Eatwell Plate Healthy Eating The origin of starchy Foods The origin of milk and dairy products The origin of meat, fish, eggs and beans Energy Balance Lifestyle and Culture Seasonality, price and availability
Challenge	To cook a range of dishes safely and hygienically and to apply their knowledge of nutrition. In addition, they will consider the factors that affect food choice, food availability and food waste.
Extra - Curricular	After school cooking club – The Love of Food

Wee k	Learning objectives:	Homework:
1.1	To explain the layout of the food room. To introduce pupils to the My learning journey booklet (progress tracker). To recognise, name and locate the tools and equipment in the food room. To describe the expectations for working in the food room. To explain and apply health and safety practices used.	
1.2	Lesson 1 Health and Safety in a Food Room To learn the Health and Safety practices used in a food room.	Health and Safety in Kitchen
2.1	Lesson 2 Accurate Measurement To learn to use a range of measuring equipment accurately	
2.2	Practical Lesson – Test To apply the accurate measurement skills/knowledge to make a dozen of cupcake	
3.1	Lesson 3 All-in-One Cake To learn the all-in-one theory and the function of ingredients	Terminology
3.2	Demonstrate how to handle and use chef knife. To complete the ‘Knife Proficiency’ test.	
4.1	Lesson 4 and 5 Delicious deli Salad Cooking method – boiling and simmering Knife skills – cut potatoes to even size; to cut chieves to small pieces Health and Safety – demonstrate the safe use of hobs and drain hot liquid Food Science - emulsion	Oven and Stove Top worksheet
4.2	Practical Lesson – to make the Deli Potato Salad	
5.1	Lesson 6 booklet To learn about the principle of the Eatwell Guide in relation to healthy diet	Food Diary
5.2	Continue with Lesson 6	
6.1	Lesson 7 and 8 Vegetable Soup Cooking methods – sauté; boiling, simmering To demonstrate a soup using seasonal vegetable To learn chemical function of caramelisation and gelatinization To learn to use an electric liquidiser	To practise the skills learnt in lesson
6.2	Practical lesson – to create a soup with seasonal vegetable	
7.1	Lesson 9 Pizza Toast - Demonstration Appliance – use of grill Knife skills – slice and dice Food Science – dextrinization	To create a healthy pizza toast
7.2	Practical lesson – to make the pizza toast	
8.1	Lesson 10 Starchy Food Focus – Theory Where starchy foods come from and its nutrition value What happens to starch when dry and moist heat is applied.	Bread, Rice, Potatoes, Pasta and other Starchy Food worksheet.
8.2	Lesson 11 Something Fishy – Demonstration Cooking Method – oven bake Food hygiene – how to deal with high-risk food Skills – cut fish to finger size; coating the fish	To apply the skills learnt in school at home.
9.1	Practical lesson – to make Fish Goujons	
9.2	Lesson 12 In the dairy – Theory To find out where milk and dairy food come from Discuss the alternative dairy products for different dietary needs	Food Poisoning
10.1	Plenary To appraise and evaluate their learning journey. To evaluate their practical cooking experiences.	
10.2	Practical Lesson – A Treat: Kingsdale Famous Brownies	

Year 8 Design Technology Curriculum Overview

DT Subjects taught on rotation throughout the year: Resistant Materials, Design Communication, Textiles & Food Science

Year 8
2026/27

TEXTILES TECHNOLOGY

Rotation Topic: Bags For Life

Understanding the possibilities of manipulation fabrics using sewing machines and embroidery, Consideration of environmental impacts, designers' responsibility

	Investigation	Design	Make	Evaluation
Learning Objectives	- Textile materials and equipment - Life Cycle Assessment 6Rs of Sustainability - ACCESS FM - Exploring the work of others - Aesthetics	- Moodboard - Appliqué sample - Initial and final designs - Meeting the design brief to show an environmental issue - Annotation	- Print / Tie-Dye / Technique Sampling - Appliqué / Hand embroidery - Using a sewing machine - Creating a paper pattern - Bag construction (seam allowance, facing), attaching handles) - Final outcome in sustainable and upcycled materials - QA/QC	- Appliqué and embroidery sample - Tie dye and print samples - Design ideas - Outcome against brief criteria to create a sustainable tote bag with machine and hand sewing, tie dye, appliqué and embellishments

	Assessment	Challenge	Exam	Further Learning
	Assessment - Effort and Participation - Presentation - Research & Extension tasks - Generation of design ideas - Annotation - Work of others / emerging technologies / design impact - Development of ideas - Textile specific Tool confidence - Health & Safety - Textile Material Knowledge - Testing & Evaluation	Challenge - Differentiated success criteria: all/most/some. - More complex design, including front and back. - More complex hand embroidery - Inclusion of upcycled elements e.g. pockets, handles, appliqué	Annual Exam Week Topics: - Recollection of ACCESS FM, 6R's, LCA of Textiles and other subject specific terminology - Understanding of hand sewing and embroidery techniques - Understanding other Textile decorative techniques: tie dye, Shibori, relief printing, applique - Designing to fulfil a brief - Neat drawing and annotation /OR (second half of term) End of Rotation Topic Test: - Recollection of ACCESS FM, 6R's, LCA of Textiles and other subject specific terminology - Understanding of hand sewing and embroidery techniques - Understanding other Textile decorative techniques: tie dye, Shibori, relief printing, applique - Designing to fulfil a brief - Neat drawing and annotation	Homework: Marked in line with the Kingsdale ESD code Enrichment KS3 Textiles after school club The Big Draw Competition

Year 8 Design Technology Curriculum Overview

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Year 8
2026/27

DESIGN COMMUNICATION

Rotation Topic: Primary School Playground

Contextual challenge: Understanding and identifying the needs of others through designing, presenting ideas and team work.

	Investigation	Design	Make	Evaluation
Learning Objectives	• User wants and needs • Investigation of materials and shapes. • Work of others • Working in teams/time management • Emerging technologies • Design impact/Role of the designer • Aesthetics • Similar product Analysis • Brief to specification	• Thumbnails – ideation • Sketch model • Communication model • Development towards function • Development toward aesthetics	• Rapid prototyping using recycled materials • Isometric and Orthographic Drawings • CAD/CAM designs	• Testing for functionality • Peer review against prototype • Testing against specification

	Assessment	Challenge	Exam	Further Learning
	Assessment • Effort and Participation • Creativity • Attention to detail • Presentation of all work • Completion of extension tasks • Generation of design ideas • Annotation • Development of ideas • Tool confidence • Independent application of Health & Safety • Material Knowledge	Challenge • Differentiated success criteria: all/most/some. • Use of nets to create more complex 3D structures • to create refined aesthetic design • create packaging for their product	Annual Exam Week Topics: • Design to fulfil brief • Understanding of user needs • Understanding of materials • Understanding of Aesthetics /OR (second half of term) End of Rotation Topic Test: • Design to fulfil brief • Understanding of user needs • Understanding of materials • Understanding of Aesthetics	Homework: Marked in line with the Kingsdale ESD code Enrichment Young Makers

Year 8 Design Technology Curriculum Overview

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Year 8

2026/27

RESISTANT MATERIALS

Rotation Topic: Timber Animal Box

Understanding and exploring possibilities of timber manipulation through hand tools and workshop machinery, wood joints, Health and Safety, Material impact and origin

	Investigation	Design	Manufacture	Evaluation
Learning Objectives	• H&S in the workshop • Timber origin/source and impact • User wants and needs • Investigation of materials and shapes. • Work of others • Working in teams/time management • Emerging technologies • Aesthetics • Brief to specification	• Animal decoration Thumbnail • Card Prototyping and development • Final design – 3D in colour with annotation	• Marking out • Tenon saw • Chisel and Mallet • Belt sander • Fret saw • Finishing techniques • Joining techniques • Pillar drill • Timber finish/Stain/Sanding • Sealant/Vinyl decoration	• Testing for functionality • Testing against specification • Prototype development • Final outcome functionality against set criteria

	Assessment	Challenge	Exam	Further Learning
	Assessment • Effort and Participation • Creativity • Attention to detail • Presentation of all work • Completion of extension tasks • Generation of design ideas • Annotation • Development of ideas • Tool confidence • Independent application of Health & Safety • Material Knowledge	Challenge • More complex design • Design fully resembles design idea • Stained finish to the timber box • Addition of acrylic components • Vinyl detail	Annual Exam Week Topics: • Health and safety in the workshop • Tools and machines • Timber origin and groups • Timber manipulation • Quality Control • Design consideration with the user need and wants in mind /OR (second half of term) End of Rotation Topic Test: • Health and Safety • Tools and machines • Timber origin and groups • Timber manipulation • Materials Manipulation	Homework: Marked in line with the Kingsdale ESD code Enrichment Young Makers

Year 8	FOOD SCIENCE Unit: Diet and Health
Learning Objectives	Outcome: Prepare and Cook a variety of dishes. See Year 8 Food Science Curriculum Map for more info.
	Design and Technology Skills: - Effort and Participation - Preparation of Food - Kitchen tools - Hob and Oven use - Extension tasks - Research - Design - Health & Safety - Testing & Evaluation
	Practical skills: To cook a range of dishes safely and hygienically and to apply their knowledge of nutrition. In addition, they will consider the factors that affect food choice, food availability and food waste. Cake making methods Kneading, shaping and finishing yeast dough Fish and meat handling Portioning, shaping and handling of meat and fish
	Theory: Food safety and hygiene Energy in the diet The role of carbohydrates Sources, types and functions of carbohydrates, protein and the consequences of energy imbalance Calculating nutritional content Healthy options Industrial Food Local Health Sources, types and functions of Vitamins A, D, B group and C. Sources, types and functions of calcium, iron and sodium.
	Annual exam week beginning 28/11/22 - Health and Safety in the Food Room - Food hygiene in relation to high-risk food - Application of the Eatwell Guide to plan a meal
Assessment	Or End of Topic test (2nd half of the term) - Health and Safety in the Food Room - Food hygiene in relation to high-risk food - Application of the Eatwell Guide to plan a meal
Challenge	Independently, plan and create a specification for a main meal dish to meet a specific need.
Extra Curricular	After school cooking club – The Love of Food

Week	Learning objectives	Homework:
1.1	To set up folder To re-introduce pupils to the My learning journey booklet (progress tracker). To recap the name and locate the tools and equipment in the food room. To describe the expectations for working in the food room. To recap health and safety practices used.	
1.2	Lesson 1 Food Hygiene Food Safety – the “4C”; how bacteria grow and multiply; how to control bacteria multiply	Create a Health and Safety Poster
2.1	Con’t with Lesson 1	
2.2	Reintroduce knife safety and renew the knife licence	
3.1	Lesson 2 and 3 Macronutrient and Micronutrient - Tuna Pasta Salad To name the micronutrients and macronutrients and state why they are needed in the diet. Food safety: the food hygiene of handling uncooked food. Food Science: gelatinization, emulsification	Food Poisoning
3.2	Practical lesson – Tuna Pasta Salad	
4.1	Lesson 4 The Eatwell Guide Recall the principles of The Eatwell Guide and relate it to their own diet. To list and explain the main nutrients and their functions provided by each food group. To explain the importance of hydration.	
4.2	Con’t with Lesson 4	
5.1	Lesson 5 Energy To define energy and explain why it is needed. To identify sources of energy in the diet. To describe how energy needs change throughout life. To define energy balance and relate the consequences of imbalance.	Diet Analysis
5.2	Lesson 6 and 7 Mini Carrot Cake – Demonstration Food Science – raising agent, the different between bicarbonate of soda and baking powder; temperature control; functional and chemical properties of fat in cakes; coagulation. Skills – grating; divide batter evenly	Use nutrition programme to create the nutrition profile for the Mini Carrot Cake
6.1	Practical Lesson – Mini Carrot Cake	
6.2	Lesson 8 Carbohydrate Matters To explain the sources, types and functions of carbohydrate. To explain the sources and functions of fibre in the diet. To describe the dietary recommendations for carbohydrate (including fibre) and how it relates to their diet. To identify varieties of bread and bread products available to the consumer. To investigate the functions of ingredients used in bread making.	Carbohydrate Matters worksheet
7.1	Lesson 9 and 10 Pizza Wheel – Demonstration Knife skills – temperature control; slicing of vegetable; cut the pizza to equal size Skills -use of yeast; bread making and shaping. Function of ingredients – yeast; herbs Food Science: dextrinization	To complete ‘Demonstration Focus’.
7.2	Practical lesson – Pizza Wheel	
8.1	Lesson 11 What’s for lunch? – Chicken Chow Mein Demonstration Cooking method: boiling; stir-fry Knife skills: cut chicken breast to strips; cut vegetable to uniform size Frood Safety: how to handle poultry Food Science: gelatinization; coagulation Function and chemical properties of food: marinate	To practice the skills learnt in the lesson at home.
8.2	Practical lesson – Chicken Chow Mein	
9.1	Lesson 12 and 13 Rubbing-In Method – Demonstration Skills: rubbing-in Food Science: shortening; gelatinization; dextrinization Knife skill: dice apply to uniform size	Apple Crumble Evaluation
9.2	Practical lesson – Apple Crumble	
10.1	Lesson 14 and 15 Hot and Happening – Thai Red Fish Curry Demonstration Cooking method: boiling; simmering Knife skills: cut fish fillet to cubes; chop basil Food Safety: how to handle fish/seafood	To complete ‘Demonstration Focus’
10.2	Practical lesson – Thai Red Fish Curry	
11.1	Plenary To appraise and evaluate their learning journey. To evaluate their practical cooking experiences.	
11.2	Practical Lesson – A Treat: Kingsdale Famous Brownies	

			YEAR 7				YEAR 8			
		NATIONAL CURRICULUM KS3	TEXTILES	GRAPHICS	PRODUCT	FOOD	TEXTILES	PRODUCT	RM	FOOD
	CODE	INFO TAKEN FROM National Curriculum KS3 Programme of Study	Worry Monster	CAD/CAM	Jumping Jack	Food and Cooking	Bags	Playground	Animal Box	Diet and Health
Design	DE.1	Use research and exploration, such as the study of different cultures, to identify and understand user needs	DE1		DE1	DE1	DE1	DE1	DE1	DE1
	DE.2	Identify and solve their own design problems and understand how to reformulate problems given to them			DE2	DE2			DE2	DE2
	DE.3	Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations						DE3		
	DE.4	Use a variety of approaches [for example, biomimicry and user-centred Design], to generate creative ideas and avoid stereotypical responses							DE4	
	DE.5	Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools	DE5	DE5	DE5	DE5	DE5		DE5	
Make	MA.1	Make, select from, and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture	MA1			MA1	MA1		MA1	MA1
	MA.2	Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties				MA2	MA2	MA2	MA2	MA2
Evaluate	EV.1	Analyse the work of past and present professionals and others to develop and broaden their understanding	EV1	EV1		EV1	EV1	EV1	EV1	EV1
	EV.2	investigate new and emerging technologies		EV2					EV2	
	EV.3	Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups	EV3	EV3	EV3		EV3	EV3	EV3	
	EV.4	Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists				EV4	EV4	EV4	EV4	EV4
Technical Knowledge	TK.1	Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions	TK1				TK1	TK1	TK1	
	TK.2	Understand how more advanced mechanical systems used in their products enable changes in movement and force			TK2			TK2		
	TK.3	Understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with heat, light, sound and movement as inputs and outputs]	TK3							
	TK.4	Apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers].	TK4							
Cooking & Nutrition	CN.1	Understand and apply the principles of nutrition and health				CN1				CN1
	CN.2	Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet				CN2				CN2
	CN.3	Become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]				CN3				CN3
	CN.4	Understand the source, seasonality and characteristics of a broad range of ingredients				CN4				CN4