Badger Hill PRIMARY SCHOOL

# DT Progression of skills 2023-24

| Design | EYFS | Year One | Year Two | Year Three | Year Four | Year Five | Year Six |
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| **Structure** | Making verbal plans and material choices.<br><br>Developing a junk model.<br><br>Designing a junk model boat. • Using knowledge from exploration to inform design. | Learning the importance of a clear design criteria.<br><br>Including individual preferences and requirements in a design. | Generating and communicating ideas using sketching and modelling.<br><br>Learning about different types of structures, found in the natural world and in everyday objects. | Designing a castle with key features to appeal to a specific person/purpose.<br><br>Drawing and labelling a castle design using 2D shapes, labelling: -the 3D shapes that will create the features - materials needed and colours.<br><br>Designing and/or decorating a castle tower on CAD software. | Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect.<br><br>Building frame structures designed to support weight. | | Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs. |
| **Mechanical Systems** | | | Selecting a suitable linkage system to produce the desired motion.<br><br>Designing a wheel. Making linkages using card for levers and split pins for pivots.<br><br>Experimenting with linkages adjusting the widths, lengths and thicknesses of card used.<br><br>Cutting and assembling components neatly. | | Designing a shape that reduces air resistance.<br><br>Drawing a net to create a structure from.<br><br>Choosing shapes that increase or decrease speed as a result of air resistance.<br><br>Personalising a design | Designing a pop-up book which uses a mixture of structures and mechanisms.<br><br>Naming each mechanism, input and output accurately<br><br>Storyboarding ideas for a book. | |
| **Cooking and Nutrition** | | Designing smoothie carton packaging by-hand or on ICT software. | | Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish. | | Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients.<br><br>Writing an amended method for a recipe to | |

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| | | | | | | incorporate the relevant changes to ingredients. Designing appealing packaging to reflect a recipe | |
| **Digital World** | | | | Problem solving by suggesting potential features on a Micro: bit and justifying my ideas<br><br>Developing design ideas for a technology pouch<br><br>Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge | | | Writing a design brief from information submitted by a client<br><br>Developing design criteria to fulfil the client's request<br><br>Considering and suggesting additional functions for my navigation tool<br><br>Developing a product idea through annotated sketches<br><br>Placing and manoeuvring 3D objects, using CAD<br><br>Changing the properties of, or combine one or more 3D objects, using CAD |
| **Electrical Systems** | | | | | Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. | Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product.<br><br>Developing design criteria based on findings from investigating existing products.<br><br>Developing design criteria that clarifies the target user. | |

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| **Textiles** | Discussing what a good design needs.<br><br>Designing a simple pattern with paper.<br><br>Designing a bookmark.<br><br>Choosing from available materials. | Using a template to create a design for a puppet. | | | | | Designing a waistcoat in accordance to a specification linked to set of design criteria.<br><br>Annotating designs, to explain their decisions. |