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| **Skills** | **EYFS** | **Year 1** | **Year 2** | **Year 3** |
| Design | * Select appropriate resources * Use gestures, talking and arrangements of materials and components to show design * Use language of designing and making. Join, build, shape, longer, smaller, big, shorter, heavier, lighter. | * Have own ideas. * Explain what I want to do. * Explain what my product is for, and how it will work. * Use pictures and words to plan, begin to use models. * Design a product for myself following a criterion. * Research similar existing products. | * Have own ideas and plan what to do next. * Explain what I want to do and describe how I may do it. * Explain the purpose of the product, how it will work and how it will be suitable for the user. * Describe design using pictures word, models, diagrams, begin to use ICT. * Design products for myself and others following a design criterion. * Choose the best tools and materials and explain choices. * Use knowledge of existing products to produce ideas. | * Begin to research others’ needs. * Show design meets range of requirements. * Describe purpose of the product. * Follow a given design criteria * Have at least 1 idea about how to create a product. * Create a plan which shows order, equipment, tools. * Describe design using an accurately labelled sketch and words. * Make design decisions. * Explain how product will work * Make a prototype. * Begin to use computers to show design. |
| Make | * Construct with a purpose, using a variety of resources. * Use simple tools and techniques. * Build/construct with a wide range of objects. * Select tools and techniques to shape, join, assemble. * Replicate structures with materials/components. * Discuss how to make an activity safe and hygienic. * Record experiences by drawing, writing or voice recording. * Understand different media can be combined for a purpose. | * Explain what I am making and why. * Consider what I need to do next. * Select tools/equipment to cut, join, shape and finish and explain my choices. * Measure, mark out, cut and shape with support. * Choose suitable materials and explain choices. * Try to use finishing techniques to make product look good. * Work in a safe and hygienic manner. | * Explain what I am making and why it fits the purpose. * Make suggestions as to what I need to do next. * Join materials/components together in different ways. * Measure, mark out and cut and shape materials and components with support. * Describe which components I’m using and why. * Choose suitable materials and explain choices depending on characteristics. * Use finishing techniques to make the product look good. * Work safely and hygienically. | * Select suitable tools, equipment, explain choices and begin to use them accurately. * Work through a plan in a logical order. * Consider how good a product will be. * Begin to measure mark out and shape and cut a variety of materials or components with some accuracy. * Begin to assemble join and combine materials and components with some accuracy. * Apply a range of finishing techniques with some accuracy. |
| Evaluate | * Adapt work if necessary. * Dismantle, examine, talk about existing objects/structures. * Consider and manage some risks. * Practise some appropriate safety measures independently. * Talk about how things work. * Look at similarities and differences between existing objects/materials/tools. * Shown an interest in technological toys. * Describe textures. | * Talk about my work, linking it to what I was asked to do. * Talk about existing products and say what is and isn’t good. * Talk about things that other people have made. * Begin to talk about what could make the product better. | * Describe what went well, think about the design criteria * Talk about existing products and consider *use, materials, how the product works, audience designed for, where they can be used, express their own opinion.* * Evaluate how good existing products are. * Talk about what I would do differently next time if I made it again. | * Evaluate the quality of the design while designing and making. * Evaluate ideas and finished product against specification considering purpose and appearance. * Test and evaluate the final product. * Evaluate and discuss existing products, considering how well they’ve been made, materials, whether they work, how they have been made, fit for purpose. * Evaluate how much products cost to make and research how sustainable materials are. * Talk about some key inventors, engineers, chefs, manufacturers products. |

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| **Skills** | **Year 4** | **Year 5** | **Year 6** |
| Design | * Use research for design ideas. * Show design meets a range of requirements and is fit for purpose. * Begin to create own design criteria. * Have at least 1 idea about how to create a product and suggest improvements for design. * Produce a plan and explain it to others. * Discuss how realistic the plan is. * Include an annotated sketch. * Make and explain design decisions considering the availability of resources. * Explain how the product will work. * Make a prototype. * Begin to use computers to show design. | * Use internet and questionnaires for research and design ideas. * Take a user’s view into account when designing. * Begin to consider the needs and wants of individuals/groups when designing and ensure product is fit for purpose. * Create own design criteria. * Have a range of ideas. * Produce a real and logical plan and explain it to others. * Use cross sectional planning and annotated sketches. * Make design decisions and consider time and resources available. * Clearly explain how parts of the product will work. * Model and refine design ideas by making prototypes. * Using pattern pieces. * Use computer aided designs. | * Draw on market research to inform the design. * Use research of user’s individual needs, wants, and requirements for design that will appeal to the intended user. * Create own design criteria and specification. * Come up with innovative design ideas. * Follow and refine a logical plan. * Use annotated sketches, plans, cross sectional planning and exploded diagrams. * Make design decisions, consider resources and cost. * Clearly explain how parts work and how they are fit for the purpose. * Independently model and refine the design ideas by making prototypes using pattern pieces. * Use computer aided designs. |
| Make | * Select suitable tools/equipment, explain choices: begin to use them accurately. * Select appropriate materials, fit for purpose. * Work through the plan. * Realise if the product will be good quality. * Measure, mark out, cut and shape materials and components with some accuracy. * Begin to assemble, join and combine materials and components with some accuracy. * Apply a range of finishing techniques. | * Use selected tools and equipment with a good level of precision. * Produce suitable lists of tools, equipment, materials needed. * Select appropriate materials, fit for purpose, explain choices considering functionality. * Create and follow a step-by-step plan * Explain how their produce will appeal to an audience. * Mainly accurately measure, mark out, cut and shape materials and components. * Mainly accurately assemble, join and combine materials and components. * Mainly accurately apply a range of finishing techniques. * Use techniques that use arrange of small steps. * Begin to be resourceful with practical problems. | * Use selected tools and equipment precisely. * Produce suitable lists of tools, equipment, materials needed, consider constraints. * Select appropriate materials, fit for purpose, explain choices, consider functionality and aesthetics. * Create, follows, and adapt detailed step by step plans. * Explain how the product will appeal to an audience, make changes to improve quality. * Accurately mark out, cut and shape material and components. * Accurately apply a range of finishing techniques. * Use techniques that follow a number of steps. * Be resourceful with practical problems. |
| Evaluate | * Refer to design criteria while designing and making. * Use criteria to evaluate product. * Begin to explain how I could improve the original design. * Evaluate existing products considering how well they have been made, materials used, whether they work correctly, how have they been made and fit for purpose. * Discuss by whom and when and where products were designed. * Research whether products can be recycled or reused. * Know about some, inventors, designer, engineers, chefs manufacturers of products. | * Evaluate the quality of the design while designing and making * Evaluate ideas and finished product against specification considering purpose and appearance * Test and evaluate the final product * Evaluate and discuss products, considering how well they’ve been made, use of materials, whether they work, how they have been made, fit for purpose. * Evaluate how much products cost to make and research how sustainable materials are. * Talk about some key inventors, engineers, chefs, manufacturers of products. | * Evaluate quality of design while designing and making: fit for purpose? * Keep checking the design, can it be adapted or tweaked. * Evaluate design and finished product against the specification, stating if it is for for purpose. * Test and evaluate the final product. Explain what would improve it and the effect different resources may have had. * Do a thorough evaluation of existing products and consider how well they have been made, materials, whether they work, how they’ve been made, fit for purpose. * Evaluate how much products cost to make and how innovative they are. |

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| **Skills** | **EYFS** | **Year 1** | **Year 2** | **Year 3** |
| Food  And  Nutrition | * Begin to understand some food preparation tools, techniques and processes. * Practise stirring, mixing, pouring and blending. * Discuss how to make an activity safe and hygienic. * Discuss the use of senses. * Understand need for variety in food. * Begin to understand that eating well contributes to good health. | * Describe textures of food. * Wash hands and clean surfaces and understand why we do it. * Think of interesting ways to decorate food. * Describe differences between food groups – sweet, sour, fruit, vegetable. * Discuss how fruit and vegetables are healthy. * Cut, peel and grate safely with support. | * Explain hygiene and keep a hygienic work surface. * Describe properties of ingredients and importance of varied diet. * Say where food comes from – animal, underground etc. * Describe how food is caught, home-grown, caught, farmed. * Draw the eat well plate and explain there are groups of food. * Describe 5 a day fruit and vegetables. * Cut, peel and grate with increasing confidence. | * Explain how to be safe and hygienic and follow own guidelines. * Present product well- interesting attractive, fit for purpose. * Begin to understand seasonality of foods. * Understand food can be grown, reared or caught in the UK and the wider world. * Describe how recipes can be adapted to change appearance, texture, taste, aroma. * Explain how there are different substances in food and drink needed for health. * Prepare and cook some savoury dishes safely and hygienically including, if needed, using a heat source. * Use a range of techniques such as: chopping, grating, slicing, peeling, mixing, spreading, kneading and baking. |
| Materials  and  Structures |  | * Begin to measure and join materials, with some support. * Describe differences in materials. * Join materials in different ways. * Use joining, rolling or folding to make it stronger. * Use own ideas to try and make product stronger. | * Measure materials. * Describe some different characteristics of materials. * Join materials in different ways. * Use joining, rolling or folding to make the structure stronger. * Use own ideas to try and make product stronger. | * Select materials carefully, considering the intended use of product and appearance. * Explain how product meets design criteria. * Measure accurately enough to ensure precision. * Ensure product is strong and fit for purpose. * Begin to reinforce and strengthen a 3D frame. |
| **Skills** | **EYFS** | **Year 1** | **Year 2** | **Year 3** |
| Mechanisms |  | * Begin to use levers or slides. | * Begin to use levers or slides. * Begin to understand about wheels and axles and how they work. | * Refine product after testing. * Grow in confidence about trying new /different idea. * Begin to use cams, pulleys and gears to create movement. |
| Textiles |  | * Measure, cut and join textiles together to make a product, with some support. * Chose suitable textiles. | * Measure textiles. * Join textiles together to make a product and explain how I did it. * Carefully cut textiles to produce accurate pieces. * Explain choices of textile. * Understand that a 3D textile structure can be made from 2 identical fabric shapes. | * Think about aesthetics and user when choosing textiles * Use own template * Think about how to make the product strong and look better * Think of a range of ways to join things. * Begin to understand that a 3D textile project can be made from a combination of fabric shapes. |
| Electrical  Systems |  |  |  | * Use simple circuit in a product. * Learn about how to program a computer to control a product. |

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| **Skills** | **Year 4** | **Year 5** | **Year 6** |
| Food  and  Nutrition | * Explain how to be hygienic/ safe. * Think about presenting product in interesting and attractive ways. * Understand ingredients can be fresh, pre-cooked or processed. * Begin to understand about food being grown, reared or caught in the UK and wider world. * Explain the importance of food and drink for active healthy bodies. * Prepare and cook some dishes safely and hygienically including, if needed, using a heat source. * Use some of the following techniques: Use a range of techniques such as: peeling, chopping, grating, mixing, spreading, kneading and baking. | * Explain how to be safe and hygienic and follow own guidelines. * Present product well- interesting attractive, fit for purpose. * Begin to understand seasonality of foods. * Understand food can be grown, reared or caught in the UK and the wider world. * Describe how recipes can be adapted to change appearance, texture, taste, aroma * Explain how there are different substances in food and drink needed for health. * Prepare and cook some savoury dishes safely and hygienically including, if needed, using a heat source * Use a range of techniques such as: chopping, grating, slicing, peeling, mixing, spreading, kneading and baking | * Understand a recipe can be adapted by adding/ substituting ingredients. * Explain seasonality of foods. * Learn about food processing methods. * Name some types of food that are grown, reared or caught in the UK or wider world. * Adapt recipes to change appearance, taste, texture or aroma. * Describe some of the different substances in food and drink and how they can affect health. * Prepare and cook a variety of savoury dishes safely and hygienically, including using a heat source. * Use a range of techniques confidently such as: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. |
| Materials  and  Structures | * Measure carefully to avoid mistakes. * Attempt to make a product strong. * Continue working on product even if the original didn’t work. * Make a strong stiff structure. | * Select materials carefully, considering the intended use of product and appearance. * Explain how product meets design criteria. * Measure accurately enough to ensure precision. * Ensure product is strong and fit for purpose. * Begin to reinforce and strengthen a 3D frame. | * Select materials carefully, consider the intended use of the product, the aesthetics and functionality. * Explain how product meets the design criteria. * Reinforce and strengthen a 3D frame. |
| Mechanisms | * Select most appropriate tools, techniques. * explain alterations to product after checking it. * Grow in confidence about trying new/different ideas. * Use levers and linkages to create movement. * 5. Use pneumatics to create movements. | * Refine product after testing. * Grow in confidence about trying new /different ideas. * Begin to use cams, pulleys and gears to create movement. | * Refine product after testing, consider aesthetics, functionality and purpose. * Incorporate hydraulics and pneumatics. * Be confident to try new and different ideas. * Use cams, pulleys and gears to create movement. |
| **Skills** | **Year 4** | **Year 5** | **Year 6** |
| Textiles | * Think about the user when choosing a variety of textiles. * Think about how to make the product strong. * Begin to devise a template. * Explain how to join things in a different way. * Understand that a simple fabric shape can be used to make a 3D textiles project. | * Think about aesthetics and user when choosing textiles. * Use own template. * Think about how to make the product strong and look better. * Think of a range of ways to join things. * Begin to understand that a 3D textiles project can be made from a combination of fabric shapes. | * Think about the user’s wants and needs, aesthetics when choosing textiles. * Make product attractive and strong. * Make a prototype. * Use a range of joining techniques. * Think about how the product might be sold. * Think carefully about what would improve the product. * Understand that a 3D textiles project can be made from a combination of fabric shapes. |
| Electrical Systems | * Use a number of components in a circuit. * Program a computer to control a product. | * Incorporate a switch into a product. * Confidently use number of components in a circuit. * Begin to be able to program a computer to monitor changes in environment and control product. | * Use different types of circuits in product. * Think of ways in which adding a circuit would improve product. * Programme a computer to monitor changes in the environment and control product. |