<table>
<tr><td>Subject: Technology</td><td>Year group: Year 4</td><td>Topic: Robots – Components</td><td rowspan="2">Initiation & activation activities:</td></tr>
<tr><td colspan="2">Prior knowledge required: Children can: design purposeful, functional, appealing products for themselves and other users based on design criteria; generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology
Make :select from and use a range of tools and equipment to perform practical tasks, (or example, cutting, shaping, joining and finishing); select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics
Evaluate: explore and evaluate a range of existing products; evaluate their ideas and products against design criteria
Technical knowledge: build structures, exploring how they can be made stronger, stiffer and more stable; explore and use mechanisms, (for example levers, sliders, wheels and axles), in their products.
Food technology: use the basic principles of a healthy and varied diet to prepare dishes; understand where food comes from.</td><td>Vocabulary:</td></tr>
<tr><td>Programme of Study*</td><td>Implementation:</td><td>Impact –lesson sequence:</td><td>Evaluations and assessments:</td></tr>
<tr><td>Design
• use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
• generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make
• select from and use a wider range of tools and equipment to perform practical tasks, such as cutting, shaping, joining and finishing, accurately
• select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</td><td>Electrical and <u>mechanical</u> components
• Can they add things to their circuits?
• How have they altered their product after checking it?
• Are they confident about trying out new and different ideas?

Developing, planning and communicating ideas
• Can they come up with at least one idea about how to create their product?
• Do they take account of the ideas of others when designing?
• Can they produce a plan and explain it to others?
• Can they suggest some improvements and say what was good and not so good about their original design?
Working with tools, equipment, materials and components to make quality products
• Can they tell if their finished product is going to be good quality?
• Are they conscience of the need to produce something that will be liked by others?
• Can they show a good level of expertise when using a range of tools and equipment?
• Do they work at their product even though their original idea might not have worked?
Evaluating processes and products
• Have they thought of how they will check if their design is successful?
• Can they begin to explain how they can improve their original</td><td></td><td></td></tr>
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Evaluate • investigate and analyse a range of existing products • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • understand how key events and individuals in design and technology have helped shape the world Technical knowledge • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products, (for example as gears, pulleys, cams, levers and linkages) • understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors) • apply their understanding of computing to programme, monitor and control their products. Cooking and Nutrition • understand and apply the principles of a healthy and varied diet • prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques • understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	design? • Can they evaluate their product, thinking of both appearance and the way it works? • Do they take time to consider how they could have made their idea better?		

- 50% of this programme of study is taught in Years 5 and 6