



SUBJECT: Design Technology

YEAR GROUP	Year 7				
Rationale	The year 7 Design Technology curriculum is designed to develop the resilience and independent learning abilities of our pupils. It gives them a broad experience of the different specialist areas of Design Technology including Food, Graphics, Textiles and Product Design. The curriculum is designed to build pupils' confidence in how to work through the design and make process, using a wide variety of materials, tools, techniques and equipment.				
Pupils will rotate around 5 different material areas in Technology over the course of the year. Each project will be taught over 8 weeks (12 hours).					
Topic/ Project	GRAPHICS 'Munch Box project' (Baseline)	TEXTILES 'Monster Puppet'	CAD/CAM 'Designer Coaster'	PRODUCT DESIGN 'Robot Phone holder'	FOOD 'Healthy Eating'
Knowledge	<p>During this project, pupils will develop an understanding about a range of drawing and designing techniques and why we use different techniques to present ideas.</p> <p>Through a range of drawing based practical tasks, they will gain an understanding of how to present their ideas successfully and identify why presentation is important when designing.</p>	<p>During this project, pupils will develop an understanding of how we use research to influence our designs.</p> <p>Through research and practical activities, pupils will gain understanding about fabric and hand sewing techniques.</p>	<p>During this project, pupils will investigate into a range of design movements to develop appreciation of past design and designers.</p> <p>They will gain an understanding of how to use designers to influence their design thinking. They will learn about the CAD/CAM software available in school and gain an understanding of the advantages and disadvantages of using this equipment in order to produce both designs and products.</p>	<p>During this project, pupils will develop their knowledge and understanding of health and safety when working in the workshop.</p> <p>They will gain an understanding of the properties of woods and the tools needed to cut and shape them. They will learn about the need to use models to test and modify their designs before manufacture, to ensure their designs are fit for purpose.</p>	<p>During this project pupils will learn how to recognise different food groups, select appropriate equipment and how to follow a recipe in order to develop their skills and confidence in the kitchen.</p>



<p>Skills</p>	<p>Design investigation skills: Pupils work through a range of focus practical design tasks to develop drawing and presentation skills in the following areas: Free hand sketching, isometric, shading to show light, one and two point perspective, shading to show materials and orthographic drawing.</p> <p>Practical skills Pupils will develop their design idea through card modelling. They will learn how to cut and shape a cardboard net safely and accurately using scissors and craft knives.</p>	<p>Design investigation skills Pupils will learn how to create a theme mood board and use this to inspire their designs. They will learn how to develop their design into simple pattern templates.</p> <p>Practical skills Pupils will learn how to create pattern piece and pin them correctly in order to cut and shape their fabric. They will develop basic hand sewing techniques including running stitch, cross stitch and star stitch. They will learn the importance of accuracy and safety with the textiles workshop.</p>	<p>Design investigation skills Pupils will learn how to use their designer research to inspire their own sketches. They will develop these designs using 2D Design acquiring a basic knowledge of the program and its tools such as path tool, rotate tool, delete tools and flip tool. They will also learn how to change line colours in order to prepare their design for the laser cutter.</p> <p>Practical skills Pupils will learn how to operate the laser cutter safely including selecting the correct print options and material placement. Pupils will also be expected to apply any other finishes to their acrylic coaster, such as sanding.</p>	<p>Design investigation skills: Pupils will learn how to use their research to inspire their own sketches. They will develop these designs using drawing grids and templates to produce a card model. They will then develop testing and modification skills in order to ensure their design will be successful.</p> <p>Practical skills Pupils will select and use a combination of workshop tools to develop their skills and techniques by using them to produce a functioning robot themed phone holder. They will learn how to independently, safely and accurately use hand tools such as coping saws, Tenon saws and files alongside electrical hegnar saws, pillar drill and disk sanders.</p>	<p>Design investigation skills: Pupils will develop an understanding of a range of basic food base terms such as carbohydrate, protein, dairy, fats, enzyme browning, boil, simmer and bake. They will develop evaluation skills in regards to the food they create using a range of techniques such as sensory analysis and taste testing.</p> <p>Practical skills Pupils will understand how to select and prepare a number of ingredients and the different methods of processing. They will complete a range of focus practical food tasks to build basic skills and confidence. These include bridge and claw chopping techniques, safe use of the oven, and a range of food presentation techniques. A large emphasis will be placed on food hygiene standards and safety.</p>
<p>Assess-ments</p>	<p>Pupils will be assessed at the end of every project. Each pupil will be assessed on the Research, Design, Make and Evaluation strands and an average for each project will contribute to the overall pathway. This will be compared to their target pathway to monitor pupil progress.</p>				



	<p>Design: Pupils will be assessed over a range of 6 different sketching and formal drawing tasks.</p> <p>Pupils will be assessed on accuracy, presentation and annotation techniques.</p> <p>Make: Pupils will produce a cardboard net of their final design. They will be assessed on the safe use of modelling equipment and accuracy and finish of the final net produced.</p> <p>Evaluation: Pupils will be assessed on the evaluation of their final design and net. They will be assessed on their use of technical vocabulary and their awareness of strengths, areas for improvement and modifications.</p> <p>The pathway pupils are graded from on this project will be the pathway each pupil will start on in the journey through Design and Technology.</p>	<p>Research: Pupils will be assessed on the analysis of a range of research based around monsters, fabric and textiles tools and equipment.</p> <p>Design: Pupils will produce 2 design ideas for their puppet. They will be assessed on the quality of the design/presentation and the annotations used to explain their designs.</p> <p>Make: Pupils will produce a fabric hand puppet. The assessment will focus on the quality of finish, accuracy when using equipment and appearance in comparison to their design idea.</p> <p>Evaluation: Pupils will be assessed on the evaluation of their final product. They will be assessed on their use of technical vocabulary and their awareness of strengths, areas for improvement and modifications.</p>	<p>Research: Pupils will complete a presentation on a chosen design movement in pairs. They will be assessed on the quality of communication and the information presented.</p> <p>Design: Pupils will be assessed on both the hand sketches produced and the development of the design on 2D Design. Assessment will be focused on the accurate transfer of the design onto 2D design, challenge of the idea and the range of tools used.</p> <p>Make: Pupils will be assessed on the understanding of how to use the laser cutter safely and the quality of their finished product.</p> <p>Evaluation: Pupils will be assessed on the evaluation of their final product. They will be assessed on their use of technical vocabulary and their ability to suggest modifications after testing and peer feedback.</p>	<p>Research: Pupils will be assessed on the analysis of a range of research tasks based around robots imagery and tools and equipment.</p> <p>Design: Pupils will be asked to design a range of phone holder ideas and then develop their chosen design into an orthographic projection. The assessment will focus on the accuracy of their orthographic projection and the presentation and annotation of the initial ideas.</p> <p>Make: Pupils will produce a final wooden product. The assessment will focus on the child's ability to independently, safely and accurately use a range of workshop equipment, alongside the quality of finish and overall final appearance of the phone holder.</p> <p>Evaluation: Pupils will be assessed on the testing and evaluation of their card model with the focus being on their ability to problem solve and modify their design at this point.</p>	<p>Research: Pupils will be assessed on the quality of analysis completed in a range of healthy eating based topics.</p> <p>Design: Pupils will be asked to design both a sandwich and pizza by selecting and preparing appropriate ingredients.</p> <p>Make: Pupils will be assessed over a range of different practical cooking activities. The assessment will focus on the child's ability to independently, safely and accurately use a range of kitchen equipment whilst maintaining high levels of food hygiene.</p> <p>Evaluation: Pupils will be assessed on the evaluation of their final food products. They will be assessed on their use of technical vocabulary and their ability to use a range of sensory analysis and feedback.</p>
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