



## **Flowery Field Primary School Threshold Concept Progression Map:**

### **Design & Technology**

#### **EYFS**

##### **Understanding the World**

###### **Nursery:**

###### **People, Culture & Communities**

Explore how things work.

###### **Reception:**

###### **The Natural World**

Explore the natural world around them.

##### **Expressive Arts and Design**

###### **Nursery**

###### **Creating with Materials**

Explore different materials freely, in order to develop their ideas about how to use them and what to make.

Develop their own ideas and then decide which materials to use to express them.

Join different materials and explore different textures.

Create closed shapes with continuous lines, and begin to use these shapes to represent objects.

Draw with increasing complexity and detail, such as representing a face with a circle and including details.

###### **Reception** (no statements relating to DT in Creating with Materials)

###### **Creating with Materials ELG**

Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Share their creations, explaining the process they have used. Make use of props and materials when role-playing characters in narratives and stories.

Through a variety of creative and practical activities delivered through an enabling environment and with engaging adults, children should be able to explore design, technology and the creation of structures or props to support independent learning.

Explore how things work: Investigate and play with mechanical equipment such as wind-up toys, pulleys, sets of cogs and pegs with boards. UW



Develop their own ideas and decide which materials to use to express them. Join different materials and explore different textures. EAD

### **Key Stage 1 and 2 National Curriculum**

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

### **Intent**

We offer a high-quality Design and Technology education that engages, inspires and challenges pupils, equipping them with the knowledge and skills to effectively investigate, design, create and critique a variety of creations of their own and of others.

As pupils progress, we support our pupils to think critically and develop a more rigorous understanding of Design and Technology.

Our curriculum offer ensures children:

**Investigate:** research successful designs and the needs of their audience.

**Design:** research and generate drawings and models that communicate their ideas for their audience.

**Make:** select from a range of tools, materials and techniques to produce their product from their design.

**Critique:** evaluate and analyse their product against its intended use and/or the needs of their audience

### **Implementation**

At Flowery Field, when designing and making, pupils should be taught to:

#### **Investigate & Design**

- understand where food comes from.



- 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
- 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
- understand and apply the principles of a healthy and varied diet
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

### **Create**

- use the basic principles of a healthy and varied diet to prepare dishes
- select from and use a range of tools and equipment to perform practical tasks [for 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
- 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.
- 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
- 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.
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

### **Critique**

- explore and evaluate a range of existing products



- evaluate their ideas and products against design criteria
- 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

### **Impact**

The Design and Technology team, which comprises a member from each phase, will monitor the study of the subject (as part of the school's monitoring cycle) using a range of strategies. Lesson walkthroughs will take place at agreed times, looking for evidence of the concepts below and reference them with the objectives for the year group. These are then matched to ensure complete coverage.



| Investigate & Design  |  |  |  |  |   |   |
|---|--|--|--|--|---|---|
| EYFS  | Y1   | Y2   | Y3   | Y4   | Y5  | Y6  |
| <b>New ELG *Link to EAD</b><br>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.  | <b>KS1 National Curriculum</b><br>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing.                     |  | <b>KS2 National Curriculum</b><br>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing.   |  | <b>KS2 National Curriculum</b><br>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing.        |   |
| Children can:<br><br>In nursery; <ul style="list-style-type: none"> <li>• use various construction materials</li> <li>• begin to construct, stack blocks vertically and horizontally, making enclosures and creating spaces.</li> <li>• Join construction pieces together to build and balance</li> <li>• Realise tools can be used for a purpose</li> <li>• Uses available resources to create props to support role play</li> </ul> In reception; <ul style="list-style-type: none"> <li>• Understand the different media can be combined to create new effects</li> <li>• Construct with a purpose in mind, using a variety of resources</li> <li>• Use simple tools and techniques competently and appropriately</li> <li>• Select appropriate resources and adapt work where necessary</li> <li>• Select tools and techniques needed to</li> </ul> | Clarify their ideas through discussion<br><br>Develop ideas by shaping, assembling and rearranging materials and components<br><br>Draw on their own experience to generate ideas<br><br>Develop their ideas using freehand drawings | Investigate the way products meet their purpose<br><br>Use drawings to help their techniques<br><br>Give a description to others of how their model will be made<br><br>Make suggestions about how they should proceed<br>Consider design ideas as they develop<br><br>Identify strengths and weaknesses | Consider the effectiveness of available products.<br><br>Generate ideas considering the users and purposes for which they are designing<br><br>Develop a clear idea of what needs to be done, planning use of materials, equipment and processes and suggesting alternative methods of proceeding.<br><br>To gather information independently and use it in their designing.<br><br>Investigate and disassemble relevant products designed for the same purpose. | Investigate how products function, e.g., components, mechanisms and suitability<br><br>Generate ideas considering the users and purposes for which they are designing.<br><br>Explore and develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways (e.g. powerpoint, drawing, much up model, pictures, photographs) | Generate ideas considering the users and purposes for which they are designing.<br><br>Clarify their idea develop criteria for designing and suggest way forward.<br><br>Consider appearance, function and reliability. | Criticise the products; suitability, materials, mechanisms and purpose. .<br><br>Use information source to assist in their planning.<br><br>Consider appearance appearance, function and reliability in their design.<br><br>Clarify ideas, identify criteria for design and way forward. |



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|---|--|--|--|--|--|--|
| shape, assemble and<br>join materials they are<br>using |  |  |  |  |  |  |
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| Make   |  |  |  |  |  |   |
|--|--|--|--|--|--|---|
|  | Y1   | Y2   | Y3   | Y4   | Y5   | Y6  |
| <b>New ELG *Link to EAD</b><br>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Make use of props and materials when role playing characters in narratives and stories.   | <b>KS1 National Curriculum</b><br>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making.                  |  | <b>KS2 National Curriculum</b><br>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making.<br><br>Create sketch books to record their observations and use them to review and revisit ideas<br><br>Improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] |  | <b>KS2 National Curriculum</b><br>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making.<br><br>Create sketch books to record their observations and use them to review and revisit ideas<br><br>Improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] |   |
| Children can:<br><br>In nursery; <ul style="list-style-type: none"> <li>use various construction materials</li> <li>begin to construct, stack blocks vertically and horizontally, making enclosures and creating spaces.</li> <li>Join construction pieces together to build and balance</li> <li>Realise tools can be used for a purpose</li> <li>Uses available resources to create props to support role play</li> </ul> In reception; <ul style="list-style-type: none"> <li>Understand the different media can be combined to create new effects</li> <li>Construct with a purpose in mind, using a variety of resources</li> </ul> | Assemble, join and combine materials and components<br><br>Apply simple finishing techniques<br><br>Produce a structure that can stand independently<br><br>Roll, cut and mould materials<br><br>Join materials in simple ways | Assemble, join and combine materials with some precision<br><br>Measure, mark out and shape materials<br><br>Assemble, join and combine materials<br><br>Produce a product with a mechanism, using an axle<br><br>Produce a freestanding structure in appropriate materials for the theme<br><br>Mix, stir and pour food | Join and combine materials in temporary and permanent ways<br><br>Apply additional finishing techniques<br><br>Create a solid 2D frame to hold a mechanism/circuit<br><br>Produce a structure that can withstand force or motion<br><br>Use boiling or baking to make food produce   | Know the working characteristics of materials are related to how they are used.<br><br>Join and combine materials accurately in temporary and permanent ways<br><br>Apply additional finishing techniques<br><br>Produce a freestanding 3D structure using natural materials<br><br>Use frying, roasting, boiling and baking to make food produce<br><br>Make an instrument that incorporates a lever or motor | Join and combine materials accurately considering whether it needs to be a temporary or permanent fix.<br><br>Accurately measure, mark out and cut and shape materials using appropriate tool.<br><br>Produce a 3D structure with a mechanism using gears and electric circuits to create rotation.<br><br>Use frying, roasting, boiling and baking to make seasonal food produce  | Select appropriate tools, materials and techniques<br><br>Join and combine materials and components accurately.<br><br>Measure, make out, cut and shape a range of materials.<br><br>Apply quality finishing techniques to produce a more durable product.<br><br>Make a large 3D structure to hold a mechanism and circuits<br><br>To explore the effects of mixing, heating, blending and combining ingredients to make a supplement. |



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| <ul style="list-style-type: none"><li>• Use simple tools and techniques competently and appropriately</li><li>• Select appropriate resources and adapt work where necessary</li><li>• Select tools and techniques needed to shape, assemble and join materials they are using</li></ul> |  |  |  |  |  |  |
|---|--|--|--|--|--|--|





| Critique   |  |  |   |   |   |  |
|--|--|--|---|---|---|--|
|  | Y1   | Y2   | Y3  | Y4  | Y5  | Y6   |
| <b>New ELG *Link to EAD</b><br>Share their creations,<br>explaining the process they<br>have used. | <b>KS1 National Curriculum</b><br><br>They should work in a range of relevant contexts                       |  | <b>KS2 National Curriculum</b><br><br>They should work in a range of relevant contexts  |   | <b>KS2 National Curriculum</b><br><br>They should work in a range of relevant contexts  |  |
| Children can:  | Evaluate their products as<br>they develop and identify<br>strengths and weaknesses<br><br>Finish a product. | Begin to use self and peer<br>critique to decide how<br>they can improve their<br>work.<br><br>Evaluate quality; how well<br>it is made and how well it<br>fits its purpose. | Use self and peer critique to<br>give suggestions at how to<br>further improve design<br>work.<br><br>Evaluate product against the<br>planning criteria<br><br>Discuss how well set out<br>design can affect the final<br>product | Use self and peer critique<br>to identify what the next<br>steps would be to further<br>improve the design, giving,<br>kind specific and helpful;<br>feedback.<br><br>Evaluate their product<br>suggesting strength and<br>weaknesses; and suggest<br>improvements.<br><br>Discuss how well set out<br>design can affect the final<br>product | Use of self and peer critique<br>to identify what the next<br>steps would be to further<br>improve their art work,<br>giving, kind specific and<br>helpful; feedback.<br><br>Evaluate effectiveness of the<br>product.<br><br>Identify and implement<br>improvements identified<br>through peer critique. | Master the use of self and<br>peer critique to identify<br>what the next steps would<br>be to further improve their<br>design work, giving, kind<br>specific and helpful;<br>feedback.<br><br>Consider the effectiveness<br>of the product including the<br>purpose to determine<br>whether it was 'fit for<br>purpose'.<br><br>Evaluate their design ideas<br>bearing in mind the user<br>and purpose for which the<br>product is intended and<br>suggest improvements.<br><br>Sell your product to a<br>potential customer/market<br>(Dragons Den pitch) |