CHS Curriculum Intent

SUCCESSFUL: Learners who gain deep and powerful knowledge in preparation for life; combining academic rigour, curiosity and creative flair.

CREATIVE: Learners who are imaginative, optimistic and inventive; finding their voice to become effective communicators prepared for lifelong adaptability

HAPPY: Learners who are confident, resilient, well-rounded citizens; they understand the world's communities and are ready to discover their place in it.

CHS Curriculum Area Framework for Learning – Computing and Technology – Year 8

SUBJECT	Computing	Design and Technology	Food Preparation and Nutrition
INTENT	"Those who can imagine anything, can create the impossible." — Alan Turing As we live in an ever-changing digital world, Computer Science impacts everything from gaming, to medicine, banking, communications and connectivity. Most individuals and businesses rely on sophisticated computer systems and software throughout their daily lives and operations. Learners today are preparing for careers that might not even exist yet, and we hope our students can be one of the Computer Scientists who makes the world better, faster and more inter-connected! Studying Computer Science at Chorlton High School, will provide our learners with the tools, knowledge and skills to develop their computational thinking, programming, problem solving and analytical skills. Our learners can then apply these to a variety of programming projects. Studying Computer Science will also allow our leaners to access a wider range of topics including digital literacy, e-safety, computer systems, networks, data representation and the positive and negative impact of computing on modern society.	"There are three responses to a piece of design – yes, no, and WOW! Wow is the one to aim for." – Milton Glaser By studying Design and Technology we want students to be secure in the core skills of teamwork, communication, co-operation, and empathy by immersing them into the world of tomorrow and inspiring them to solve real world problems using practical solutions. We aim to inspire our students to become reflective and creative individuals who have the confidence to explore and question the world around them. Everything we use in life has been designed by someone, by people who are risk takers, experimenters, who are not afraid to make mistakes and learn from them. Therefore, through the in-depth knowledge of materials, products and innovations, students learn to interact positively with the ever-changing world around them and how this can have potential implications on societies, cultures, environment, and new innovations. Our aim is to develop curious, confident young people who are introduced to a vibrant range of activities and cultural experiences covering a broad-spectrum of design disciplines. We encourage creativity supporting students to go beyond the classroom creating responsible consumers, and successful innovative designers and engineers of tomorrow. We aim to develop happy, creative and successful learners that can change the ever-developing Design and Technology landscapes, such as product design, engineering, fashion design and Sustainable futures, preparing them for A-Level, level 3 BTECs or apprenticeships.	"To eat is a necessity, but to eat intelligently is an art." - La Rochefoucauld Food Preparation and Nutrition at Chorlton High school inspires students to develop and understand the relevance and importance of healthy eating in order to contribute to a healthy future. The food and drink industry is the UK's largest manufacturing sector and a vital part of the UK economy. It is a diverse, vibrant, innovative and exciting industry, offering employment to people with a wide array of skills and talent. Studying Food preparation and Nutrition will enable students to acquire a wide range of specialist skills covering problem solving, creativity, logical thinking, an analytical approach, good communication, and teamwork. These skill sets are highly sought after by employers transferable across all industries. In studying this curriculum, we equip students both personally, preparing them for their understanding of food and nutrition but also within their potential future careers. Food Preparation and Nutrition provides progression to A Level, further education or onto an apprenticeship as well as supplementing as a building block to a future career in the Food and Hospitality sector.

Department: Computing & Technology 2021 - 2022
Subject: Computing and Technology – <u>Year 8 Rotation</u>

Year Group	Year 8					
Rationale/ Narrative	**Developing - Following on from their Year 7 Curriculum, students in Year 8 will have 1 term of two hour lessons in Computing, 1 term of 2 hour lessons in Design and Technology and 1 term of 2 hour lessons in Food Preparation and Nutrition. This is done in rotation cycle throughout the academic year.** **Computing in Year 8:** In Year 8 students will develop their knowledge of computational thinking and understand some of the science behind computers, software and processing, students will be able to apply think knowledge through practical exercises in preparation for KS4. There will also be some business links made in the context of ICT with students being asked to use formulae to calculate costs and market an event. **Design and Technology in Year 8:** In Year 8 students will develop and continue to enhance their knowledge of technological drawing methods. They will continue to develop their knowledge and understanding of key elements of the D&T curriculum to build on their understanding from Year 7 of materials understanding how products are manufactured. Students will also look at scientific properties of materials and how this has an impact when products are being made. **Food Preparation and Nutrition in Year 8:** In Year 8 students will develop and continue to enhance their knowledge of food hygiene, nutrition and practical skills with the opportunity to develop new skills and build on their understanding from year 7. In addition, they will develop a deeper understanding of food provenance. As well as looking at the scientific principles and techniques of different ingredients and food products.					
	Computing		**Design and Technology**		**Food Preparation and Nutrition**	
KNOWLEDGE	**Computing** Students will all start with a tutorial lesson on MS Office and specific apps within Office 365 including MS Teams *(revisit to support learners)* Students will learn information around the key topics of: • Computer modelling (mini project including some ICT software and business information) • Computer networks & Cyber security	**Computing** Students will learn information around the key topics of: • Computer programming and coding (Python) • Input, Output, Variables • Arithmetic and Operators • Sequence selection Students will also complete a practical application topic focusses on web design.	**Industry and Manufacturing** Students will develop their understanding of Design and Technology through the following areas: • Industry & Technology • Manufacturing techniques & practices • CAD/CAM • Forces, motions & Stresses • Electronics and Systems For practical sessions: Health and safety	**Design and Make Process** Students will learn information around the key topics of: • The iterative design processes • Product analysis through • ACCESS FM • Developing design ideas (perspective drawing) • Modelling and modelling techniques • Workflow plans • Evaluation of products and processes	**Food Preparation and Nutrition:** *Food Safety and Food Science* Students will learn and develop information around key topics of: • Food Poisoning causes and prevention. • Raising agents- chemical, biological, mechanical- *food science investigations* • Bread-function of ingredients- *practical links pizza/multicultural bread*	**Food Preparation and Nutrition:** *Food, Nutrition and Health, Food Choices and Food Provenance.* Students will learn and develop information around key topics of: • Recap of Macronutrients (enhancing knowledge from year 7) • Introduction to micronutrients- *practical link curry/dahl* • Nutritional Labelling/costing • Adapting a recipe- budget/healthy eating

	• Binary, logic gates, truth tables • Computational thinking and algorithms		(specifically in relation to workshop behaviors, use of tools and equipment.		• Starch based Sauces- gelatinization- *practical links mac n cheese*	links- *practical links adapt a recipe.* • Environmental impact and sustainability- Food security/sustainability and Fairtrade.
SKILLS	Students will: • Identify and select information, breaking down key information. • Analysis Practical application of knowledge will also be a developed skill this term. Students will: • Use evaluation skills, analysis and Metacognitive practice. • Practical application of knowledge will also be a developed skill this term. This will be done using suitable software and programs that relate to the topics being covered in lessons including Python etc. • Students will look at how to use Excel to use formulae to calculate costs and develop their understanding of users and clients.		Students will: **Theoretical skills:** • Identify, select and break down key information. • Analyse and evaluate information relating to a range of materials. • Use creativity to create ideas and present these through suitable communication techniques. **Practical skills:** • Develop skills, techniques and processes in relation to drawing and the various materials. • Develop their ability to use specialist technical equipment. • Develop their understanding of health and safety and specific regulations for working with tools and equipment • Independently build their confidence and resilience levels as they work with specific materials. **Other skills students will develop:** • Time management • Organisation • Initiative and independence • Problem solving and decision making • Application of math's/numeracy		Students will: **Theoretical skills:** • identify, select and break down key information. • Evaluation skills, analyse (sensory), reflect, plan and improve. **Practical skills:** • General practical skills (weighing and measuring) • Knife skills • Preparing Fruit and Vegetables • Cooking methods/Use of cooker • Use of equipment • Sauce making • Dough making • Raising agents • Setting mixture **Other Skills students will develop are:** • Quality Control • Time Management • Teamwork/Organization • How to prepare themselves and their area for cooking. • Application of maths, graphs, units of measure etc.	
ASSESSMENTS	**Term 1** **Key Assessment Piece** Computer modelling project. **Key Assessment Piece** Computational thinking and algorithms	**Term 2** **Cp Progress Checkpoint** Students will have a progress checkpoint assessment to assess their knowledge and understanding of the topics covered in this unit. **End Point assessment.** At the end of this unit of work a topic 'test' will	**Term 1** **Key Assessment Piece** Students will complete an extended reading and writing assessment task based on fashion miles. **Key Assessment Piece** Student practical work will be assessed using a range of criteria: • Health and safety	**Term 2** **D&T Progress Checkpoint** Students will have a progress checkpoint assessment to assess their knowledge and understanding of the topics covered in this unit. **End Point assessment.** At the end of this unit of work a topic 'test' will	**Term 1** **Key Assessment Piece** Raising agents food science project. This will be an extensive piece of work that will run across 2 marking points. Students will be assessed on their planning, results and evaluation and knowledge gained.	**Term 2** **FP&N Progress Checkpoint** Students will have a progress checkpoint assessment to assess their knowledge and understanding of the topics covered in this unit. **End Point assessment.** At the end of this unit of work a topic 'test' will

		assess their key understanding through the scheme.	• Quality control/ finish • construction skills • Selection and use of tools	assess their key understanding through the scheme.		assess their key understanding through the scheme.