Intent: Year 7: By the end of the year...

Students will be able to identify and use a range of specialist tools, techniques, processes, materials, Ingredients, equipment and machinery

Students will speak with confidence about structure and pattern as features of the built, manufactured or designed environment and the natural world, and articulate how these concepts drive the processes of design.

Students will have started to learn how to research, understand user needs, know what a design problem is and know what a specification is. Students will know how to generate ideas and how to represent them using sketching and modelling techniques, including technical drawing.

Students will know what is meant by analysis and evaluation and will start to apply it to their work and the work of others. They will begin to understand the developments in design technology.

Students will understand the principles of nutrition and health and start to apply them. They will understand the sources of ingredients and different cooking techniques and will have started to cook a repertoire of dishes as part of a healthy and varied diet to feed themselves. Students will know and understand health, safety and hygiene while working in a practical environment.

		A LITUAANI 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2	
	Actomic 2 STRING 1			JI KING 2	Assassment 2		
Core Course Topic:	Across the year students will co	ver these 5 core tonics:					
These topics are taught through the identified terms. They are taught in small bitesize chunks and revisited regularly.	Key Concept focus: Structure: Understanding of Structure as referring to the shape and scale of things, their composition, order or sequence, and the way one part joins to the next. Exposure to examples from across the natural and manmade environment relevant to Structure. Key Concept focus: Pattern: Understanding of Pattern as repetition or series, a set of common features, or a rule that controls variation. Exposure to examples of Pattern in art and design, including those beyond surface pattern design.						
	Design principles : How to research, User needs, What is meant by desig problems, What a specification is, H to generate ideas, How to sketch an model, including technical drawing skill	, Making Principles : I in use of specialist tool low processes, equipmen nd precisely, including a of computer-aided manufacture, Aware safety	Identification and s, techniques, nt and machinery awareness eness of health and soluti move	nical knowledge: Pupils explore terminology with an emphasis on surements ml, cm, mm, tbsp, g. terties of materials and the ormance of structural elements to eve functioning tions. Mechanical systems – ement and force.	Sustainability and the environment: Introduction to the 6R's and how they can be used to benefit the environment. What sustainability is. Food waste may be explored.	Analyse and Evaluate: How to analyse, How to evaluate, Awareness of developments in design and technology, its impact on individuals, society and the environment.	
Additional support links: Here are links to additional resources which will help your child	http://wiki.dtonline.org/index.php/Main_Page - A range of DT related information and resources https://www.stem.org.uk/home-learning/secondary-design-technology - A range of STEM and DT related information and resources www.technologystudent.com – Under heading of 'New D&T GCSE' there is an area based on Timbers and wood joints which is particularly useful. Also under 'Mathematics in Design Technology' there are a range of maths activities linked directly to DT.						
Knowledge: Included here is the specific knowledge your child will learn in detail	Designing principles Pupils must have the ability to adap and refine: This could be a technical design in isometric or orthographic style or a simple dish t make it healthier and/or more appealing Design a range of ideas based on a k and develop ideas using feedback fr others	Making principles <u>Pupils understand here</u> <u>use appropriately a negative structure</u> <u>linking to health and</u> <u>could be through ane</u> <u>following</u> : coping saw Skills using a pillar dr orief Understanding of dir 'om include use of sand per Working with paper Understanding of dir for paper and board application of colou and machine stitchin textiles (weaving/kn	ow to identify and range of equipment, I safety. This y of the w and a tenon saw.Pupils includ plasti made plasti made plasti made plasti made plasti made plasti made plasti made plasti mate plasti made plasti mate plasti mate plasti mate plasti mate plasti mate plasti mate plasti mate plasti mate mate plasti mate mate plasti mate mate plasti mate mate plasti mate mate plasti mate mate plasti mate mate	is should have knowledge of erials and their origins which may de: wood, fabric, ingredients, cic, metal, paper, boards. Man- e and natural. Is should learn appropriate cutting nods. This could be for the following erials: wood, fabric, ingredients, cic, metal, paper, boards. Is should recognise and be able to e simple structures. This could de: nets, joining methods od/fabrics), layers, fastenings.	Sustainability and the environment Learn what sustainability is through any DT specialist area. Introduction to the 6R's: Reuse, refuse, reduce, recycle, repair, rethink in relation to any DT specialist areas and how they can be used to benefit the environment when it comes to design and making.	Analyse and evaluate Able to evaluate the effectiveness of a series of practical outcomes using a sensory analysis Product analysis of an existing product. Able to evaluate focussed on functional testing. Analysis of existing design work or the work of others Product analysis of an existing product. Evaluation of own work, focussing on functional testing	
Skills:	Personal safety and awareness of the safety of others, group work, using a range of equipment, time management, problem solving, adaption and development, analysis Evaluate, understand the needs of others, problem solving and identifying issues, following instructions, personal safety and awareness of the safety of others, design skills Analysis, identifying the needs of others, design skills, evaluation, dexterity, accuracy, marketing skills considering the needs of others, adaption and development.						



Design _{Year 7}

Curriculum Overview					
Included here is the specific skills your child will learn in detail	Manual dexterity and accuracy, analysis and evaluation, problem solving, adaption and development, verbal reasoning Exploration, identifying issues and problem solving, trial and error, understanding the needs of others, understanding cultural and social needs, working indeper time management and sequencing, making links between different areas of knowledge, manual dexterity and practical skills.				
Common Lexicon: These are the key words	All: Shape, form, scale, variation, brief, testing, analysis, evaluation, measurement, environment, sustainability, designing, m				
and terms learnt. These	Depending on the DT specialist areas taught, common lexicon may include:				
knowledge organisers.	Timbers : MDF (medium density fibreboard), pine, mahogany, oak, hardwoods, softwoods, sand paper, smooth, measure, accuracy, pillar drill, screwdriver, cop plan/section; triangulation, 2D, 3D, joints and junctions, intersecting planes, fold, bend, layer, prototype				
	Paper & board: Copier paper, tracing paper, grey board, foam board, craft knife, cutting board, cutting mat, ruler, accuracy, asymmetry, monochrome, polychr part and whole, fold, curve, intersecting planes, data visualisation, mechanical reproduction				
	Metals: Stainless steel, aluminium, copper, bronze, galvanise, metal ore, weld, temper, brazing, pewter casting, ferrous, non-ferrous				
	Plastics: Acrylic, PVC, polypropylene, thermosetting, thermoplastic, vacuum forming, line bender, laser cutter				
	Industrial design and production methods:				
	JIT (just in time), lean manufacturing, FMS (flexible manufacturing systems), one-off, batch, mass, continuous				
	CAD/CAM: CADCAM (computer aided design and computer aided manufacture), CNC (computer numerical control), software, hardware				

