



DESIGN TECHNOLOGY Y9 CURRICULUM AND ASSESSMENT MILESTONES DOCUMENT

YEAR 9 CURRICULUM MILESTONES: DESIGN TECHNOLOGY

Designing and Planning

They will have an awareness of social moral, cultural and environmental issues and be able to discuss them and link them to their design work

They will be able to identify and explore relevant information based on their chosen client/user needs.

They will be able to develop their own design specification based on their chosen client/user

They will be able to independently research relevant information and use it to inform their design decisions

They will be able to sketch a variety of different designs using a range of sketching techniques that link to their research and client needs

They will understand the importance of innovation when designing as well as the designs being functional and appropriate for their purpose.

They will have a broader use of annotations including links to ergonomics and anthropometric data where relevant

They will be able to independently plan a sequence to allow them to manufacture products and prototypes

They will be able to create a time plan to produce a healthy meal whilst considering timings, health and safety and checks for readiness.

Making and Developing

They will name and use a wide range of tools and equipment using them safely and with accuracy including CAM as appropriate.

They will have a good understanding of a wide range of processes and be able to use subject specific language when discussing them

They will have a wide knowledge of materials including their working properties and be able to select appropriate ones for specific situations including use in industry.

They will be accurate with an excellent quality finish, able to creatively solve problems and be more independent when making products selecting their own tools and processes as well as selecting materials as appropriate using quality control throughout the making process including the work of others

They will have a good understanding modern manufacturing including CAM, as well as modern and smart materials

They will have some experience of CAM when making their products

They will actively work independently and adapt and experiment developing their ideas through iteration as well as collaboration

They will be aware of the local Ks5 progression opportunity's as well as possible future careers

•They will become proficient in making high quality products using a broad range of materials / ingredients and to further stretch those existing skills by planning and making a meal of their choosing.

Analysing and Evaluating

They will actively use the work of others when designing and making using products and images as vehicles to avoid design fixation

They will be able to critically analyse/evaluate their work and the work of others against a design brief/specification that they have developed adapted in detail

They will know in detail what the responsibilities of designers and manufacturers are in relation to social, moral, cultural and environmental issues.

They will be able to critically analyse/evaluate theirs and others work independently

They will be able to predict and identify common errors as well as problems they face when designing and making explaining what could go wrong or has gone wrong. They will then be able to problem solve independently

They will have a good level of conceptual understanding making links frequently as appropriate in unfamiliar situations

They will be able to explain what has gone well and what can be improved during their practical and set themselves targets for the following lesson.

Technical Language

They will be able to use a broad range of technical language in unfamiliar situations fluently and articulately

They will they should be able to recall and apply 5 stages of the Life Cycle Assessment

They will be secure in understanding what inclusive design is and be able to apply the knowledge in unfamiliar situations

They will have a very good understanding of new and emerging technologies and use the knowledge as appropriate when analysing/ evaluating products

They will further develop pupils' knowledge of healthy eating including understanding diet related diseases and how cooking methods can impact on nutritional value of foods.

YEAR 9 ASSESSMENT MILESTONES: DESIGN TECHNOLOGY

Consolidation lessons

Consolidation lessons take place at the start of each rotation covering knowledge from previous projects. The lessons are bespoke for each group depending on which projects have been taught previously. The consolidation lessons will enable teachers to revisit previous learning checking understanding of substantive knowledge across disciplines.

Food Tech

Diagnostic Test: Multiple choice Quiz to enable teachers to understand pupils level of understanding of technical language.

Feedback: Feedback takes place based on immediate live feedback for both practical as well as written tasks based on immediate live feedback tasks which will be personalised as well as shared with class through a 'Whole Class Feedback' document

Pupils will use a range of ingredients following and modifying a range of recipes to make healthy food that follow the eat well guide and healthy eating guidelines.

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Whirligig

Diagnostic Test: Multiple choice Quiz to enable teachers to understand pupils level of understanding of technical language.

Feedback: Feedback takes place based on immediate live feedback for both practical as well as written tasks based on immediate live feedback tasks which will be personalised as well as shared with class through a 'Whole Class Feedback' document.

Practical: Pupils are assessed on the accuracy and safe use of tools and equipment, manipulation of materials including shaping and joining methods. Pupils are also assessed on their problem solving, analysing and creative thinking skills.

Pupils will experience cutting, shaping and joining wood-based materials. they will also cut shape and join other materials chosen by the pupils including polymers as well as wood-based materials using mechanical fixings to manufacture a successful and accurate whirligig. Pupils will be expected to be independent and resilient when selecting and using tools and processes, they should also be more creative and accurate they should follow the iterative design process to develop their own product.

Cushion

Diagnostic Test: Multiple choice Quiz to enable teachers to understand pupils level of understanding of technical language.

Feedback: Feedback takes place based on immediate live feedback for both practical as well as written tasks based on immediate live feedback tasks which will be personalised as well as shared with class through a 'Whole Class Feedback' document.

Practical: Pupils are assessed on the accuracy and safe use of tools and equipment, manipulation of materials including shaping and joining methods. Pupils are also assessed on their problem solving, analysing and creative thinking skills.

Pupils will experience hand embroidery stitching, the use of templates, pinning and cutting of fabrics and they will be introduced to smart materials in textiles. They will also use sewing machines independently as part of the project. They will use these skills to create a personalised adapted cushion.

Mini NEA Lamp Diagnostic Test

Multiple choice Quiz to enable teachers to understand pupils level of understanding of technical language.

Feedback: Feedback takes place based on immediate live feedback for both practical as well as written tasks based on immediate live feedback tasks which will be personalised as well as shared with class through a 'Whole Class Feedback' document.

Practical: Pupils are assessed on the accuracy and safe use of tools and equipment, manipulation of materials including shaping and joining methods. Pupils are also assessed on their problem solving, analysing and creative thinking skills.

Pupils will experience cutting, shaping and joining wood-based materials. they will also cut shape and join other materials chosen by the pupils including electronics as well as wood-based materials using a range of joining methods as they product develops using the iteratively. Pupils will be expected to be independent and resilient when selecting and using tools and processes, they should also be more creative and accurate they should follow the iterative design process to develop their own product. Experimentation is to be encouraged throughout.