

## Design and Technology: EYFS & Key Stage 1

|                                 | Nursery  | Reception   | Year 1  | Year 2   |
|---------------------------------|--|---|---|--|
| <b>Designing and Evaluating</b> | D1 Explore different materials freely, in order to develop their ideas about how to use them and what to make. EAD | D1 Return to and build on their previous learning, refining ideas and developing their ability to represent them. EAD | <b>D1</b> I can explore objects and designs and begin to describe what I like about them. | <b>D1</b> I can explore objects and designs to identify likes and dislikes of the designs.               |
|                                 | D2 Develop their own ideas and then decide which materials to use to express them. EAD                             | D2 Explore, use and refine a variety of artistic effects to express their ideas and feelings. EAD                     | <b>D2</b> I can say what materials and tools I will use from a limited selection.         | <b>D2</b> I can say what materials and tools I will use from a limited selection and justify my choices. |
|                                 |  |   | <b>D3</b> I can suggest improvements to existing designs.                                 | <b>D3</b> I can suggest improvements to existing designs to my own and others work.                      |
|                                 |  |   | <b>D4</b> I can design products that have a clear purpose and an intended user.           | <b>D4</b> I can explore how products have been created.  |
|                                 |  |   | <b>D5</b> I can design using drawings or sketches.  | <b>D5</b> I can model simple designs using software.   |
|                                 |  |   |   | <b>D6</b> I can refine the design as work progresses.  |

### National Curriculum:

#### Pupils should be taught to:

##### Design

- 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.

##### Evaluate

- Explore and evaluate a range of existing products.
- Evaluate their ideas and products against design criteria.

|        | Nursery   | Reception   | Year 1   | Year 2   |
|--------|---|---|--|--|
| Making | M1 Explore different materials freely, in order to develop their ideas about how to use them and what to make. EAD<br>Develop their own ideas and then decide which materials to use to express them. EAD | M1 Return to and build on their previous learning, refining ideas and developing their ability to represent them. EAD   | <b>M1 Construction</b> I can use materials to practise joining, cutting, and shaping to make and strengthen products.            | <b>M1 Materials</b> I can cut materials safely using tools provided.   |
|        | M2 Join different materials and explore different textures. EAD   | M2 Explore, use and refine a variety of artistic effects to express their ideas and feelings. EAD   | <b>M2 Construction</b> I can construct using joining, cutting, shaping and finishing techniques to make and strengthen products. | <b>M2 Materials</b> I can demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).   |
|        | M3 Use one-handed tools and equipment, for example, making snips in paper with scissors. PD   | M3 Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons. PD | <b>M3 Mechanics.</b> I can create products using sliders and levers.   | <b>M3 Materials</b> I can measure and mark out to nearest cm.  |
|        | M4 Create closed shapes with continuous lines, and begin to use these shapes to represent objects. EAD  |   |  | <b>M4 Materials</b> I can demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). |
|        |   |   |  | <b>M5 Textiles</b> I can shape textiles using templates.   |
|        |   |   |  | <b>M6 Textiles</b> I can join textiles using running stitch.   |
|        |   |   |  | <b>M7 Textiles</b> I can colour and decorate textiles using number of techniques.  |
|        |   |   |  | <b>M8 Mechanics</b> I can create products using wheels and axles   |

**National Curriculum:**

**Pupils should be taught to:**

Make

- Select from and use a range of tools and equipment to perform practical tasks (for example: cutting, shaping, joining and stitching).

- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

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 axels) in their products.

|                       | Nursery  | Reception   | Year 1  | Year 2   |
|-----------------------|--|---|---|--|
| Cookery and Nutrition | C1 Start to eat independently and learning how to use a knife and fork. PD | C1 Know and talk about the different factors that support their overall health and wellbeing including healthy eating. PD | <b>C1</b> I can say where food comes from (animal or a plant).  | <b>C1</b> I can say where food comes from within my locality (farms and fields).   |
|                       | C2 Make healthy choices about food, drink, activity and tooth brushing. PD |   | <b>C2</b> I know that food is caught, reared or grown.  | <b>C2</b> I know that different foods are best produced in different seasons within my locality (Food in the UK – linked to seasons) |
|                       |  |   | <b>C3</b> I know that there are different types of food and that we need more than one of these to make a meal. | <b>C3</b> I can name the basic food groups and sort ingredients into them (Carbohydrates, fruit and vegetables, protein, dairy).     |
|                       |  |   | <b>C4</b> I can slice, chop and peel ingredients safely and hygienically.                                       | <b>C4</b> I can select ingredients to create a varied meal.  |
|                       |  |   | <b>C5</b> I can measure or weigh using measuring cups.  | <b>C5</b> I can slice, chop, peel and grate ingredients safely and hygienically.   |

**National Curriculum:**  
**Pupils should be taught to:**  
 Cookery and Nutrition

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from

**Design and Technology: Key Stage 2**

|                                 | Year 3  | Year 4  |
|---------------------------------|---|---|
| <b>Designing and Evaluating</b> | <b>D1</b> I can design with purpose by identifying opportunities to design.   | <b>D1</b> I can design with purpose by identifying opportunities to design and justify my choices.  |
|                                 | <b>D2</b> I can make products by working efficiently (such as by carefully selecting from a wide range of materials and tools). | <b>D2</b> I can make products by working efficiently and with precision (such as by carefully selecting from a wide range of materials and tools.)      |
|                                 | <b>D3</b> I can refine work as work progresses, evaluating the end product design.  | <b>D3</b> I can refine work and techniques as work progresses, continually evaluating the product design.   |
|                                 | <b>D4</b> I can identify some of the great designers in all of the areas of study to generate ideas for designs.                | <b>D4</b> I can use software to design and represent product designs including labels.  |
|                                 | <b>D5</b> I can improve upon existing designs, giving reasons for choices.  | <b>D5</b> I can identify some of the great designers in all of the areas of study (including pioneers in sustainability) to generate ideas for designs. |
|                                 | <b>D6</b> I can use software to design and represent product designs.   | <b>D6</b> I can disassemble products to understand how they work.   |

**National Curriculum:**  
**Pupils should be taught to:**

### Design

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at a particular individual or group.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.

### Evaluate

- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of other to improve their work.
- Understand how key events and individuals in design and technology have helped shape the world.

|        | Year 3   | Year 4   |
|--------|--|--|
| Making | <b>M1 Construction</b> I can choose suitable techniques to construct products or to repair items.  | <b>M1 Materials</b> I can measure and mark out to the nearest mm   |
|        | <b>M2 Construction</b> I can strengthen materials using suitable techniques.   | <b>M2 Materials</b> I can cut materials accurately and safely by selecting appropriate tools.  |
|        | <b>M3 Mechanics</b> I can use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). | <b>M3 Materials</b> I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). |
|        |  | <b>M4 Materials</b> I can select appropriate joining techniques.   |
|        |  | <b>M5 Textiles</b> I can select the most appropriate techniques to decorate textiles.  |
|        |  | <b>M6 Textiles</b> I can understand the need for a seam allowance.   |

|  |   |
|--|---|
|  | <b>M7 Textiles</b> I can join textiles with appropriate stitching.  |
|  | <b>M8 Electricals and electronics</b> I can recognise if a battery operated device works or not.  |
|  | <b>M9 Electricals and electronics</b> I can diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage). |
|  | <b>M10 Electricals and electronics</b> I can create series circuits.  |
|  | <b>M11 Electricals and electronics</b> I can create parallel circuits.  |
|  | <b>M12 Computing</b> I can monitor models using software designed for this purpose.   |
|  | <b>M13 Computing</b> I can control models using software designed for this purpose.   |

**National Curriculum:**

**Pupils should be taught to:**

Make

- Select from and use a wider range of tools and equipment to perform practical tasks (for example: 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.

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: 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 program, monitor and control their products.

|                       | Year 3   | Year 4 |
|-----------------------|--|--------|
| Cookery and Nutrition | <b>C1</b> I can say where food comes from, from around Europe.   |        |
|                       | <b>C2</b> I know that different foods are best produced in different seasons around Europe.  |        |
|                       | <b>C3</b> I can name all of the food groups and sort ingredients into them (Carbohydrates, fruit and vegetables, protein, dairy, oils and spreads, foods high in fats and sugars). |        |
|                       | <b>C4</b> I can follow a recipe, including selecting appropriate ingredients.  |        |
|                       | <b>C5</b> I can prepare ingredients hygienically selecting and using appropriate utensils.   |        |
|                       | <b>C6</b> I can measure ingredients to the nearest gram.   |        |

**C7** I can assemble and cook ingredients (controlling the temperature of the oven or hob if cooking).

**National Curriculum:**

**Pupils should be taught to:**

Cookery 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.