

**ECCLESTON C.E. PRIMARY SCHOOL**

**DESIGN AND TECHNOLOGY END POINTS AND**

**KNOWLEDGE**

**By the end of Year 1, our children will;**

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| **Knowledge** | |
| **Designing** | State the products they are designing and making  Say whether their product is for themselves or other users  Describe what their products are for |
| **Making** | Plan by suggesting what to do next  Select from a range of simple tools and equipment and say what the tools are for  Know about the simple working characteristics of materials and components  Describe the properties of the materials they use |
| **Evaluating** | Talk about their design ideas and say what they are making and say what they like/dislike about their final product and how they might do things differently another time |
| **Cooking and Nutrition** | Know that food comes from plants and animals  Name and sort foods into groups  Talk about foods that help us stay healthy, give us energy or should only be eaten as treats (link to looking after their teeth)  Know that we should try and eat at least 5 portions of fruit or vegetables each day |
| **Skills** | |
| **Designing** | Be able to use simple drawings to illustrate their plan and state what products they are designing and making and what materials they will need  Use simple design criteria to help develop their ideas |
| **Making** | Follow procedures for safety and hygiene  Use a range of materials and components including construction kits and materials, textiles, food ingredients and mechanical components  Assemble, join and combine materials and components |
| **Evaluating** | Make simple judgements about their design and ideas against design criteria |
| **Cooking and Nutrition** | Follow procedures for safety and hygiene including cutting food safely  Prepare simple dishes safely and hygienically  Grow and harvest some crops and cook with home or locally grown produce |
| **Vocabulary** | |
| Design, product, idea, names of different materials & textiles, names of different food ingredients, assemble, join & combine, food plant names, animals that produce/give food, different food groups; fruit and vegetables, potatoes, bread, rice, pasta and other starchy carbohydrates, beans, pulses, fish, eggs, meat and other proteins, dairy and alternatives, oils and spreads, hygiene/hygienically, healthy and unhealthy | |

**By the end of Year 3, our children will;**

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| **Knowledge** | |
| **Designing** | Understand the importance of disassembly, to see how something has been made  Know the purpose of their products  Know design features of their products that will appeal to intended users  Know how particular parts of their products work  Know the purpose and benefits of using a prototype or pattern piece  Know how to annotate a sketch effectively |
| **Making** | Know that products are made of different components  Know procedures for safety and hygiene  Know how systems such as levers and linkages or pneumatic systems can create movement |
| **Evaluating** | 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  Know about a range of inventors who have developed products and technology |
| **Cooking and Nutrition** | Know that food is grown in the UK, Europe and wider world and can be farmed, grown or caught  Know that a healthy diet is made up from a variety and balance of different food and drink |
| **Skills** | |
| **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  Share and clarify ideas through discussion  Model their ideas using prototypes  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, 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  To make strong, stiff shell structures |
| **Evaluating** | Identify the strengths and areas for development in their ideas and products |
| **Cooking and Nutrition** | To taste a variety of healthy sandwiches, snacks or drinks  To evaluate the nutritional value of a range of sandwiches and snacks  To prepare and make a healthy lunch  To use a range of techniques such as chopping, mixing, spreading |
| **Vocabulary** | |
| As at end of Year 1, plus: purpose, design features, intended users, prototype, annotated sketches, disassembly, design criteria, components, levers, pneumatic systems, movement, healthy diet, nutrition | |

**By the end of Year 5, our children will;**

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| **Knowledge** | |
| **Designing** | Know the purpose of their products  Know design features of their products that will appeal to intended users  Know how particular parts of their products work  Know how to design an appropriate questionnaire  Know how to disassemble an object |
| **Making** | Know that products are made of specific components  Know procedures for safety and hygiene  Know how electrical circuits work |
| **Evaluating** | 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  Find out about people in history, designers and chefs who have invented or developed products and helped shaped the world. |
| **Cooking and Nutrition** | Know that seasons affect food availability  Know that recipes can be adapted to change the appearance, taste, texture and aroma  Know that the state of some ingredients/foods can be changed by heating or cooling |
| **Skills** | |
| **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 Share and clarify ideas through discussion  Model their ideas using prototypes  Use annotated sketches or disassembly 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  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  Use simple electrical circuits and components can be used to create a functioning alarm |
| **Evaluating** | Think about what went well, what could be improved and how  Consider the views of others, including intended users, in order to improve their work |
| **Cooking and Nutrition** | Prepare and cook dishes safely and hygienically  Use a range of techniques as previously taught and to develop new skill of peeling  Make and bake bread, developing new skills of kneading and baking |
| **Vocabulary** | |
| As for end of Year 3, plus: questionnaire, diagram, electrical circuits, reinforce and strengthen, seasonal, food availability, knead, prove | |

**By the end of Year 6, our children will;**

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| **Knowledge** | |
| **Designing** | Know the purpose of their products  Know design features of their products that will appeal to intended users  Know how particular parts of their products work  Know how to use computer aided programmes in the design process |
| **Making** | Know that products are made of specific components  Know procedures for safety and hygiene  Know how complex electrical circuits work, (links with science)  Know how to programme to monitor and control their products |
| **Evaluating** | 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  Know about a range of inventors, designers, engineers, chefs, manufacturers who have developed everyday products and technology |
| **Cooking and Nutrition** | Know how food is processed into ingredients that can be eaten or used in cooking  Know that different food and drink contain different substances: nutrients, water and fibre, that are needed for health |
| **Skills** | |
| **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, which may include using interviews to identify the needs, wants, preferences or values of a particular individual/group  Share and clarify ideas through discussion  Model their ideas using prototypes and designs  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  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  Demonstrate resourcefulness and resilience 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 |
| **Cooking and Nutrition** | To prepare and cook a variety of predominantly savoury dishes safely and hygienically using the use of a heat source |
| **Vocabulary** | |
| As in previous years, plus: interview, computer aided programmes, complex electrical circuits, food processing | |