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|  | **Cooking and Nutrition**  Understand and apply the principles of nutrition and learn how to cook | **Design: Developing, Planning and Communicating Ideas** | | | | **Make**  Work with tools, equipment, materials and components to make quality products | **Evaluate**  Evaluate processes and products | **Technical Knowledge**  Develop technical expertise and knowledge |
| Understand context, users and purpose | | | Generate, develop, model and communicate ideas |
| R | * Begin to work safely and hygienically. * Weigh using non-statutory measures e.g. spoons/cups. * Begin to use some techniques e.g. mix, spread, knead | * Use what I have learnt about materials, thinking about uses and purposes * Think about and discuss what I want to make * Discuss my work as it progresses | | | | * Represent and construct my own ideas, thoughts and feelings through design * Explore different techniques for joining materials, such as how to use adhesive tape and different sorts of glue * Use a range of materials and tools with care and precision | * Describe what I like and dislike about my creation * Identifies if the construction is fit for purpose * Adapt work where necessary | * Select appropriate resources * Make decisions on how items can be combined and changed * Name of tools needed to work the materials |
| KS1  Including direct reference  to national curriculum aims | **Cooking and Nutrition**  Understand and apply the principles of nutrition and learn how to cook | **Design: Developing, Planning and Communicating Ideas** | | | | **Make**  Working with tools, equipment, materials and components to make quality products | **Evaluate**  Evaluating processes and products | **Technical Knowledge**  Develop technical expertise and knowledge |
| Understand context, users and purpose | | | Generate, develop, model and communicate ideas |
| KS1 | * That all food comes from plants or animals * That food has to be farmed, grown elsewhere (e.g. home) or caught * How to name and sort foods into the five groups of the Eatwell plate * That everyone should eat at least five portions of fruit or vegetables every day * How to prepare simple dishes safely and hygienically, without using a heat source * How to use techniques such as cutting, peeling, basic chopping and grating. | * Work confidently within a range of contexts, such as imaginary, story based, home, school, gardens, playgrounds, local community, industry and the wider environment * State their products and target audience. * Say whether their products are for themselves or for other users * Describe what their products are for * Say how their products will work * Say how they will make their products suitable for their intended users * Use simple design criteria to help develop their ideas * Identify a target for what they intend to design and make based on design criteria * Generate ideas by drawing on their own experiences * Use knowledge of existing products to help come up with ideas * Develop and communicate ideas by talking and drawing * Model ideas by exploring materials, components and construction kits and by making templates and mock-ups * Use Tinkercad to develop and communicate ideas | | | | * Plan by suggesting what to do next * Use a range of tools and equipment safely, explaining their choices. * Select from a range of materials and components according to their characteristics * Follow procedures for safety. * Measure, mark out, cut and shape materials and components * Assemble, join and combine materials and components * Use finishing techniques, including those from art and design | * Talk about their design ideas and what they are making * Make simple judgements about their products and ideas against design criteria * Suggest how their products could be improved | * Explore the uses of mechanisms such as levers, sliders, wheels and axles * How freestanding structures can be made stronger, stiffer and more stable |
| KS2  including direct reference to national curriculum aims | **Cooking and Nutrition**  Understand and apply the principles of nutrition and learn how to cook | **Design: Developing, Planning and Communicating Ideas** | | | | **Make**  Working with tools, equipment, materials and components to make quality products | **Evaluate**  Evaluating processes and products | **Technical Knowledge**  Develop technical expertise and knowledge |
| Understand context, users and purpose | Generate, develop, model and communicate ideas | | |
| LKS2 | * That food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world * How to prepare and cook a variety of dominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source * How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking * That a healthy diet is made up from a variety and balance of different food and drink, as depicted from The Eatwell Plate * That to be active and healthy, food and drink are needed to provide energy for the body | * Work confidently within a range of contexts such as home, school, leisure, culture, enterprise, industry and the wide environment * Describe the purpose of their products * Indicate the design features of their products that will appeal to intended users * Explain how particular parts of their products work * Gather information about the needs and wants of particular individuals and groups * Develop their own design criteria and use these to inform their ideas * Share and clarify ideas through discussion * Model their ideas using prototypes and pattern pieces * Use annotated sketches, cross sectional drawings and exploded diagrams to develop and communicate their ideas * Use computer-aided design to develop and communicate their ideas * Generate realistic ideas, focusing on the needs of the user * Make design decisions that take account of the availability of resources | | | | * Select tools and equipment suitable for the task * Explain their choice of tools and equipment in relation to the skills and techniques they will be using * Select materials and components suitable for the task * Explain their choice of materials and components according to functional properties and aesthetic qualities * Order the main stages of making * Follow procedures for safety and hygiene * Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components * Measure, mark out, cut and shape materials and components with some accuracy * Assemble, join and combine materials and components with some accuracy * Apply a range of finishing techniques, including those from art and design, with some accuracy | * Identify the strengths and areas for development in their ideas and products * Consider the views of others, including intended users, to improve their work * Refer to their design criteria as they design and make * Use their design criteria to evaluate their completed products | * That materials can be combined and mixed to create more useful characteristics * That mechanical and electrical systems have an input, process and output * How mechanical systems such as levers and linkages or pneumatic systems create movement * How simple electrical circuits and components can be used to create functional products * Apply understanding of how to make strengthen, stiffen and reinforce more complex structures |
| KS2  including direct reference to national curriculum aims | **Cooking and Nutrition**  Understand and apply the principles of nutrition and learn how to cook | **Design: Developing, Planning and Communicating Ideas** | | | | **Make**  Working with tools, equipment, materials and components to make quality products | **Evaluate**  Evaluating processes and products | **Technical Knowledge**  Develop technical expertise and knowledge |
| Understand context, users and purpose | | Generate, develop, model and communicate ideas | |
| UKS2 | * That food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world * That seasons may affect the food available * How food is processed into ingredients that can be eaten or used in cooking * How to prepare and cook a variety of dominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source * How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking * That recipes can be adapted to change the appearance, taste, texture and aroma * That different food and drink contain different substances –nutrients, water and fibre – that are needed for health | * Work confidently within a range of contexts such as home, school, leisure, culture, enterprise, industry and the wide environment * Describe the purpose of their products * Indicate the design features of their products that will appeal to intended users * Explain how particular parts of their products work * Carry out research, using surveys, interviews, questionnaires and web-based resources * Identify the needs, wants, preferences and values of particular individuals * Develop a simple design specification to guide their thinking * Model their ideas using prototypes and pattern pieces * Use annotated sketches, cross sectional drawings and exploded diagrams to develop and communicate their ideas * Use computer-aided design to develop and communicate their ideas * Generate realistic ideas, focusing on the needs of the user * Make design decisions, taking account of constraints such as time, resources and cost | | | | * Select tools and equipment suitable for the task * Explain their choice of tools and equipment in relation to the skills and techniques they will be using * Select materials and components suitable for the task * Explain their choice of materials and components according to functional properties and aesthetic qualities. * Produce appropriate list of tools, equipment and materials that they needs * Formulate step-by-step plans as a guide to making * Follow procedures for safety and hygiene * Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components * Accurately measure, mark out, cut and shape materials and components * Accurately assemble, join and combine materials and components * Accurately apply a range of finishing techniques, including those from art and design * Use techniques that involve a number of steps * Demonstrate resourcefulness when tackling problems | * Identify the strengths and areas for development in their ideas and products * Consider the views of others, including intended users, to improve their work * Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make * Evaluate their ideas and products against their original design specification * How much products cost to make * How innovative products are * How sustainable the materials in products are * What impact products have beyond their intended purpose | * How to use learning from science to help design and make products that work * How to use learning from mathematics to help design and make products that work * That materials have both functional properties and aesthetic qualities * That materials can be combined and mixed to create more useful characteristics * That mechanical and electrical systems have an input, process and output * The correct technical vocabulary for the projects they are undertaking * How mechanical systems such as levers and linkages or pneumatic systems create movement * How simple electrical circuits and components can be used to create functional products * How to programme a computer to control their products * How to make strong, stiff shell structures * That a single fabric shape can be used to make a 3D textiles product |