Subject:	Year:	Developed by:	Date:
Design and Technology	**7**	**Design and Technology**	**September 2021**

INTENT

The themes for the year / areas of the curriculum to be studied / the big picture TO BE SHARED WITH STUDENTS (evidence in their books)

This year introduces a range of D&T topics, incorporating a variety of basic skills and subject related knowledge which will give students the awareness of how the 'living environment' around them has been designed and constructed.

IMPLEMENTATION

Overview of Year – Topic area and Assessment	Baseline project.	Polymers	Structures.	CAD /CAM.	Textiles.	Food.	Graphics.
	This unit is intended to determine students' understanding of design and technology as a whole and also to test the students' basic practical skills. All students entering BGN in Year 7 will undertake this module at the beginning of the year, irrespective of the specific discipline they start in. The students will undertake a short design project, culminating with a practical result. This unit will be used to set each student's initial BGN entrance level, this will be recorded on the	This unit is intended to introduce students to the design process and also to develop the students' practical skills in addition to their understanding of plastics and related topics. This is achieved by employing a series of focused practical tasks and directed theory sessions to culminate in the forming of a selection of items. Students are introduced to a range of construction processes using a variety of tools and equipment. Students, design, develop and realise their products as	This unit is intended to develop the students' understanding of the concepts behind different Structures Students will learn to employ a range of methods of presenting work and will engage in a variety of 'hands on' focussed practical investigation tasks, using a selection of different materials to solve design tasks Students will Identify different forces and their effects, Consider the nature and uses of different structures, Use a range of tools and	This unit is intended to develop the students' computer designing skills, and increase their understanding of CAD/CAM in the design process. This will be achieved through focussed practical design and realisation tasks, directed theory sessions and selected CAD CAM projects. Students gain knowledge and understanding of the possibilities available when using CAD CAM packages and will produce small items of their own design. Students are introduced to industrial processes and production	**T**his unit is intended to continue student's understanding of the design process and also to develop the students' textile practical skills in addition to their understanding of textiles, their uses and related topics. This will be achieved by employing a series of focused practical tasks and directed theory sessions to culminate in the realisation of different products. Students are also introduced to a range of textile manufacturing processes using a variety of tools and	This unit is intended to introduce Food and Nutrition to students, explaining the basics of preparing healthy and nutritious meals and introducing the practical methods of creating a variety of meals using different equipment and ingredients This will be achieved through focussed practical tasks and directed theory sessions. This unit is designed as the introductory Food module, beginning and then developing Students' understanding of Nutrition and the combination and preparation of ingredients They will use a variety of ingredients and	This unit is intended to develop students' concept of the design process and also to increase the students' physical design skills in addition to their understanding of graphics and related topics. Employing a series of focused tasks and directed theory sessions to culminate in the realisation of graphic products. This unit introduces the study of communication and design techniques using a range of practical skills and also introduces the concepts of differing levels of production,

	central D&T student database and used as a starting point for all future assessment and calculation of progression through KS3. At all times students will be expected to work safely and accurately, develop their products as necessary and evaluate the outcome.	necessary and evaluate the outcome. At all times the correct and safe use of tools and equipment is demonstrated and expected.	equipment, Design, construct and test structures and Evaluate their results and plan developments/improvements This module will introduce the use of technical terms and concepts which will be reinforced throughout KS3 and KS4.	methods. Students will Work with CAD CAM software and Realise their own designs using a CNC laser cutter and other CNC machines Students will develop an understanding of the benefits of using ICT	equipment. At all times students will be expected to work safely and accurately, develop their products as necessary and evaluate the outcome.	production methods to produce a range of appealing and nutritious meals Students will develop an understanding of the importance of having a balanced, nutritious, healthy diet (and how to produce suitable meals) Students will be introduced to the idea of the 'test kitchen' phase in the manufacturing process; showing that this is where the experimenting and developing of new products takes place.	quality control and quality assurance. It allows the student to design and realise a specific product using specialised tools and equipment. Students carry out focused tasks which will increase their understanding of the possibilities available when producing their designs. At all times students will be expected to work safely and accurately, develop their work as necessary and evaluate the outcome.

IMPACT

Topic, Assessment, Readiness	Topic	Assessment Method	Mark Sch / Grade Boundaries	Knowledge / Skills / Understanding To be shared with students
	Baseline project **Polymers** **Structures** **CAD /CAM** **Textiles** **Food** **Graphics**	Self-assessment skill and knowledge evaluation to be carried out at beginning and end of each module Specific assessment points (**DESIGN / MAKE / EVALUATE / TECHNICAL KNOWLEDGE**) throughout module (in workbook) End of module exam FAR marking and final level assessment at end of module	RAG self assessment 9 – 1 assessment 9 – 1 assessment	Each unit is designed to be an introduction to the different disciplines within D&T This will be accomplished by specific theory and focussed practical sessions They will be introduced to the concepts and techniques specifically related to the subject area in addition to relevant industrial processes The skills and knowledge gained during each module will be reinforced in subsequent units and following years.