Marden Bridge Middle School

Empowering Minds Inspiring Futures

Curriculum Outline 2024-25: **DT**

[This document summarises the content to be delivered over the course of the year. There will be some rotation of topics due to resourcing implications]

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	**Baseline assessment: Alessi** Design and make a prototype of their own ALESSI-inspired product, to assess pupils' working level. **Textiles: Bookmark/stocking** Design and create a felt-based product. Using basic sewing skills attaching materials together.		**Food Technology** Understanding and applying the EatWell guide. Introduction to food preparation while making mainly healthier choice snacks.		**Cams** Understand how cams can aid mechanisms. They will learn to construct simple structures and mechanisms using axles, push rods, and cams.	
LITERACY	**Design ideas, spellings of keywords. Practical logs. Peer feedback. Evaluation. Discussing key vocabulary.**		**Instructional writing for washing up. Using basic recipe/instruction sheets. Evaluations. Key vocabulary and definitions. Sensory analysis descriptors.**		**Design ideas, evaluations and instructions. Verbal discussions and feedback of their product.**	
NUMERACY:	**Accurate measuring and cutting. Discussing 3D shapes**		**Discussion about 3D shapes linking to safety grips. Proportions linking to the EWG. Data representation (Star diagrams.)**		**Accurate measurement, angles, shape and technical drawings. We will look at how triangles strengthen 3d shapes, motion, forces etc.**	
SMSC/Creativity/ Careers Focus	**Teamwork and problem solving skills using materials safely and effectively. Design and marketing jobs within Alessi. Design and create prototype.**		**Teamwork and problem solving skills. Design and make own sandwich using the EWG using ingredients and equipment safely and effectively. Food hygiene - Environmental health careers.**		**Problem-solving skills, designing for others. Creative design of the toy element of the project. Careers links will focus on design and engineering jobs such as mechanical engineering, car engineers, mechanical design engineers and construction.**	

Year 6	**Engineering** Looking at which shape(s) are strongest and why. Researching current designs. Applying this to their design idea. Creating a bridge as a team that has to fall within a budget.	**Food Technology** Noodle pots project. Looking at the advantages and disadvantages of noodle pots. Completing a range of sensory analysis. Designing and creating dried and fresh noodle pots - which one is better?	**Graphics: Popup cards** Research to inform their own design idea and challenge level. Create own graphics card. Cutting, sticking, scoring, joining and manipulating cardboard.
LITERACY	**Research, hats evaluations, design ideas (key vocabulary), and overall evaluation.**	**Reading, using and writing recipes. Advantages and disadvantages compare and contrast. Sensory analysis words. Evaluations.**	**Research, design ideas, using written instructions. Evaluation.**
NUMERACY:	**Shapes and their properties, focus on triangles. Budgeting. We teach forces and shapes and how they strengthen 3d shapes. We introduce specific maths and science language around forces and shapes**	**Weighing and quantity of ingredients. Nutritional labelling and percentages.**	**3D shapes, measuring, accuracy and symmetry.**
SMSC/Creativity/ Careers Focus	**Teamwork, investigating and problem solving skills. Design in a group. Job roles within group work. Discussion. Careers related to this topic are civil engineers, construction, design engineering etc.**	**Teamwork and problem-solving skills, using equipment and ingredients safely and effectively. Design and make own products. Careers linked to activities completed e.g. product designer, packaging designer.**	**Problem solving skills using materials and equipment safely and effectively. Design and make own pop up card. Looking at bespoke card making as a career.**

Year 7	**Food Technology: Knife skills** To refine basic knife skills from previous years. Theory around food waste, farming methods, the factors that affect the cost of foods and how nutrients work in the body.	**STEM: Rocket Cars** A national competition against other year 7 pupils. Pupils will build a scaled down prototype out of clay and use a wind tunnel to pretest their idea. They will then design, build and refine a rocket-powered car looking at the design, shape and aerodynamics to make it competitive.
Extended Literacy opportunities:	**Following instructions and recipes. Evaluations. Creating a balanced argument using evidence.**	**Job roles and key vocabulary definitions. Evaluations.**
NUMERACY:	**3D shapes concerning knife safety grips. Size/surface area. Timing.**	**Timing, calculating forces and speed, interpreting graphs, mass, volume, or density. We use a wind tunnel to examine the science of fluid dynamics, wings, and aerodynamics using terms such as drag and lift. We test our cars and discuss friction.**
SMSC/Creativity/ Careers Focus	**Teamwork and problem-solving skills, using ingredients and equipment safely and effectively to design and make own product. Dedicated careers lesson to identify the vast range of careers in the food industry. EXT: Use www.tastycareers.co.uk to investigate careers and create a fact file about one.**	**Problem-solving skills, using materials and equipment safely and effectively. Learning about and applying job roles. We look at careers in automotive design, manufacture, and testing. As well as the armed forces and car racing.**

Year 8	**Food Technology: Carbohydrates** Look closely at how carbohydrates work in the body (building upon last year). Demonstrating the skills required to create a range of baked carbohydrate-based products. To identify the function of ingredients and modify recipes. Identify the function of the ingredients within the recipe.	**Product Design: Music Makers** Pupils will track the development of music players from Thomas Edison's Phonograph to the present day. They will learn about how technology has changed the way we listen to music and about the workings of the products including the science, materials, and social changes which shaped them.	**Resistant Materials / Product Design / Electronics: Staying seen at night.** To design and make their own product that will allow someone to be safe and seen at night.
Extended Literacy opportunities:	**Recipe reading and adaption. Discussion. Definitions of keywords.**	**The pupils will design a next-generation music maker and create a verbal presentation with slides to give to the class.**	**Design ideas, name and role of components, and planning instructions to make their product.**
NUMERACY:	**Weighing, measuring, role of ingredients and their quantities. Scaling recipes. Timing.**	**Through technical drawings, measurements, and graphs. We look at the measurement of speed, time and distance. We also look at graphs related to soundwaves and introduce the language of frequency and amplitude in relation to sound. We look at magnetism in relation to cassettes**	**Accuracy, measuring and problem-solving.**
SMSC/Creativity/ Careers Focus	**Team work and problem solving skills, using ingredients and equipment safely and effectively. Diabetes myth busting. Design and make own products. Careers linked to activities completed, e.g, nutritionist when looking at diets.**	**The pupils will be problem-solving, and learning about the materials used in music machines. They will also be creating their own design for a music player. They will draw upon the knowledge learnt through the project to design a new product. Careers focus includes looking at several influential inventors such as Edison and Berliner, and look at careers in the phonograph industry etc. The focus of the project is to design a next-generation music player and therefore the students are acting as product designers.**	**Problem-solving skills, using materials and equipment safely and effectively. Design and make own product. Careers surrounding the activities.**