

MOOR PARK HIGH SCHOOL: CURRICULUM

Key Stage 3 Long Term Planning

Year 7 INTENT: Pupils will develop essential creative and practical skills to design, implement and refine products. Ranging from woodworking, to nutritional information. Pupils will spend approximately 10 weeks in each rotation. **Art is part of the rotation. The Art curriculum can be found separately.**

Faculty Area: Art, Performance and Technology (Design Technology).

Year 7	Transition	(Rotation 1)	(Rotation 2)	(Rotation 3)	(Rotation 4)	
	'Go big' transition book	Design Technology	Food Technology	Art	Art	
Knowledge	Understanding some of basic processes used in the home i.e Cutting (shearing), Assembly (gluing). Be able to show that making mistakes or failure to complete a task is not the end of the road. In fact, it's the beginning of another road/journey to progressing your learning. Reflection Optimism Resilience responsibility	Pupils will use a wide range of materials to design and make products (Tangram Puzzle). In this project pupils will work out their ideas with some accuracy, taking into account how products are made, who will use them, the material that will be used and their appearance. They will develop their understanding of making and expand their design (CAD) skills. They will use a range of techniques, equipment (Hardware) and materials. The main aim of this project is to develop pupils understanding of CAD/CAM techniques	Pupils will gain knowledge about how to stay safe in a kitchen setting and being aware of their surroundings. Pupils will gather knowledge on how to make a selection of basic products that they can recreate at home or modify to create a different product. They will go onto utilise the skills and knowledge gained throughout the previous lessons to design and make pasta salad, shortbread, pizza toast and apple crumble. The skills include the 'the bridge and claw' method when preparing ingredients. The importance of being accurate in measuring out ingredients and ensuring the 'scale' up is appropriate for the quantity of product to be made.			
Skills	To develop their reasoning skills when it comes to choosing a particular design: Curiosity Reflection The correct use of the English language (words and phrases)	Students will be given a focused practical task to make a tangram puzzle to a set specification. They will develop specific design skills which are paper and computer based. The project allows pupils to understand basic principles of, manufactured board & joints, hardware and software and health & safety. This will lead them onto developing specific drawing skills used the CAD software	Pupils will develop their knife skills learning two basic knife techniques (Claw grip and bridge hold). Pupils will also learn to become independent and how to follow a method accurately, so that they can produce products of a high quality. Pupils will continue to practice their knife skills as well as learning to become more independent in practical lessons. Pupils will be able to use their clock reading skills to know when a product needs removing from an oven.			
Connections to previous learning	Activities which have been explored and utilised in primary school (model making, etc)	Design work carried out in primary school. Computer work carried out in primary school. This could also include any hobbies which the pupils have been engaged in.	Each practical links into the previous lessons theory, whether it is working safely in the kitchen using a sharp knife or using the measuring scales accurately when making flapjacks etc.			
Assessment	Group discussion and interaction with individual pupils	<i>Point 1</i> To demonstrate if they are able to draw an accurate tangram puzzle on paper within a given tolerance. If the drawing is out of tolerance, then they are required to draw it again <i>Point 2</i> To be able to independently draw using the skills developed throughout the computer lessons an accurate CAD design of their puzzle <i>Point 3</i> Completing the comprehension exercise which relates to the use of paper and varying sizes <i>Point 4</i>	Point 1: Pupils will complete a flowchart on how to make fairy cakes. They complete this after watching a demonstration. The purpose is to include all the points in the correct order so that another person could follow their method. PUPILS, THEN USING THEIR FEEDBACK, WILL PRODUCE A NEW FLOWCHART FOR A DIFFERENT PRACTICAL Point 2: Pizza Toast are made and are assessed on how independent they have been as well as the finished outcome of their product.			

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		<i>End of unit test. Exam style questions where possible in which they use their knowledge of what we have been learning about in this rotation</i> <i>Point 5</i> <i>End of unit evaluation on the project. An analysis of how well the project was delivered, based on the specification points</i>	<i>Point 3: End of unit test. Exam style questions (where possible) in which pupils use their knowledge of what we have been learning about in this rotation</i>		
Homework	Different types of materials used in the home when items are bought	1.To research the origins of 'Chinese puzzles' [tangram]. Establish the reasons for their production, use and sales. What are the rules governing a tangram puzzle? 2.Create a fact sheet showing the different types of 'wood' you could buy, the standard form it may come in and categorise into the three areas: Man made boards, softwood and hardwood. 3.Keywords and their meanings to be completed by the pupils. This will help them during the CAD design stages and final evaluation stage. 4.Put together a convincing and creative poster that will encourage people to be more environmentally friendly. Think about all the news stories that have been talked about in the newspapers and on the television regarding global warming, saving the planet and re-using products for other purposes.	1.Pupils will be expected to bring in their ingredients for their practical, which are put onto SMH. 2.Pupils will complete a research project and create an information leaflet about what food poisoning and food hygiene is and what the consequences are to a restaurant if they are not clean.		
Cultural Capital	Shopping trips, observing different types of foods, packaging materials and the shapes differing.	Watch: 'Engineering Connections: Why the designers require to be accurate'. What are the key factors which are taken into consideration Watch: 'Engineering Connections: How the designers go about being accurate'. What is the level of accuracy needed for different types of products Recycling Sustainability We know that unfortunately the magic sweet jar doesn't exist. Taking sweets out of the regular jar without putting any more sweets back in is not a sustainable practice. You can't keep doing it for a long time, because the jar will eventually run out. A bit like rainforest deforestation, if trees aren't planted in place of those cut down, as well as the loss of trees, all that habitat for animals, plants and insects are lost there too. How does the simple method of the 3R's and the 3P's help sustainability?	Watch: 'Junior Bake off'. Pupils can watch programmes like this so that they can see how children in a similar age range to themselves organise their work space and therefore be more organised in a kitchen Attend: If there is a local food festival then pupils may want to attend it in their own time. Please note that they may not be on at all.		
Literacy	Exploring different literature found on packaging, toy boxes and clothes labels. This will enhance their understanding in the future	Completing their puzzle challenges in the booklet and giving a reason for their choices Expressing their opinion on their personal thoughts regarding a particular product or design Key Words and Sentence Starters: Pupils will read through the instructions which include specific technical information displayed on the board and pick out key information. Answer using the 'Speaking Guidelines sheet' and use the sentence starter guides.	Key Words and Sentence Starters: Pupils will read through the recipes for their practical's, which are displayed on the board and pick out key information such as oven temperature and time to cook/bake. Answer using the 'Speaking Guidelines sheet' and use the sentence starter guides. During a demonstration, pupils will hear some key words being used in the correct context and in the written element of the lesson, pupils will be asked to incorporate these words into their work.		
Numeracy	The use of a ruler in math's lessons. How they measure given shapes in school	The use of a ruler, understanding the difference between MM and CM in a DT context. How this affects how they interpret data in the future. Being able to apply this new found knowledge in different contexts i.e. measuring 3D rather than 2D.	Weighing and measuring: One lesson will focus on using weighing scales and measuring jugs accurately Weighing and measuring: for practical's including fairy cakes and chocolate flapjacks Timing: Using a clock to time how long their products need to be in the oven for without having to rely on the timer on the oven.		
CIAG		Product Designers: How important is measuring accurately? Manufacturer: How they use the information supplied by the Product Designer to make products?	Product Designers: What do they need to take into consideration when designing a new product? Market Researchers: How do they collect evidence from the public? Engineers: How do they use flowcharts to help complete their work?		

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			Nutritionists and Dieticians: What do they do and how do they keep people healthy?			

Key Stage 3 Long Term Planning

Year 8 INTENT: Pupils will be challenged to further develop their practical skills learned in the previous year to create, implement and refine more complex products. These products range from woodwork and food. Pupils will spend approximately 10 weeks in each rotation. Art is part of the rotation. The Art curriculum can be found separately.

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Faculty Area: Art, Performance and Technology (Design Technology).

Year 8	Rotation 1)	(Rotation 2)	(Rotation 3)	Rotation 4
	Design Technology	Food Technology	Art	Art
Knowledge	They will use a range of tools, machinery and materials. The main aim of this project is to develop pupils understanding of manufacture, through the use of traditional production techniques and their understanding of CAD/CAM techniques from the previous projects (Yr 7) PROJECT 1: Souvenir Coin In this project pupils will work out their ideas with some precision, taking into account how products are made, who will use them, the materials that will be used and their appearance. They will develop their understanding of making and expand their practical skills PROJECT 2: Pendant Design The pupils will use their existing knowledge of jewellery. In particular any jewellery they have come across at home or on display.	Pupils will gain knowledge about different scientific reactions, such as dextrinisation and coagulation. As they looked at macronutrients in Year 7, pupils will learn about some of the different micronutrients and the benefits of eating them. Pupils will expand on this knowledge through their practical work as each practical will look at what we have learnt about in the previous lesson, so they can see it in action To aid in further knowledge gain, other concepts which are partially understood will be covered further, such as caramelization, denaturation and the function of fats.		
Skills	PROJECT 1: Souvenir Coin Students will be given a focused practical task to make a Souvenir coin display stand to a set process. The project allows pupils to understand basic principles of, wood, wood to other materials joints, hand tools and equipment, joining techniques, health & safety, CAD/CAM techniques. The project builds upon design and making skills previously learnt and helps to combine the traditional with the modern. Pupils will also be introduced to other areas of design including: To enable pupils to develop their practical skills. PROJECT 2: Pendant Design The pupils will have the chance to design their own pendant based on the work of a specific designer. The skills gained in Yr7 and in project 1 will be enhanced. The ability to create an accurate mould will be a key test. The project helps to refine the designing phase and being able to follow specific rules governing the casting/moulding process.	Pupils will improve the skills that they have learnt in Year 7 including knife safety and weighing and measuring. New cutting skills (wedges) Pupils use their time management skills to ensure they can complete their practical work on time. They will be able to do this using the information/PowerPoint provided on the board.		
Connections to previous learning	PROJECT 1: Souvenir Coin Building on the basic foundations of CAD/CAM exposure in yr7. Using the H&S knowledge from yr7 to engage with materials and machinery in a safe and controlled environment PROJECT 2: Pendant Design Implementing more specific tools from the CAD software not previously used but having already had some familiarity in Yr7/8. Using the same finishing process but also adding some hand tools into the overall process of finishing and polishing	Pupils will use the knowledge that they gained in Year 7 to complete a range of more challenging practical's and incorporating the use of different pieces of equipment within the same practical, rather than focusing on just one piece. (Potato wedges and dips) All lessons are catered that the practical lesson supports what they have learnt about in the previous lesson. Sometimes a practical maybe completed first so that pupils have a visual reference to support their learning.		
Assessment	<i>Point 1</i> Be able to demonstrate accurate skills in using the machinery and with safety in mind at all times <i>Point 2</i> To be able to independently draw using the skills developed throughout the computer lessons an accurate CAD design of their chosen theme <i>Point 3</i> Record an appropriate plan, outlining the methods and processes used to achieve a favorable outcome <i>Point 4</i> End of unit test. Exam style questions where possible in which they use their knowledge of what we have been learning about in this rotation <i>Point 5</i> End of unit evaluation on the project. An analysis of how well the project was delivered, based on the specification points	<i>Point 1: Pupils will complete a practical, where they will make a 5-6 mini pizza roles using fillings of their choice. They will be assessed on their independence/accuracy and quality of their product</i> <i>Point 2: Pupils will complete an evaluation, where they look at what they did well at in their practical as well as what they can improve. They will then make suggestions for improvement and how they would change their product and explain why.</i> <i>Point 3: End of unit test. Exam style questions (where possible) in which pupils use their knowledge of what we have been learning about in this rotation</i>		
Homework	PROJECT 1: Souvenir Coin Produce a convincing and thoughtful marketing strategy to be able to sell their chosen themed souvenir PROJECT 1: Souvenir Coin	Pupils will be expected to bring in their ingredients for their practical, which are put onto Synergy.		

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	Redesign an existing souvenir based on the knowledge they have gained about the process of 'design' PROJECT 2: Pendant Design Re-designing an existing product with a given designers theme PROJECT 2: Pendant Design Research and analysis of the different methods of Moulding/Casting in different industries.	Pupils will complete a research project and present it in the form of a poster. They will be expected to look at the roles that different ingredients play in a cake (Marble cake or lemon drizzle cake) and look at alternative ways to make them healthier.		
Cultural Capital	Souvenirs/Jewelry around the world and their symbolism/significance. How the availability of materials and methods determines the design/product on offer Watch: Industrial processes which shaped our lives. Discussion on the nature of the processes which are devised or modified to help create the products Social and Sustainable responsibility: Define the term 'sustainable': the practice of using natural resources responsibly so that human needs are met without compromising the ability of future generations to meet theirs' Give examples of current products which show this in action? Which companies explicitly pursue 'sustainable' practice? Social responsibility: what and who does it affect? Social responsibility: 'an ethical framework and moral obligation for individuals and organizations to act for the benefit of society. It dictates that decisions and actions should prioritize the greater good, balancing economic growth with the welfare of communities and the environment' How can we as a society become more socially aware at home, work and the wider spaces we visit	Watch: Pupils can watch Masterchef and see how amateur chefs use their presentation skills to make their products look more attractive. Attend: Visit the school canteen and carry out a simple observational task, whilst the meals are being prepared. See the staff working as a team, manage time and tasks. Observe safe working practices from the cleanliness of counter space to keeping the food hot.		
Numeracy	Understand that waste production can be minimised through thoughtful measuring and starting from a given datum point. Appreciate how standard designs lead to better quality control. Having templates can help determine designs and features much quicker in the make process.	Weighing and Measuring: Pupils will use the kitchen scales to help them produce their products and ensure that they are accurately measured. Timing: Again, pupils will need to be able to say when their product has been in the oven for the correct amount of time or to say if something has simmered for the correct length of time etc. Quantities: When we look at micronutrients, pupils will see that they are measured in micrograms instead of grams and why.		
Literacy	Key Words and Sentence Starters: Pupils will read through the instructions which include specific technical information displayed on the board and pick out key information. Answer using the 'Speaking Guidelines sheet' and use the sentence starter guides.	Key Words and Sentence Starters: Pupils will learn new words about what happens to food e.g. caramelization, denaturation and coagulation. Pupils will carry out a small practical to help them understand what is happening before we discuss what they have seen using specific vocabulary and writing down what they have seen. More able will have certain aspects that they must include, and sentence starters will be provided for weaker abilities. Skimming and scanning: Pupils will read through the recipes for their practical's, which are displayed on the board and pick out key information such as oven temperature and time to cook/bake Evaluation: Pupils will complete a written piece of work that allows them to explain the good points and suggest improvements to their product as well as giving them the opportunity to compare their product to a shop bought variety.		
CIAG	Measuring: Using the template accurately. Ensuring the waste is minimized. Time: Ensuring the most efficient processes are utilised. The Iterative Process: All designers in all industries carry out this process. From designing a simple part to a multi complex design, the process is the same. An idea in the head turns into a design on paper/screen, this then is realized into a model, tested, re-drawn and tested again until it works! Measuring: Drawing accurately on the CAD software the rectangles, circles and designs so that they all fit correctly. Ensuring that the rules of the various CAM machines are applied and standards are maintained.	Food Scientists (Quality Manager): What do they do? How do they check the quality of a food product in a factory? Food Technologists: What do they do? Why is it important to know why food does certain jobs? Chefs: Why do they need to know the science behind the food?		

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Key Stage 3 Long Term Planning

Year 9 INTENT: Pupils will be confident in working independently to design, implement and evaluate a variety of products. These range from woodwork/metal work, to nutritious main courses. Pupils will spend approximately 13 weeks in each rotation. Art is part of the rotation. The Art curriculum can be found separately.

Faculty Area: Art, Performance and Technology (Design Technology).

Year 9	(Rotation 1)	(Rotation 2)	(Rotation 3)	Rotation 4
	Design Technology	Food Technology	Art	Art
Knowledge	Project 1:Maze Game In this project pupils will work out their ideas with some precision, taking into account how products are made, who will use them, the materials that will be used and their appearance. They will develop their understanding of making and expand their practical skills. They will use a range of tools, machinery and materials. The main aim of this project is to develop pupils understanding of manufacture, through the use of traditional production techniques in cooperating more than two material substrates. Project 2:Furniture Design This project is based around the presentation of work and how ideas are developed based on a given designer. The work is presented in the GCSE 3D Design format Understanding drawing techniques, use of media, modeling techniques and presentation of work.	In this rotation, pupils will gain knowledge about how to meal plan for people of different dietary requirements, geographical locations and lifestyles. Pupils will learn to time manage themselves so that they can become more independent learners. Pupils will also learn about how different research based tasks can help them in the design of a final product. The areas of knowledge to be tackled include: What is a hobby kit? What's its purpose? Is there a market for this product? How do you go about putting one to together? What's the relationship of making and packaging? Is it important?		
Skills	Pupils will be given a focused practical task to make a challenging multi layered maze game, based on a standard format which the pupils will then expand upon. The project allows pupils to understand basic principles of, wood to wood, wood to other materials joints, hand tools and equipment, joining techniques, health & safety, user defined briefs which challenge the designer. The project builds upon design and making skills previously learnt and helps to combine the traditional with the age old art of modelling with card (used to build the actual maze [recycled]). Pupils will also be introduced to other areas of design including:	The aim of this project is to make pupils more independent and develop these skills. In year 7/8 they understand the safety, cleanliness and hygiene side of food preparation. As we cook with raw meat in some of the practical's, pupils will also be able to identify when it has cooked through properly and is therefore safe to eat. They have covered the basics of cutting, dicing and preparing ingredients. The skill of utilising the given time is a sought-after ability, not to be underestimated particularly in the kitchen where ingredients can be ruined quickly.		
Connections to previous learning	Building on the techniques of 'hand skills' developed from Yr8. The use of traditional measuring and marking methods. Using the H&S knowledge from yr7 to engage with materials and machinery in a safe and controlled environment	Pupils will use all the skills that they have learnt in the previous 2 years. Pupils will develop their skills in making high-skill dishes. This will hopefully help them to take more interest in the world of food and try making some dishes at home.		
Assessment	<i>Point 1</i> <i>Be able to demonstrate accurate skills in using the measuring equipment with accuracy in mind at all times</i> <i>Point 2</i> <i>To be able to independently model using the skills developed throughout the Yr8 practical lessons. Be able to work safely.</i>	Point 1: Pupils will complete a practical, where they will make pizza from scratch. They will be assessed on their independence/accuracy and quality of their product		

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	<i>Point 3</i> Record an appropriate plan, outlining the methods and processes used to achieve a favorable outcome <i>Point 4</i> End of unit test. Exam style questions where possible in which they use their knowledge of what we have been learning about in this rotation <i>Point 5</i> End of unit evaluation on the project. An analysis of how well the project was delivered, based on the specification points	<i>Point 2: Pupils will complete an evaluation, where they look at what they did well at in their practical as well as what they can improve. They will then make suggestions for improvement and how they would change their product and explain why.</i> <i>Point 3: End of unit test. Exam style questions (where possible) in which pupils use their knowledge of what we have been learning about in this rotation</i>		
Homework	Project 1: Maze Game History of Maze design, why were they invented, who invented them, the types, specific facets explained. Methods of joining different materials. Wood to Wood, Wood to Metal, Metal to Metal, etc Project 2: Furniture Design Establish some designs from existing furniture in the home, school or place of interest Research the designs from different designers who are involved in product design. Apply those ideas to your design	Pupils will be expected to bring in their ingredients for their practical, which are put onto Synergy. Pupils will be given an extended project to create a meal plan for 1-3 days based on client profiles. Look at different aspects of food delivery:		
Cultural Capital	How products have evolved over time and how the method of assembly has changed from labour intensive to automation. What were the methods which were most common at the time before automation Watch: Joining methods, both traditional and new. The invention of the robot assembly system. Why was this system developed, what are the benefits, drawbacks and what does the future hold? How has the world of design incorporated 'Inclusive Design'. What does that mean, how can it be achieved and what affects it has on milieu.	Watch: Masterchef: The Professionals Trip: <i>Please note that this is just an idea and may not take place. Permission will be needed and careful planning will be needed too.</i> A selection of pupils could attend Cadbury's world in Birmingham to see the workings of a real factory, which could help with their homework. There is also a packaging workshop that we could attend. Watch: Documentaries on current food affairs e.g. 'Inside The Factory'		
Numeracy	Measuring Pupils will be required to measure items prior to making Explore the idea of proportion through modelling in paper/card and 3D CAD.	Weighing and Measuring: Pupils will use the kitchen scales to help them produce their products and ensure that they are accurately measured. Timing: Again, pupils will need to be able to say when their product has been in the oven for the correct amount of time or to say if something has simmered for the correct length of time		
Literacy	Key Words and Sentence Starters: Pupils will read through the instructions which include specific technical information displayed on the board and pick out key information. Answer using the 'Speaking Guidelines sheet' and use the sentence starter guides. Unscramble some keywords and make connections with the project. Unscramble some keywords and make connections with the project. 'retrieval practice' through images, missing letters and words associated with a concept.	Key Words and Sentence Starters: Pupils will read through the recipes for their practical's, which are displayed on the board and pick out key information such as oven temperature and time to cook/bake Analysis: Pupils will complete graphs (numeracy) and after they have completed these, they will then analyse their findings e.g. which option was the most popular etc. Evaluation: Pupils will complete a written piece of work that allows them to explain the good points and suggest improvements to their product as well as giving them the opportunity to compare their product to a shop bought variety.		
CIAG	Measuring: Using the measuring equipment accurately. Ensuring the waste is minimised. Time: Ensuring the most efficient processes are utilized Tolerance: Ensuring the measurements undertaken are accurate and the cutting process is also accurate so that they all fit correctly. Industrial Engineers: Designing specialist jigs/fixtures to help solve production problems. Furniture Designers: Being able to design both bespoke and main stream products for two very different markets.	Market Researchers: The importance of questionnaires and how they are used. What are the advantages and disadvantages of using questionnaires? Graphic Designers: What do they do and why are they relevant to the food industry? Food Technologists: What do they need to take into consideration when they're designing a new hobby kit?		



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