Westbury ACADEMY

Design and Technology Long Term Plan

Independence & Preparation for Adulthood

Intent:

At Westbury Academy, pupils benefit from a knowledge-rich curriculum in Design and Technology that reflects current educational and technological developments while remaining responsive to the needs of individuals, groups, and cohorts. Our carefully sequenced programme enables pupils to build resilience and creativity through hands-on design and practical "make" tasks that consolidate and extend prior learning. In Food, pupils explore key concepts such as nutrition and food provenance, ensuring they gain essential life skills alongside academic knowledge.

We aim to foster a sense of pride in our learners while deepening their understanding of how Design and Technology influences the world around them. Pupils engage with modern materials and technologies, and consider the social, moral, and ethical implications of design decisions. They also explore the environmental impact of design, manufacturing, and food production. Through this, they develop the ability to interpret technical vocabulary and documents with confidence and **Independence.**

Across all key stages, pupils are supported to develop practical skills and a broader awareness of the significance of Design and Technology in everyday life, in **Preparation for Adulthood**. Our curriculum encourages ambitious aspirations by promoting academic literacy, critical thinking, and social fluency. Pupils are introduced to career pathways in STEM and catering, empowering them to make informed life choices and become active, capable contributors to family and society.

Throughout their journey, pupils will have regular opportunities to work with a variety of materials and ingredients, encouraging creativity, innovation, and high standards of workmanship. In Key Stage 3, students design, manufacture, and cook with increasing independence, creating personalised outcomes they can take pride in. At Key Stage 4, GCSE students respond to real-world design briefs, developing and producing their own original outcomes. In BTEC Home Cooking, pupils plan and prepare meals for others, including celebratory events, developing skills that are meaningful and transferable beyond the classroom.

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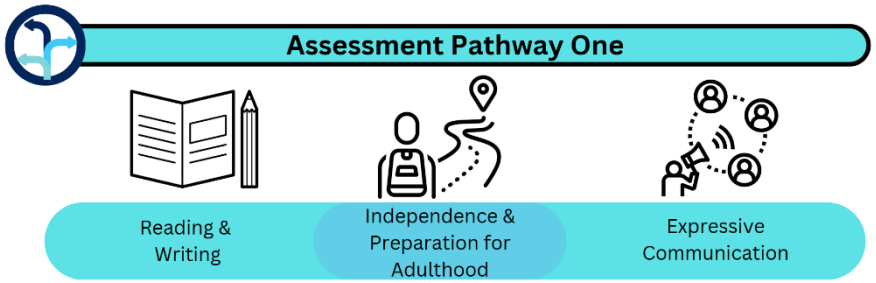
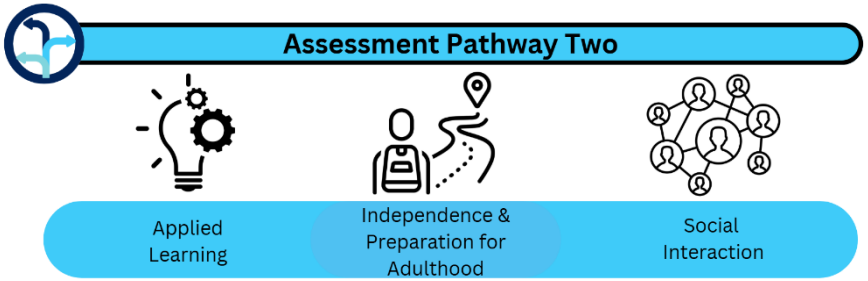
Design & Technology: Westbury's Assessment Pathways

The Design & Technology curriculum at Westbury is designed and assessed through Westbury's Assessment Pathways. Each pathway ensures pupils access Design & Technology at a level suited to their individual needs and development.



Pupils are supported in developing functional engagement, communication, and early independence in D&T routines.

- A focus on sensory engagement, sequencing, and a recognition of tools, materials or ingredients.
- Use of visual prompts, repetition and teacher/TA modelling to support task completion.
- Early safety awareness and hygiene routines (e.g. safe use of tools, handwashing)
- Communication development through naming tools or describing processes (verbally or with symbols)



Pupils build independence through guided practical tasks and begin to apply their knowledge to real-life contexts.

- A focus on guided designing and making, developing fine motor and sequencing skills.
- Introduction to design vocabulary (e.g. strong, cut, join, finish)
- Application of learning to familiar routines (e.g. safety, hygiene, assembling, washing up)
- Working collaboratively with peers, using prompts to reflect on their work

Pupils are supported to develop independence, critical thinking and purposeful decision making through creative tasks.

- A focus on planning, problem solving, and making decisions with increasing confidence.
- Use of design criteria and iterative thinking to improve outcomes.
- Opportunities for peer discussion, giving and receiving feedback.
- Development of practical precision, equipment safety, and finishing techniques.

Personal Development and Careers Links

The Design & Technology curriculum at Westbury Academy plays a key role in supporting pupils' Personal Development. Through carefully planned learning experiences, pupils build upon their personal development and develop knowledge and skills for their future careers.

Personal Development Links

At Westbury Academy, we actively promote personal development by fostering pride, responsibility, and a deeper understanding of the role Design & Technology plays in both individual lives and wider society. Pupils develop a clear awareness of where their food comes from and how nutrition affects their health, equipping them to make informed, healthy choices. Through regular hands-on experiences, they learn to respect materials, ingredients, and their workspace, with safety, sustainability, and self-management embedded in every task.

Pupils will:

- Understand the nutritional value of recipes and their impact on the body.
- Explore the environmental, social, moral, and ethical implications of design choices and food provenance.
- Take pride in their working environment by using materials and ingredients responsibly and safely.
- Gain the confidence to plan and cook meals independently at home.
- Learn safe food preparation and hygiene practices.
- Transfer practical knowledge and skills to different cooking and design contexts.
- Embrace an iterative process, learning from mistakes and striving for continual improvement.
- Build cultural capital through exposure to a variety of materials, foods, tools, and design contexts.

Careers Links

Our Design & Technology and Food curriculum prepares pupils for future pathways by embedding academic literacy, technical knowledge, and practical skills that are essential in a range of careers - especially in STEM, design, and the food industry. Pupils explore how design and food-related careers contribute to society, understand industry processes, and engage with real-world tools and technologies that reflect modern professional practice.

Pupils will:

- Use current developments in technology and modern materials in practical projects.
- Learn to read and interpret technical language and documents, including working drawings.
- Build a strong understanding of subject-specific vocabulary and key terminology.
- Experience media and content that promote awareness of STEM and catering careers.
- Conduct research, present ideas, and produce high-quality prototypes and outcomes.
- Apply maths and science in practical contexts related to design and cooking.
- Learn how to plan and cook economically, preparing for roles at home and in the workplace.
- Gain skills and experiences that open pathways into vocational qualifications such as GCSE Design & Technology and BTEC Home Cooking, with opportunities to create discrete, purposeful outcomes based on industry-style briefs.

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D&T Overview 3/4

In Years 3 and 4, Design and Technology is taught through a broad, exploratory, and highly practical approach that is embedded within wider topic-based themes. Teaching is adapted each year using Curriculum Maestro to suit the chosen topics and the needs of the pupils.

The focus at this stage is on encouraging curiosity, creativity, and confidence with materials and tools. Pupils are supported to explore how things work, experiment with ideas, and begin to understand simple design principles. Learning is highly scaffolded, and activities are often delivered in small groups or with adult support, ensuring all pupils can take part successfully. Emphasis is placed on tactile experiences and developing basic practical and decision-making skills through making, testing, and evaluating simple products.

In Years 3 and 4, pupils develop their early design and practical skills through engaging, hands-on activities that are often linked to wider curriculum topics.

They begin to explore how everyday products are made and how they can design and create their own simple items with a specific purpose in mind. Pupils are introduced to a variety of materials and tools, learning how to use them safely and appropriately with adult support.

Teaching focuses on developing basic skills such as planning, assembling, joining, and evaluating, with a strong emphasis on creativity, exploration, and learning through doing. Tasks are carefully adapted to meet the diverse needs of learners and promote confidence and independence.

Pupils in Years 3 and 4 are introduced to food and nutrition through practical experiences that help them develop essential skills for preparing simple dishes safely and hygienically.

Learning focuses on building an understanding of healthy food choices, food origins, and the sensory properties of ingredients. Children take part in age-appropriate food preparation activities, with adult support, that encourage independence, confidence, and curiosity about food. Lessons also promote basic hygiene routines and safe use of simple equipment, ensuring pupils can take part in cooking activities in a supported and inclusive way.

In Years 3 and 4, pupils begin to make connections between the food they eat and how it is grown through regular use of the school garden and polytunnel. They learn about the basic needs of plants, how to care for them safely, and begin to explore where food comes from in a hands-on, sensory-rich environment. This work directly supports their understanding of food preparation and healthy eating, helping them to recognise the value of fresh produce and seasonal ingredients.

Garden education also promotes early environmental awareness and introduces pupils to sustainable practices, which align with the wider aims of the Design and Technology curriculum.

Pupils in Years 3 and 4 contribute to the school's *Westbury Goes Green* enterprise market by designing and making simple, sustainable products that reflect their learning in D&T, food, and gardening. Using the principles of the 6Rs, pupils are encouraged to explore how they can reduce waste, reuse materials, and make environmentally responsible choices. The products they create vary each year but are always designed with a purpose and made with adult support, using safe tools and techniques.

Enterprise work gives pupils a real audience for their designs and provides valuable opportunities to develop confidence, creativity, and early entrepreneurial thinking.

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D&T Overview 5/6

In Years 5 and 6, Design and Technology is taught through a more purposeful, structured, and skill-building approach, still delivered within cross-curricular topics. Although flexibility remains essential to meet the varying needs of the pupils, there is a clear focus on progression, with pupils beginning to apply knowledge and skills with more independence, supported by Curriculum Maestro.

Learners are encouraged to problem-solve, plan, and reflect on their work more systematically. Projects often relate to real-world challenges or practical contexts and may involve collaborative work, evaluative thinking, and extended design processes. Staff support pupils to develop greater resilience and reasoning in their creative work, including how to improve or adapt their ideas. D&T at this stage helps to prepare pupils for more formal or independent learning in secondary settings, while remaining accessible and engaging.

In Years 5 and 6, pupils continue to develop their design and technology skills through more structured and purposeful activities. They are encouraged to apply previous learning in more independent and collaborative tasks, with increasing attention to planning, improving, and evaluating their work.

Pupils work with a range of materials and tools to solve practical problems, respond to design challenges, and create functional outcomes.

The teaching of D&T at this stage encourages deeper thinking about how and why products are made, and supports learners to make choices, reflect on processes, and build resilience when testing and refining their ideas.

Food lessons in Years 5 and 6 focus on developing greater independence in food preparation, including following step-by-step instructions, using a wider range of tools, and understanding food safety in more detail.

Pupils build on their knowledge of healthy eating and are supported to make informed choices about ingredients and food combinations. Lessons include opportunities to explore where food comes from, how it is produced, and how seasonal and cultural factors influence food.

Practical tasks are adapted to suit individual needs and promote confidence, with adult support provided as needed to ensure all pupils can participate successfully.

In Years 5 and 6, pupils deepen their understanding of where food comes from by taking greater responsibility in the school garden. They explore how plants grow, how to maintain a growing space safely, and how environmental factors affect food production. This learning supports their work in food preparation by reinforcing the value of fresh, locally grown produce and encouraging thoughtful food choices.

Environmental themes are woven throughout, with pupils considering issues such as waste, composting, and sustainability. These experiences also link meaningfully to D&T, where pupils learn to think critically about the impact of design, materials, and food systems on the wider world.

In Years 5 and 6, pupils take a more active and independent role in planning and producing items for the *Westbury Goes Green* enterprise market. Building on their knowledge of sustainability and the 6Rs, pupils consider how their product designs can be environmentally responsible and make use of natural, recycled, or repurposed materials.

They draw on learning from D&T, food, and gardening, such as growing ingredients, planning packaging, or designing reusable items, to create purposeful products for sale. This real-world project fosters problem-solving, teamwork, and enterprise, and gives pupils the opportunity to see how design can have a positive impact on their community and the environment.

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D&T Overview Y7

In Year 7, pupils experience a dynamic rotation of four engaging subjects within Design and Technology. These include Woodwork, Healthy Eating in Food, Textiles, and a Recycling Project. This structure ensures that all students are introduced to a broad range of practical skills, regardless of the order in which they study each subject. Rotations may occur in different sequences depending on timetable arrangements, but all pupils will complete each area over the course of the year.

Materials Focus: Timber

Project: Puzzle

Context: Memphis

Pupils explore the Memphis Design Movement, using it to inspire a functional wooden puzzle. They learn how design movements influence product aesthetics, and develop technical skills in shaping, assembling, and finishing timber using both hand tools and CAD/CAM.

Materials Focus: Food

Project: Healthy Eating

Context: Introduction to cooking, food safety and skills

Pupils learn the basics of food safety, hygiene, and nutrition. They are introduced to the Eatwell Guide and build essential cooking skills through the preparation of healthy savoury meals and desserts. They also develop confidence in using sensory vocabulary to evaluate their outcomes.

Materials Focus: Textiles

Project: Soft Toy

Context: Decorative techniques: Applique

Pupils explore user needs by designing and making a soft toy. They use specialist textiles tools and techniques, develop safe and accurate making skills, and test and refine their work based on peer and user feedback. The project introduces pupils to material properties, standard components, and product analysis.

Materials Focus: Mixed

Project: Westbury Goes Green

Context: 6 R's

Pupils design and manufacture a batch-produced product for the Westbury Goes Green Horticultural Market, focusing on reuse and recycling. They develop problem-solving skills, apply specialist tools and techniques including CAD/CAM, and learn about material properties, quality control, and sustainable production methods.

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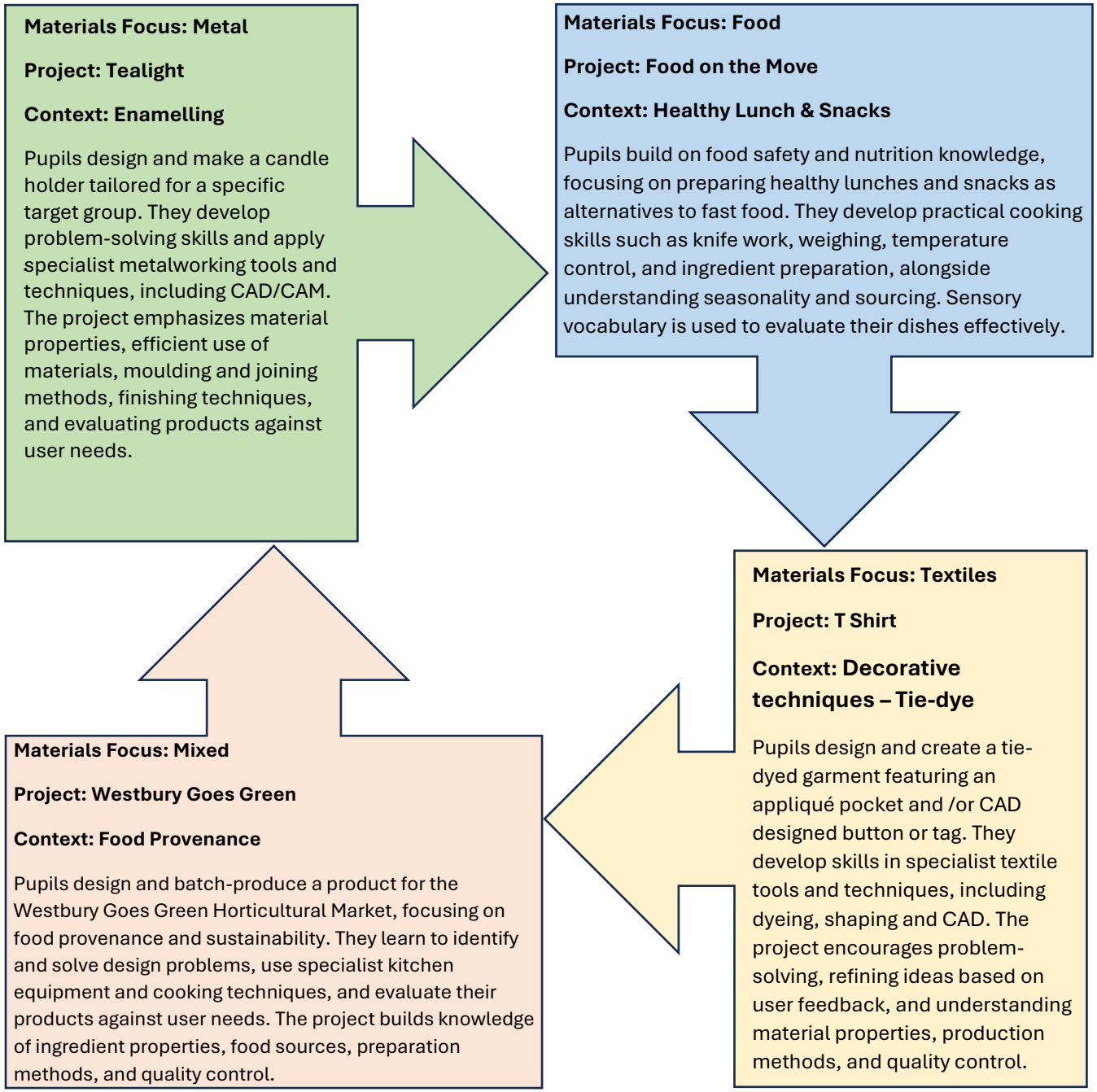
D&T Overview Y8

Year 8 builds on prior knowledge and introduces more advanced skills through a rotation of four key subjects: Metal Fabrication, Food for Packed Lunches and Picnics, Textiles, and a Food Provenance Project. These topics are taught in rotation, with pupils experiencing all subjects throughout the year. While the order may vary, all pupils gain hands-on experience in every area to deepen their understanding of design and food education.



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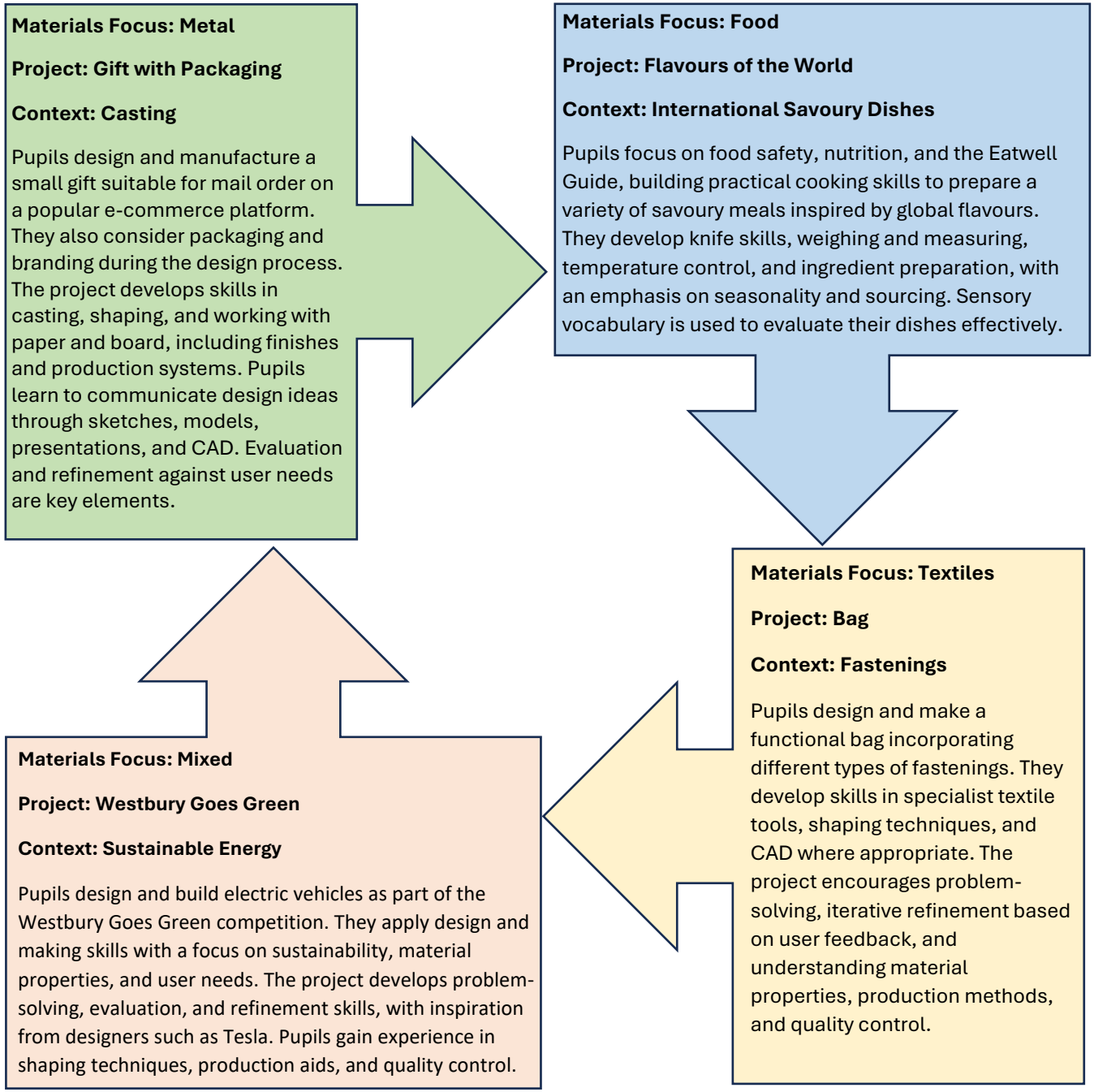
D&T Overview Y9

In Year 9, pupils refine their skills and begin to focus on sustainability and cultural awareness. Their rotation includes Casting Metal, International Cuisine, Textiles, and a Reducing Waste Project. Each subject is taught for part of the year in rotation, giving pupils a thorough and practical understanding of advanced design and food concepts. The sequence of topics may vary, but all pupils will complete every area.



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D&T Overview 10

Year 10 marks the start of the GCSE Design and Technology journey. From September to May, pupils work on a comprehensive mock GCSE project that develops their skills in research, designing, making, and evaluating. This in-depth project prepares pupils for the expectations of their final Year 11 coursework. In June, pupils begin their official GCSE project, applying what they have learned in a focused and creative way.

Project: Mock NEA

Assessment Objectives: AO1 - Identify, investigate and outline design possibilities. AO2 – Design and make prototypes that are fit for purpose

Section Criteria: A, B & C

Pupils undertake a full mock Non-Exam Assessment (NEA) project, focusing on investigation and design skills in preparation for their Year 11 final project. Working from the AQA GCSE Design Challenge, they explore a chosen context by understanding user needs, conducting primary and secondary research, and developing a detailed design brief and specification. They use surveys, interviews, and market research to engage with client needs and produce informed design sketches. This phase emphasizes design strategies, ethical and social considerations, sustainability, and understanding the wider impact of products on society.

Project: Mock NEA

Assessment Objectives: AO2 – Design and make prototypes that are fit for purpose

Section Criteria: D & E

Pupils advance their mock NEA project by developing their design ideas through detailed modelling, CAD work, and construction sketches. They produce comprehensive working drawings and compile materials lists alongside clear manufacturing specifications. The focus is on translating designs into physical prototypes, applying efficient manufacturing techniques while maintaining quality and safety standards.

Project: Mock NEA

Assessment Objectives: AO3 – Analyse and evaluate

Section Criteria: F

Pupils complete their mock NEA by testing their prototype for functionality, durability, and user suitability. They evaluate the final product against their original design specification, assess the manufacturing process, and gather client/user feedback to identify improvements.

Project: GCSE NEA

Assessment Objectives: AO1 - Identify, investigate and outline design possibilities

Section Criteria: A

Pupils choose a context from the AQA GCSE Design Challenge. They investigate a real-world design problem through client engagement, surveys, interviews, and task analysis. They explore a design context, carry out primary and secondary research (including client interviews and market analysis), and investigate user needs and

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D&T Overview 11

In Year 11, pupils concentrate on completing their GCSE Design and Technology project, which is worth a significant portion of their final grade. They demonstrate their ability to manage a project from concept to creation, showing innovation, practical skill, and critical thinking. This is the culmination of their design and technology education and provides a strong foundation for further study or employment in design-based industries.

Project: GCSE NEA

Assessment Objectives: AO1 - Identify, investigate and outline design possibilities

AO2 – Design and make prototypes that are fit for purpose

Section Criteria: B&C

Pupils' investigations culminate in a clear design brief and specification. Pupils develop and communicate design ideas through sketching, modelling, and digital tools such as CAD. They produce construction sketches and working drawings, using client feedback to refine and develop viable, creative, and functional design proposals.

Project: GCSE NEA

Assessment Objectives: AO2 – Design and make prototypes that are fit for purpose

Section Criteria: D&E

Pupils develop a detailed manufacturing specification and materials list based on their final design. They then manufacture their product using specialist tools and equipment, applying quality control and safe working practices.

Project: GCSE NEA

Assessment Objectives: AO3 – Analyse and evaluate

Section Criteria: F

Pupils test and refine their prototype, evaluating how well it meets the design specification. They gather client feedback, test the product in situ, and suggest improvements to both design and manufacturing processes.

Project: Exam Revision

To support learning in Design and Technology, all pupils have access to the **CGP GCSE D&T Revision Guide** and a set of accompanying **revision cards**. These resources are used regularly in school during lessons to reinforce key concepts and support exam preparation. A full set of the revision cards is also sent home with each pupil, helping them to continue their revision independently and with family support.

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Food Overview 10

Year 10 pupils also take the BTEC Level 1 Award in Home Cooking Skills. This course focuses on building practical cooking skills and understanding the importance of nutrition, hygiene, and meal planning. It offers a valuable foundation for pupils who wish to develop lifelong cooking confidence or progress into hospitality or catering.

Project: Home-Cooked Meals Coursework

Assessment: 1.1, 1.2, 1.3

Focus: Prepare, cook and present nutritious home-cooked meals using basic ingredients

Pupils learn to plan, prepare, and cook a variety of healthy, home-cooked dishes without relying on pre-prepared or ready meals. They explore the nutritional properties of macro- and micronutrients and how diet affects health. They develop practical skills including preparation, cooking techniques, sensory analysis, and recipe adaptation linked to culinary traditions.

Project: Home-Cooked Meals Coursework

Assessment: 1.1, 1.2, 1.3

Focus: Prepare, cook and present nutritious home-cooked meals using basic ingredients

Pupils develop practical cooking skills to prepare home-cooked food without using pre-prepared or ready-cooked items. They learn how food processing affects nutrient value, and create a range of healthy, varied products. Emphasis on preparing ingredients, using utensils and equipment safely, applying different cooking methods, sensory evaluation, and recipe adaptation. Pupils also explore food sustainability, sourcing, and ingredient functions.

Project: Practical Coursework Exam

Assessment: 1.1, 1.2, 1.3, 2.1, 2.2

Focus: Cooking a main course for a friend

Pupils build on their cooking skills to prepare a range of home-cooked sweet and savoury products, drawing on international cuisine influences. They learn to calculate nutritional values, understand portion control, and develop sensory evaluation skills. Pupils also explore the importance of passing on home cooking knowledge and skills to others.

Project: Westbury Goes Green

Focus: Food Provenance

Pupils design and batch-produce a product for the Westbury Goes Green Horticultural Market, focusing on food provenance and sustainability. They learn to identify and solve design problems, use specialist kitchen equipment and cooking techniques, and evaluate their products against user needs. The project builds knowledge of ingredient properties, food sources, preparation methods, and quality control.

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Food Overview 11

In Year 11, pupils who completed the Level 1 BTEC in Home Cooking continue with the Level 2 Award. This course enhances their cooking skills and introduces more complex techniques and recipes. Pupils also explore how to prepare meals on a budget and for different dietary needs, helping them gain practical life skills and a qualification that supports career or further education pathways in food-related industries.

Project: Home-Cooked Meals Coursework

Assessment: 1.1, 1.2, 1.3

Focus: Prepare, cook and present nutritious home-cooked meals using basic ingredients

Pupils develop skills in planning and investigating food, focusing on understanding and analysing ingredients and sensory properties. They prepare project pages covering investigation, analysis, and evaluation.

Project: Home-Cooked Meals Coursework

Assessment: 1.1, 1.2, 1.3

Focus: Prepare, cook and present nutritious home-cooked meals using basic ingredients

Pupils focus on detailed planning including nutritional values, costing, and timing. They prepare, cook, present, analyse, and evaluate their dishes, covering sweet and savoury products.

Project: Practical Coursework Exam

Assessment: 1.1, 1.2, 1.3, 2.1, 2.2

Focus: Birthday Celebration – 2 courses

Pupils apply practical cooking skills in a timed, controlled environment to prepare, cook, and present nutritious meals using basic ingredients. They develop time management, recipe adaptation, and sensory evaluation skills. Focus on demonstrating safe food handling and hygiene throughout.

Project: Cooking for Pleasure

Focus: Developing creativity and confidence in cooking

Pupils explore cooking as an enjoyable and creative activity by selecting recipes of personal interest, experimenting with Flavours, ingredients, and presentation. They develop independence, food knowledge, and confidence while reinforcing safe and hygienic practices.