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| **Design Technology Year 7 Curriculum Intent**  |
|  | **Autumn Term** | **Spring Term** | **Summer Term** |
|  | **The 3 areas of Design Technology are taught on a termly rotation**  |
|  | **1** | **2** | **1** | **2** | **1** | **2** |
| Key Concepts | Technology- Pop Craft Cube Character Project | Engineering- To design and manufacture a Novelty Pencil Holder  | Food Technology- Understand and apply the principles of nutrition and learn how to cook |
| Knowledge & Understanding | NC- develop and communicate design ideas using annotated sketches, detailed plans, oral. Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. K&U- This unit is aimed at giving students an insight into the design and make process. This covers the design process as well as some practical graphical skills and the leads onto the skills required in future years. It also promotes literacy and numeracy in order to strengthen these skills which may have been neglected during lockdown. | NC- develop and communicate design ideas using annotated sketches, detailed plans, oral. Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. Students will select from and use specialist tools, techniques, processes, equipment and machinery precisely,K&U- This unit is aimed at giving students an insight into the design and make process. This covers the design process as well as some practical manufacturing skills and the leads onto the skills required in future years. It also promotes literacy and numeracy in order to strengthen these skills which may have been neglected during lockdown.  | NC- understand and apply the principles of nutrition and health, students will cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet. Students will become competent in a range of cooking techniques by selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes. They will also understand the source, seasonality and characteristics of a broad range of ingredientsK&U- This unit is aimed at giving insight on how to make a range of different food products and develop a wide range of different food products and develop a wide range of skills that will equip them for life. It also promotes literacy and numeracy in order to strengthen these skills which may have been neglected during lockdown.  |
| Assessment | Students will be assessed throughout through teacher assessment, both verbal and written, peer/self-assessment and an end of unit test.  | Students will be assessed throughout through teacher assessment, both verbal and written, peer/self-assessment and an end of topic assessment on students practical skills.  | Students will be assessed through teacher assessment, bother verbal and written, peer/self-assessment and an end of unit test.Students will be accessed on six dishes they cook. The assessment will incorporate skills learnt to make the dish and theory students have learnt. |
| Why this? Why now? | In Key stage 2, pupils studied DT. They learnt how to generate, develop, model and communicate their ideas through discussion, annotated sketches. This topic builds in the basic drawing skills, to be able to communicate their design ideas. The theory topics are slightly universal so students may have an understanding through home or recent media. Some basic drawing skills will also have been taught in primary school which can then be developed. Students should have also have some basic knowledge of nets which is in the maths curriculum. At Key stage 2 students learnt how to investigate and analyse a range of existing products and evaluate their ideas and products against their own design criteria and consider the views of others to improve their work, they will build on this using GCSE terminology of ACCESSFMM.  | In Key stage 2, pupils studied DT. They learnt how to generate, develop, model and communicate their ideas through discussion, annotated sketches. At Key stage 2 students learnt how to investigate and analyse a range of existing products and evaluate their ideas and products against their own design criteria and consider the views of others to improve their work, they will build on this using GCSE terminology of ACCESSFMM. This may be the first time students have used tools and equipment, this project is to start to develop manufacturing skills in the workshop and raise an awareness of health and safety.  | Students may help out at home but food technology would be a new subject as this is not always taught at Key Stage 2. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. The course will build on the knowledge learnt at Key Stage 2 which is to understand and apply the principles of a healthy and varied diet and prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Cooking is a life long skill. Students will also have the opportunity to cook one sweet dish.  |
| Skills & Characteristics | * What is a design brief
* Understand the individual requirements
* Uunderstand how a products function and appearance can affect the customer and cost
* Understand how a product material and manufacture can affect the environment
* Analyse existing products
* Understanding the requirements and purpose of a design specification
* Write a design specification
* Analyse research to inform a design specification
* Link design ideas to your design specification
* Understand how deforestation can affect the environment
* Know how paper manufacture can affect the environment
* Understand how to reduce environmental impact of paper products
* How to draw in 1 point perspective
* Develop accurate measuring and conversion skills from cm’s to mm’s
* Know how to annotate a design idea
* Know how to render a drawing
 | * To understand what a design brief and problem are
* To identify key information in a design brief and problem
* To complete a detailed analysis of the design brief
* Differentiate hardwood, softwood, and manufactured board.
* Discuss the properties of specific timbers Identify the uses of wood.
* Classify different woods and manufactured boards.
* Explain wood defects
* To understand why we look at other products on the market
* To apply ACCESFMM to products
* To explain why we look at other products on the market
* To apply ACCESFMM to products to explain
* To work to a brief
* To generate ideas
* To generate good quality design ideas
* To design a pencil holder in the style of an animal
* To explain design ideas
* To understand what a production plan is To understand why we create production plans
* To create a production plan
* To select the correct tools/equipment
* To use tools/equipment safety
* To explain why tools/equipment have been chosen
* To explain how to use tools/equipment safety
* Name tools
* Recall tools used
* Explain how tools are used
* Give advantages of different tools
* To explain the importance of an evaluation
* To complete an evaluation of the project
* To complete an evaluation of the project and suggest improvements
* To explain the importance of packaging
* To understand what should be included on packaging
* To design a piece of packaging for your pencil holder
 | * Understand the importance of good kitchen hygiene and routines
* Describe consequences of not following personal hygiene and kitchen routines
* Learn how to use equipment safely
* Be able to use sensory evaluation to review a dish
* Be able to identify the 5 main nutrient groups
* Explain the need for each nutrient
* Learn how to explain what a ‘balanced diet’ means
* Learn about examples of dietary needs
* To know which foods are available in each season
* To understand the importance of eating seasonally
* Be able to identify the role of carbohydrate in my diet.
* Be able to distinguish between slow and fast (complex and simple) carbohydrates.
* Be able to explain why the body needs protein
* Be able to identify sources of protein and distinguish between HBV and LBV protein.
* Be able to explain why the body needs fat.
* Describe a range of consequences of a poor diet
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| Aspirations & Careers | We have many company links at Southmoor- Seta, Nissan, Komatsu, Vantec and Unipress. Jobs students may go into are: Tradesman: Electrician, Plumer, Joiner, Builder. Engineer: Materials, Civil, Automotive, Design, Chemical, Clinical, Games Designer, Graphic Designer, Product Designer, Construction Manager CAD Technician, Secondary School Teacher, Data Analysis | We have many company links at Southmoor- Seta, Nissan, Komatsu, Vantec and Unipress. Jobs students may go into are: Tradesman: Electrician, Plumer, Joiner, Builder. Engineer: Materials, Civil, Automotive, Design, Chemical, Clinical, Games Designer, Graphic Designer, Product Designer, Construction Manager CAD Technician, Secondary School Teacher, Data Analysis | Industrial baker, baking operative, artisan baker, craft baker, Bartender, Barista, Butcher, Butler, Cake decorator, Catering manager, Food service manager, Cellar technician, dispense technician, cellar service engineer, beer quality technician, Chef, Cook, Crew member, fast-food service assistant, food and beverage server, Fishmonger, Food factory worker, Food manufacturing inspector, Food scientist, Waiter, Waitress, waiting staff, server, Waiters serve food and drinks to customers in restaurants and cafes, take orders and handle payments. |

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|  | **Basic****(Lower Ability End Points)** | **Clear** **(Middle Ability End Points)** | **Detailed** **(Higher Ability End Points)** |
| Y7 Technology  | * Know how to shade, add tone, texture and understand primary and secondary colours
* Research other cultures to inspire design ideas
* Understand typography
* Use research help with design ideas
* Develop specifications to inform design ideas
* Create a range of design ideas including 3-D modelling
* Understand the environmental impact of deforestation
 | * Understand colour theory, tone, texture, shadow and rendering
* Use research and exploration, such as the study of different cultures to inform design decisions
* Understand typography and link to cultural research
* Use research and exploration to help with design ideas
* Develop specifications to inform the design of innovative, functional, appealing products
* Develop and communicate design ideas using annotated sketches, 3-D modelling
* Understand the environmental impact of the life cycle of paper
 | * Understand colour theory, tone, shadow, texture and rendering and apply this to their work
* Use research and exploration, such as the study of different cultures, to identify and understand user needs
* Understand typography and develop this linking to cultural research
* Use research and exploration to identify and understand user needs
* Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations
* Develop and communicate design ideas using annotated sketches, detailed plans, 3-D modelling
* Understand the environmental impact of the life cycle of paper and how to reduce this impact
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| Y7 Food Technology  | * Be able to suggest ways to keep myself and the kitchen area hygienic.
* Correctly colour and label the sections of the Eatwell Guide
* Be able to identify food sources of vegetables.
* Be able to identify food sources of carbohydrates
* Be able to identify food sources of protein.
* Be able to identify food sources of fats.
* Recognise some basic consequences of a poor diet
* You chose and used the equipment for the recipe. You followed the most obvious health & safety rules. You needed a lot of help to complete outcomes.
 | * Be able to suggest a range of ways to keep myself and the kitchen area hygienic.
* Write or draw relevant examples of food products for each section of the ‘Eatwell Guide’.
* Know and understand the value of different fruit and vegetables in the diet.
* Be able to identify the role of carbohydrate in my diet.
* Be able to explain why the body needs protein .
* Be able to explain why the body needs fat.
* Describe some basic consequences of a poor diet
* You chose and used the equipment for the recipe fairly accurately. You followed health & safety rules. Your teacher helped you a few times. You had success with the skills listed in foundation level.
 | * Be able to explain why good personal hygiene and general cleanliness is important in the kitchen.
* Write or draw a range of relevant examples of food products for each section of the ‘Eatwell Guide’.
* Know how to store, prepare and cook vegetables correctly to avoid food contamination and vitamin loss.
* Be able to distinguish between slow and fast (complex and simple) carbohydrates.
* Be able to identify sources of protein and distinguish between HBV and LBV protein.
* Be able identify sources of fat and distinguish between good and bad fats.
* Describe a range of consequences of a poor diet
* You worked with sharp equipment and relevant parts of the cooker accurately and with precision. You followed health & safety rules. Your teacher rarely needed to help. Either you made no mistakes or you could correct your own. You had good success with the skills listed in foundation level.
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| Y7 Engineering  | * Develop specifications to inform design idea
* Simple designs
* You used the equipment and attempted your practical activity when marking out, Shaping, drilling, cutting, finishing and assembly
* You followed health and safety rules. You used the equipment and attempted your practical activity: Marking out, Drilling, Shaping, Cutting grooves Filing and Use of Hegner saw.
* Make any final changes to work. Complete any outstanding work
 | * Develop specifications to inform the design of innovative, functional, appealing products
* Good quality designs
* You used tools and equipment fairly accurately
* You followed health and safety rules. You used tools and equipment fairly accurately. You reflected as you worked, Marking out, Drilling, Shaping, Cutting grooves, Filing, Use of Hegner saw.
* Explain how you could further improve the design or your finished outcome.
 | * Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations
* High quality designs. Research is evident and developed through the ideas.
* You followed health and safety rules You can correct your mistakes and produce alternative improvements; you worked with precision and produced a finished product of high quality. You reflected on you work as it developed identifying what worked well modifying where necessary. Marking out, Drilling, Shaping Cutting grooves, Filing and Use of Hegner saw.
* An excellent quality face drawing with really good use of space for the face.
* Explain how you could further improve the design or your finished outcome.
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