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| **D and T** |
|  | **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
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| KS1Including direct referenceto 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
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| KS2including 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
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| KS2including 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
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