

## Year 4 Design Technology

| Steps to knowing... Yr4   |  |   |   |   |  |   | End Point statement  |
|---|--|---|---|---|--|---|--|
| <p>What are levers and linkages?</p> <p>Which products include levers and linkages?</p>                                       | <p>How do levers work? (Refer to work from Year 1)</p> <p>What is a linkage and how does it work?</p>                                | <p>How can levers be fixed together to form linkages?</p> <p>Which part of the system is the input and which is the output?</p> <p>Which are the fixed pivots and which are the loose pivots?</p> <p>How can I mark, cut and join materials securely?</p> | <p>What is the design criteria for our product?</p> <p>How can I record my ideas to explain to others how my design meets these criteria? (annotated sketches and prototypes)</p> | <p>How can I make my product in the right order thinking about the skills, tools techniques and materials I need?</p> | <p>Do my levers and linkages work smoothly in the intended way?</p> <p>Do I need to change anything?</p> <p>How can I finish my work well?</p> | <p>How can I test my finished product?</p> <p>Does my product meet the design specification?</p> <p>What are its strengths and areas for development?</p> | <p>Mechanical - Design, make and evaluate a purposeful product incorporating levers and linkages. Use a linkage to join two or more pivoted levers to create a moving mechanism.</p>                                       |
| <p>What is an electrical system?</p> <p>What existing products in the home and school environment include series circuits</p> | <p>How does a battery powered product work?</p> <p>What are the key features and components of a battery powered product and how</p> | <p>How do I construct a series circuit, including input and output devices?</p> <p>How can I use my understanding of computing to</p>   | <p>How will we create design criteria to meet our product's user's needs and fulfil its intended purpose?</p>   | <p>What are the main stages in making and testing my product?</p> <p>What are the most suitable tools and</p>         | <p>Have I constructed my series circuit correctly?</p> <p>Do I need to debug my</p>  | <p>Does my product meet my design criteria?</p> <p>What strengths and areas for improvement are there?</p>  | <p>Electrical systems -Design, make and evaluate a purposeful electrical system incorporating switches. Use knowledge of electrical systems, such as series circuits to incorporate switches, bulbs and buzzers. Apply</p> |

## Year 4 Design Technology

|   |   |   |   |  |   |  |  |
|---|---|---|---|--|---|--|--|
| <p>incorporating switches, bulbs and buzzers?</p>   | <p>do they all interact?</p>  | <p>program and control my product?</p> <p>What skills and techniques will allow me to accurately cut, shape, join and finish materials?</p> | <p>How can I communicate my ideas accurately, using annotated sketches and cross-sectional or exploded diagrams?</p>  | <p>materials for me to use to construct my product?</p>  | <p>computer control program?</p>  |  | <p>their understanding of computing to program and control their products.</p>   |
| <p>How can I tell whether a product is healthy?</p> <p>What are the different food groups and why are they important?</p> <p>What are the different ways that I can describe foods?</p> <p><i>Include appearance, taste, texture and aroma.</i></p> | <p>How are the foods I am tasting processed and where do they come from?</p> <p>What is the difference between fresh and processed foods?</p> | <p>How can I follow a recipe successfully?</p> <p>What must I do before preparing food in order to stay safe and why is this important?</p> | <p>What are the different ways that I can prepare ingredients?</p> <p><i>e.g. the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking.</i></p> | <p>What ingredients will I use to make an appealing product that is part of a balanced diet and meets the needs of the user and purpose?</p> <p><i>Include appearance, taste, texture and aroma.</i></p> <p>How can I make my own recipe clear including ingredients</p> | <p>Have I selected and used the most appropriate utensils and equipment to prepare and combine the ingredients?</p> | <p>Does my product meet the design criteria? Is there anything I might do differently next time?</p> | <p>Food - Design, make and evaluate a food product which is healthy, using appropriate equipment and utensils to prepare and combine food. Demonstrate an understanding of a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</p> |



## Year 4 Design Technology

|  |  |  |  |                      |  |  |  |
|--|--|--|--|----------------------|--|--|--|
|  |  |  |  | utensils and method? |  |  |  |
|--|--|--|--|----------------------|--|--|--|

### Vocabulary

shell structure, prototype, lever, linkage, pivot, slot, bridge, guide, system, input, process, output, linear, rotary, oscillating, reciprocating, series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, system, input device, output device

### NC Links

|  |
|--|
|  |
|--|