|  |
| --- |
| **CURRUCULLUM PROGRESSION GRID: DT** |
| **LOWER KEY STAGE 2** |
| **Design** | **Make** | **Evaluate** | **Technical knowledge** | **Cooking and nutrition** |
| **NC Link:**-Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups-Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. | **NC Link:** -Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately-Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. | **NC Link:** -Investigate and analyse a range of existing products-Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work;-Understand how key events and individuals in design and technology have helped shape the world. | **NC Link:**-Apply their understanding of how to strengthen, stiffen and reinforce more complex structures;-Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages];-Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors];-Apply their understanding of computing to program, monitor and control their products. | **NC Link:**-Understand and apply the principles of a healthy and varied diet;-Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques;-Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. |
| **Theme links**Cycle A- Autumn 1IronmanCycle B- Summer 1Enterprise | **Theme links**Cycle A- Autumn 1IronmanCycle B- Summer 1Enterprise | **Theme links**Cycle A- Autumn 1IronmanCycle B- Summer 1Enterprise | **Theme links**Cycle B- Summer 1Enterprise | **Theme links**Cycle A- Spring 1GreeksCycle B – Spring 2Spain |
| **Builds on KS1****-**Pupils can use their knowledge of existing products and their own experience to help generate their ideas;-design products that have a purpose and are aimed at an intended user;-explain how their products will look and work through talking and simple annotated drawings;-design models using simple computing software; -plan and test ideas using templates and mock-ups; -understand and follow simple design criteria;-work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment. | **Builds on KS1****Planning**-Pupils can with support, follow a simple plan or recipe;-begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer;-select from a range of materials, textiles and components according to their characteristics;**Practical skills and techniques**-learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;-use a range of materials and components, including textiles and food ingredients;-with help, measure and mark out;-cut, shape and score materials with some accuracy;-assemble, join and combine materials, components or ingredients;-demonstrate how to cut, shape and join fabric to make a simple product;-manipulate fabrics in simple ways to create the desired effect;-use a basic running stich;-cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;-begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.  | **Builds on KS1**-Pupils can explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;-explain positives and things to improve for existing products;-explore what materials products are made from;-talk about their design ideas and what they are making;-as they work, start to identify strengths and possible changes they might make to refine their existing design;-evaluate their products and ideas against their simple design criteria;-start to understand that the iterative process sometimes involves repeating different stages of the process. | **Builds on KS1**- Pupils can build simple structures, exploring how they can be made stronger, stiffer and more stable;-talk about and start to understand the simple working characteristics of materials and components;-explore and create products using mechanisms, such as levers, sliders and wheels. | **Builds on KS1**-Pupils can explain where in the world different foods originate from;-understand that all food comes from plants or animals;-understand that food has to be farmed, grown elsewhere (e.g. home) or caught;-name and sort foods into the five groups in the Eatwell Guide;-understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why;-use what they know about the Eatwell Guide to design and prepare dishes. |
| **LKS2 Intent** -Pupils can identify the design features of their products that will appeal to intended customers;use their knowledge of a broad range of existing products to help generate their ideas;-design innovative and appealing products that have a clear purpose and are aimed at a specific user;-Pupils can explain how particular parts of their products work;use annotated sketches and cross-sectional drawings to develop and communicate their ideas;-when designing, pupils can explore different initial ideas before coming up with a final design;-when planning, pupils start to explain their choice of materials and components including function and aesthetics;-test ideas out through using prototypes;-Pupils can use computer-aided design to develop and communicate their ideas develop and follow simple design criteria;-Pupils can work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.**Extended Write:****Write a persuasive letter explaining their design for a product** **Biography Donald Bailey (designed bridge important in WW2** | **LKS2 Intent** **Plan**-Pupils can plan with growing confidence, carefully select from a range of tools and equipment, explaining their choices;-select from a range of materials and components according to their functional properties and aesthetic qualities;-Pupils can place the main stages of making in a systematic order; **Practical skills and techniques**-Pupils learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;-use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components;-with growing independence, measure and mark out to the nearest cm and millimetre;-Pupils can cut, shape and score materials degree of accuracy-cut, shape and score materials with some degree of accuracy;-assemble, join and combine material and components with some degree of accuracy;demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product;-Pupils can join textiles with an appropriate sewing technique;begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.**Extended Write:** **Instructions of how they have made their iron man****Story based on their own iron man****Creating an advert** | **LkS2 Intent** -Pupils can explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;explore what materials/ingredients products are made from and suggest reasons for this;-Pupils consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product;-evaluate their product against their original design criteria;-evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.**Extended Write:** **Write an explanation of their product****Write a customer review** | **LKS2 Intent**  -Pupilsunderstand that materials have both functional properties and aesthetic qualities;-Pupils apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;-Pupils understand and demonstrate how mechanical and electrical systems have an input and output process;make and represent simple electrical circuits, such as a series and parallel, and components to create functional products;-Pupils explain how mechanical systems such as levers and linkages create movement;-use mechanical systems in their products.**Extended Write:** **Newspaper report explain how they made their product** | **LKS2 Intent** -Pupils start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world;-Pupils understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically;-with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;-Pupils use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking;-explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes;-Pupils understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;-prepare ingredients using appropriate cooking utensils;measure and weigh ingredients to the nearest gram and millilitre;-Pupils start to independently follow a recipe;-start to understand seasonality.**Extended Write:** **Create a menu****Write a recipe** **Review of their food****Letter to invite people to eat their food** |
| **Vocabulary**InnovateFunctionalProductPurposeAnnotateCross sectionsPrototypesComputer aided designIntended userFunctionalAestheticsComponents  | **Vocabulary**EquipmentCuttingShapingJoiningFinishingComponents ConstructSystematic orderMeasureMarkScoreAssembleCombineAppearanceHemmingTie dyeDigital graphics | **Vocabulary**Design criteriaEvaluateIntended purposeStrengthsRefineEdit  | **Vocabulary**Strengthen Stiffen reinforceCompelsGearPulleyscam leverslinkagesseries circuitsswitchesbulbsbuzzersmotorsfunctional propertiesaesthetics propertiesmechanical systemsleverslinkages  | **Vocabulary**Healthy Varied dietSavourySweetSeasonalIngredientsGrownCaughtRearedProcessedTemperatureMashingWhiskingCrushing GratingCuttingKneadingBakingNutritiousEnergyUtensilsGramMillilitres  |