|  |  |  |  |
| --- | --- | --- | --- |
|  | **Knowledge** | **Skills** | **Vocabulary** |
| **A** | **Designing**   * To know the purpose of their products * To know design features of their products that will appeal to intended users * To know how particular parts of their products work * To know the purpose and benefits of using a prototype or pattern piece * To know how to annotate a sketch effectively   **Making**   * To know that products are made of different components * To know procedures for safety and hygiene * To know how mechanical systems such as levers and linkages or pneumatic systems create movement   **Evaluating**   * To know:   How well products have been designed  How well products have been made  Why materials have been chosen  What methods of construction have been used  How well products work  How well products achieve their purposes  How well products meet user needs and wants   * To know about inventors, designers, engineers, chefs, manufacturers and key events who have developed groundbreaking products and helped shaped the world   **Cooking and Nutrition**   * To know that food is grown in the UK, Europe and wider world * To know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate | **Designing**   * 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 * Use given information to develop their own design criteria and use these to inform their ideas (at least once per year) * Share and clarify ideas through discussion * Model their ideas using prototypes and pattern pieces (at least once per year) * Use annotated sketches, to develop and communicate their ideas   **Making**   * Select tools and equipment suitable for the task * Select materials and components suitable for the task * 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 * To use mechanical systems such as levers and linkages or pneumatic systems create movement * To make strong, stiff shell structures   **Evaluating**   * Identify the strengths and areas for development in their ideas and products * To investigate and analyse:   who designed and made the products  where products were designed and made  **Cooking and Nutrition**   * To prepare and cook a variety of predominantly savoury dishes safely and hygienically * To use a range of techniques such as chopping, mixing, spreading. |  |
| **B** | **Designing**   * To know the purpose of their products * To know design features of their products that will appeal to intended users * To know how particular parts of their products work * To know what information is needed to create their own design criteria * To know how to complete a cross-sectional drawing effectively   **Making**   * To know that products are made of different components * To know procedures for safety and hygiene * To know how electrical circuits work * To know how to programme a product   **Evaluating**   * To know:   How well products have been designed  How well products have been made  Why materials have been chosen  What methods of construction have been used  How well products work  How well products achieve their purposes  How well products meet user needs and wants   * To know about inventors, designers, engineers, chefs, manufacturers and key events who have developed groundbreaking products and helped shaped the world   **Cooking and Nutrition**   * To know that food is reared and caught in the UK, Europe and wider world * To know that to be active and healthy, food and drink are needed to provide energy for the body | **Designing**   * 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 to create their own design criteria (at least once per year) * Share and clarify ideas through discussion * Model their ideas using prototypes and pattern pieces (at least once per year) * Use annotated sketches or cross sectional drawings, to develop and communicate their ideas   **Making**   * Select tools and equipment suitable for the task * Select materials and components suitable for the task * 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 increasing accuracy * Assemble, join and combine materials and components with increasing accuracy * Apply a range of finishing techniques, including those from art and design, with increasing accuracy * To use simple electrical circuits and components can be used to create functional products * To program a computer to control their products   **Evaluating**   * Use their design criteria to evaluate their completed products * To investigate and analyse:   When products were designed and made  Whether products can be recycled or reused  **Cooking and Nutrition**   * To prepare and cook a variety of predominantly savoury dishes safely and hygienically * To use a range of techniques as previously taught and to develop new skills of slicing and grating |  |
| **C** | **Designing**   * To know the purpose of their products * To know design features of their products that will appeal to intended users * To know how particular parts of their products work * To know how to design an appropriate questionnaire * To annotatesketsches/diagrams   **Making**   * To know that products are made of specific components * To know procedures for safety and hygiene * To know how cams or pulleys or gears work   **Evaluating**   * To know:   How well products have been designed  How well products have been made  Why materials have been chosen  What methods of construction have been used  How well products work  How well products achieve their purposes  How well products meet user needs and wants   * To know about inventors, designers, engineers, chefs, manufacturers and key events who have developed groundbreaking products and helped shaped the world   **Cooking and Nutrition**   * To know that seasons affect food availability * To know that recipes can be adapted to change the appearance, taste, texture and aroma | **Designing**   * 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 questionnaires to identify the needs, wants, preferences or values of a particular individual/group (at least once per year) * Share and clarify ideas through discussion * Model their ideas using prototypes and pattern pieces (at least once per year) * UKS2 exploded diagrams to develop and communicate their ideas   **Making**   * Select tools and equipment suitable for the task and 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 and explain their choice of materials and components according to functional properties and aesthetic qualities * Follow procedures for safety and hygiene * Use a wider range of materials and components than LKS2, 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 * To use techniques that involve a number of steps * To use mechanical systems such as cams or pulleys or gears create movement * To reinforce and strengthen a 3D framework   **Evaluating**   * Consider the views of others, including intended users, to improve their work * To investigate and analyse:   how much products cost to make how innovative products are  **Cooking and Nutrition**   * To prepare and cook a variety of predominantly savoury dishes safely and hygienically using the use of a heat source * To use a range of techniques as previously taught and to develop new skill of peeling |  |
| **D** | **Designing**   * To know the purpose of their products * To know design features of their products that will appeal to intended users * To know how particular parts of their products work * To know how to design appropriate interview questions * To know how to use computer aided programmes in the design process   **Making**   * To know that products are made of specific components * To know procedures for safety and hygiene * To know how complex electrical circuits work * To know how to programme to monitor and control their products   **Evaluating**   * To know:   How well products have been designed  How well products have been made  Why materials have been chosen  What methods of construction have been used  How well products work  How well products achieve their purposes  How well products meet user needs and wants   * To know about inventors, designers, engineers, chefs, manufacturers and key events who have developed groundbreaking products and helped shaped the world   **Cooking and Nutrition**   * To know how food is processed into ingredients that can be eaten or used in cooking * To know that different food and drink contain different substances: nutrients, water and fibre, that are needed for health | **Designing**   * 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 interviews to identify the needs, wants, preferences or values of a particular individual/group (at least once per year) * Share and clarify ideas through discussion * Model their ideas using prototypes and pattern pieces (at least once per year) * Use annotated sketches or computer-aided design to develop and communicate their ideas   **Making**   * Select tools and equipment suitable for the task and 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 and explain their choice of materials and components according to functional properties and aesthetic qualities * Follow procedures for safety and hygiene * Use a wider range of materials and components than LKS2, 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 * Demonstrate resourcefulness when tackling practical problems * How more complex electrical circuits and components can be used to create functional products * How to program a computer to monitor and control their products   **Evaluating**   * Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make * To investigate and analyse:   how sustainable the materials in products are  what impact products have beyond their intended purpose  **Cooking and Nutrition**   * To prepare and cook a variety of predominantly savoury dishes safely and hygienically using the use of a heat source * To use a range of techniques as previously taught and to develop new skills of kneading and baking |  |