Long Marston School

DT Curriculum Map – Knowledge, Skills and Vocabulary

Progression of skills

Class 5 Year A

	Autumn **Electrical systems: Steady hand game (Y6)**	**Spring** **Digital world: Navigating the world (Y6)**	**Summer** **Food: Come dine with me (Y6)**
Skills design	Designing a steady hand game - identifying and naming the components required Drawing a design from three different perspectives Generating ideas through sketching and discussion Modelling ideas through prototypes Understanding the purpose of products (toys), including what is meant by 'fit for purpose' and 'form over function'	Writing a design brief from information submitted by a client Developing design criteria to fulfil the client's request Considering and suggesting additional functions for my navigation tool Developing a product idea through annotated sketches Placing and manoeuvring 3D objects, using CAD Changing the properties of, or combine one or more 3D objects, using CAD	Writing a recipe, explaining the key steps, method and ingredients Including facts and drawings from research undertaken
Skills make	Constructing a stable base for a game Accurately cutting, folding and assembling a net Decorating the base of the game to a high quality finish Making and testing a circuit Incorporating a circuit into a base	Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo) Explaining material choices and why they were chosen as part of a product concept Programming an N,E, S,W cardinal compass	Following a recipe, including using the correct quantities of each ingredient Adapting a recipe based on research Working to a given timescale Working safely and hygienically with independence
Skills evaluate	Testing own and others finished games, identifying what went well and making suggestions for improvement Gathering images and information about existing children's toys Analysing a selection of existing children's toys	Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool Developing an awareness of sustainable design Identifying key industries that utilise 3D CAD modelling and explain why Describing how the product concept fits the client's request and how it will benefit the customers Explaining the key functions in my program, including any additions Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch Demonstrating a functional program as part of a product concept	Evaluating a recipe, considering: taste, smell, texture and origin of the food group Taste testing and scoring final products Suggesting and writing up points of improvements in productions Evaluating health and safety in production to minimise cross contamination

Knowledge	**Technical:** To know that batteries contain acid, which can be dangerous if they leak To know the names of the components in a basic series circuit including a buzzer **Additional:** To know that 'form' means the shape and appearance of an object To know the difference between 'form' and 'function' To understand that 'fit for purpose' means that a product works how it should and is easy to use To know that form over purpose means that a product looks good but does not work very well To know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind To understand the diagram perspectives 'top view', 'side view' and 'back'	**Technical:** To know that accelerometers can detect movement To understand that sensors can be useful in products as they mean the product can function without human input **Additional:** To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request To know that 'multifunctional' means an object or product has more than one function To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing	**Cooking and nutrition:** To know that 'flavour' is how a food or drink tastes To know that many countries have 'national dishes' which are recipes associated with that country To know that 'processed food' means food that has been put through multiple changes in a factory To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork)
Vocabulary	Backboard, battery, bulb, buzzer, circuit, conductor, copper, function, insulator, LED, magnetic field, net, pliers, prototype, series circuit, side view drawing, switch, test, wire	Smart, smartphone, equipment, navigation, cardinal compass, application (apps), pedometer, GPS tracker, design brief, design criteria, client, , function, program, duplicate, replica, loop, variable, value, if statement, Boolean, corrode, mouldable, lightweight, sustainable design, environmentally friendly, biodegradable, recyclable, product lifecycle, product lifespan	Equipment, flavours, ingredients, method, research, recipe, bridge method, cookbook, cross-contamination, farm to fork, preparation, storyboard