Subject :	DT

	Food Tech	Design & Technology
Scheme title	**Power of Food**	**Electronics - 3D Jigsaw & Steady Hand Game**
Purpose of scheme	The aim of this project is to equip students with the power of knowledge when making food choices in the future. Along with students understanding how to adapt recipes to their own needs as well as others.	Using creativity and imagination, pupils are to design and make products that solve real and relevant problems. They acquire a broad range of subject knowledge and draw on cross curricular disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks within a supportive environment, becoming resourceful, innovative, enterprising and capable adults. Through the evaluation of existing products (both past & present), they develop a critical understanding of its impact on daily life and the wider environment.

Knowledge in sequence	Practical - Big Mac create a healthier version of the fast food favourite, Sausage bites create a healthier version of fast food favourite, KFC and wedges, Cheesecake, Taco Bowls, Curry, Spring Rolls, Mini Calzone, Final design dish, Food and health- making the link and ensuring all food made is healthy	Cambridge NATIONALS LEVEL 1/LEVEL 2; Skills/Coverage ENGINEERING MANUFACTURE Version 4 - September 2022 Unit R114: Engineering materials, processes and production Learning Outcome 1: Know about properties and uses of engineering materials Characteristics of engineering materials; o ease of use o safety in use o forms of supply Learning Outcome 2: Understand engineering processes and their application Basic engineering processes; o material removal •Sawing •Filing Unit R110: Preparing and planning for manufacture Learning Outcome 1: Be able to plan for the making of a pre-production product

Skills	Ability to: Design recipes and plan a method. Develop a basic recipe to fit certain consumer needs. Presentation techniques of food and plating up dishes.	Unit R111: Computer aided manufacturing Learning Outcome 2: Be able to interpret information from Computer Aided Design (CAD) to manufacture components on CNC equipment Learners must be taught: • use of Computer Aided Design (CAD) packages; • on-screen simulation Material categories Students should have an overview of the main categories and types of manufactured boards including: • medium density fibreboard (MDF) • plywood • chipboard. Using and working with materials Students must know and understand how different properties of materials and components are used in commercial products, how properties influence use and how properties affect performance. Students must know and understand the physical and mechanical properties

Key Words	Deficiency - A lack/shortage of a nutrient in the body. Excess - Too much of a nutrient in the body. Macronutrient -A nutrient required in large amounts in the diet. E.g. carbohydrates, fats, protein. Micronutrient - A nutrient required in small amounts in the diet. E.g. vitamins, minerals and NSP. Anaemia - A condition that can be caused by lack of iron in the diet where you lack enough healthy red blood cells to carry enough oxygen around the body. Diverticulitis - A condition that can be caused by lack of NSP/fibre in the diet. It is where smell pouches develop in your digestive system and they get infected or inflamed. Osteoporosis - A condition that can be caused by lack of calcium/vitamin D in the diet. It weakens bones making them fragile and more likely to break. Well-being - Well-being is feeling well, feeling positive. Includes having good mental health and high life satisfaction.	Template - A shaped piece of rigid material used as a pattern for repeated processes such as cutting out or shaping Model - A particular design or version of a product Prototype - A first version of a device from which other forms are developed.
End Point	End of rotation	End of rotation

Assessment method	ELP task (week 1) Create a piece of research for a classroom display based on one of the project topics. Use the internet to further research one chosen topic of interest and display it in an attractive and eye-catching way. Food and physical health (Week 2) List the symptoms of a variety of diet related illnesses. Name the nutrient that is linked to each illness. Identify the target group at risk of these illnesses. Food and performance (Week 3) Students to compare the nutritional needs of two specific groups giving reasons for similarities and differences. Mini theory test (week 6) Students to complete 6 short answer exam style questions requiring them to recall the information they have learnt in the theory lessons over the past 6 weeks. Scores are out of 16.	Moodboard Complete research into electronic components Annotated VR image of 3D jigsaw Marking of final practical piece

Year Group:

Textiles
Graffiti
This scheme builds on students' initial textiles skills from Y7 as well as their introduction to art textiles in Y8. It aims to improve confidence and skills in art textiles preparing students for phase 2 (if they opt for the subject) An introduction to new and exciting techniques that will be undertaken in GCSE art textiles. Students will be expected to demonstrate good presentation techniques, use of displaying work and suitable font titles. Students develop application of colour and tone through designing a product based on the patterns and textures created.

Researching work of existing artists and create textiles samples that reflect the artist's work.

Revising the correct way to set up and use the sewing machine.

Exploring techniques that are used to create surface patterns.

Presentation skills: - presenting all the work completed in the style of the scheme heading graffiti.

Designing without making: - designing and annotating a product in enough detail that another person could construct the design.

All the techniques that students develop skills in could be used and refined in GCSE coursework if the students opt for the subject.

- Free machine embroidery- how to use the sewing machine correctly to create a free machine sample.
- Tie dye- how to create an interesting tie dye piece.
- Bond ‘a’ web- using bond ‘a’ web to create a trapped material sample.
- Using the heat press safely following the correct procedure to protect the machine and the materials being pressed.
- Using CAD to create an interesting pattern.
- Lamination- trapping materials and paints between laminating pouches to create an interesting sample.
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All samples are to be based on the work of graffiti artists, the artist are to be chosen by the students.

Understand how to insert and use a range of sewing machine feet and wind a bobbin and insert it in to the sewing

Pattern/s: Half drop repeat, reflection, rotation and repeat: different ways that a pattern can be created.

CAD- Computer aided design. Using a com-puter to create or alter an image that will later be transferred on to material using CAM- Computer aided manufacture.
Tie dye-A resist method of dying material.
Bond'a'web – A material/product that is used to stick fabrics together. The glue on the bond'a'web reacts to heat and becomes sticky when hot. In this project it is used to create a new piece of material by sticking materials to each other as well as combining paints.
Lamination- Trapping materials and paint between a laminating pouch and then heating it using the heat press to create an interesting new material.
Free Machine foot- The foot that has to be used when doing the technique of free machine embroidery.
Heat press- A very large iron that reaches high temperature and is used

End of rotation

AO1 – students select images and research own graffiti artists. Work in the style of the artist or using inspiration from the artist.
AO2- Experimentation through creating samples of a range of new techniques – mark making, repeat patterns / sublimation printing, lamination, free machine embroidery all in the graffiti style.
AO3 – Collecting secondary images for theme and artist research, presenting samples with careful consideration of layout and font in the theme style.
A04- Designing a product or collection of products based on the theme and samples created throughout the project.