

## KS3 Long Term Curriculum Plan: Design and Technology Year 7 2022-23

**Curriculum Aim:**

The national curriculum for design and technology aims to ensure that all pupils: develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users critique, evaluate and test their ideas and products and the work of others. Understand and apply the principles of nutrition and learn how to cook.

**Link to prior learning:** We build on the KS2 curriculum where through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]

**Rationale of sequencing:** Each group rotates between four different subjects over two years forming a carousel following the design process to engage the students in a wide range of design materials. Each subject area will have a particular focus of the design process.

	Focus / Topic	Knowledge & Skills	Assessment
Food Preparation and Nutrition	<p>Themes: Principles of nutrition and healthy eating. Food safety, choice and provenance. Evaluation and self-assessment.</p>	<ul style="list-style-type: none"> <li>● understand and apply the principles of nutrition and health</li> <li>● cook a repertoire of predominantly savoury dishes</li> <li>● become competent in a range of cooking techniques, for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways</li> <li>● understand the source, seasonality and characteristics of a broad range of ingredients.</li> </ul>	<ul style="list-style-type: none"> <li>● Self-assessment booklet - after each practical lesson</li> <li>● Food Preparation Skills - verbal feedback and self-assessment of a range of dishes</li> <li>● Food Nutrition and Health -EWG worksheet</li> <li>● Food Safety - Quiz</li> <li>● Fibre - Quiz</li> <li>● Food Choice- Quiz</li> <li>● Food Provenance- Quiz</li> </ul> <p>These topics will be assessed in a written assessment during assessment week</p> <p>Year 7:</p> <ul style="list-style-type: none"> <li>● Assessment week (w/b 22nd February 2023)</li> </ul> <p>End of Year exams (w/b 14th June 2023)</p>
Graphics	<p>Design Brief: To design and make a set of celebration badges based around a cultural celebration. To design packaging for a range of different products.</p>	<ul style="list-style-type: none"> <li>● develop and communicate design ideas using annotated sketches, detailed plans, 3-D</li> <li>● and mathematical modelling, oral and digital presentations and computer-based tools</li> <li>● develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations</li> <li>● select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture</li> <li>● select from and use a wider, more complex range of materials and components taking into account their properties</li> <li>● Manufacture products using various types of paper, card and modelling boards.</li> </ul>	<p>Year 7:</p> <p>These topics will be assessed in a written assessment during assessment week.</p> <ul style="list-style-type: none"> <li>● Types of research</li> <li>● Production of specifications</li> <li>● Logo design and development</li> <li>● Evaluation techniques</li> <li>● Properties and uses of packaging</li> <li>● Properties and uses of paper, card and modelling materials</li> <li>● Printing techniques</li> </ul> <ul style="list-style-type: none"> <li>● Assessment week (w/b 22nd February 2023)</li> </ul> <p>End of Year exams (w/b 14th June 2023)</p>

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Resistant Materials	<p>Design Brief: To design and make a desk tidy for a chosen stakeholder. To design and make a CAD/CAM LED Mood Light.</p>	<ul style="list-style-type: none"> <li>● Iterative Design Process</li> <li>● Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations</li> <li>● Design Development and Prototyping</li> <li>● Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools</li> <li>● Practical Skills manufacturing with timbers, polymers CAD/CAM and electronics.</li> <li>● select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture</li> <li>● Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions</li> <li>● Quality Control and Quality Assurance</li> </ul>	<p>Year 7: These topics will be assessed in a written assessment during assessment week</p> <ul style="list-style-type: none"> <li>● Tools and Machinery processes</li> <li>● Electronic Components and processes</li> <li>● Aesthetics and Ergonomics</li> <li>● ACCESSFM</li> <li>● Properties and uses of polymers</li> <li>● Properties and uses of timbers</li> <li>● CAD/CAM</li> <li>● Adhesives</li> <li>● Responding to Specifications</li> <li>● Prototyping</li> <li>● Producing Design Ideas from a Specification.</li> <li>● Quality Control and Quality Assurance</li> </ul> <p>● Assessment week (w/b 22nd February 2023) End of Year exams (w/b 14th June 2023)</p>
Textiles	<p>Design Brief: Design and make an environmentally friendly bag which is an alternative to a disposable supermarket bag.</p>	<ul style="list-style-type: none"> <li>● Develop an understanding of sustainability and the environment.</li> <li>● Understand the knowledge and skills required to engage in an iterative process of designing and making.</li> <li>● select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture</li> <li>● Demonstrate appropriate health &amp; safety practices within the textile classroom</li> <li>● Understand and use the properties of materials to achieve functioning solutions. (Fibre Classification: Natural and manufactured fibres)</li> </ul>	<ul style="list-style-type: none"> <li>● Health &amp; Safety in the textile industry</li> <li>● Fibre Classification. Natural and manufactured fibres</li> <li>● Fabric properties</li> <li>● Sustainability</li> <li>● New and emerging technology</li> <li>● Scales of production</li> <li>● Wash codes</li> <li>● Research</li> <li>● Specification</li> <li>● Logo design</li> <li>● Evaluation</li> <li>● Maths in technology</li> </ul> <p>These topics will be assessed in a written assessment during assessment week</p> <p>Year 7: ● Assessment week (w/b 22nd February 2023) End of Year exams (w/b 14th June 2023)</p>

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### further information

- Each group rotates between four different subjects over two years forming a carousel. At the end of year 8 students opt for two materials areas to study in greater depth in year 9. The year group is split into four bands by the school (E, F, G and H). These are sub- divided into six mixed ability Technology sets and are timetabled for two fifty minute periods per week. The subjects in the rota are Food Preparation and Nutrition, Graphics, Resistant Materials and Textiles Technology. Each unit is a term and a half in length.
- website: <https://www.chace.enfield.sch.uk/curriculum-technology/>
- In Design and Technology, students will develop the skills to:
- Skills needed to engage in an iterative process of designing and making, working in a range of domestic and local contexts [for example, the home, health, leisure and culture], and industrial contexts [for example, engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion].
- Designing, making, evaluating, technical knowledge and understanding, cooking and nutrition.
- DFE Subject content: [National Curriculum - Design and technology key stages 3 and 4](#)