



## Design and Technology - Long Term Plan

### Key Stage 1

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

#### **Make**

- 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

#### **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.

#### **Cooking and Nutrition**

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



## Key Stage 2

**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 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 [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

### **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, 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.



#### **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.

Our School Vision is to work as a community within the school's Christian ethos. We learn about world faiths alongside our Christian Values to work towards creating an outstanding school where all can flourish. Through the provision of a broad and balanced curriculum we encourage every child to develop lively, creative and enquiring minds enabling them to become confident individuals who reach their full potential and succeed in Modern Britain.

*Our school works in partnership with the church and the wider community to give a caring and nurturing environment. Together we enable and equip each child to "I have come that they may have life, and have it to the full" (The Gospel of John – Chapter 10, verse 10).*

#### **We will realise our Vision through the following aims:**

- demonstrating, as a Church school, our Christian values in action
- providing a broad and balanced curriculum to all children
- consistently high standards of teaching
- providing a happy, healthy and secure environment where all are respected, valued and encouraged to contribute
- excellent leadership and governance
- encouraging a love of learning by participating in experiences full of opportunity and creativity
- pursuing excellence in every aspect of school life, supporting one another and celebrating the achievements of all
- a partnership of pupils, teachers, parents, governors and the local community
- targets that are challenging and achievable.

#### **GARTON ON THE WOLDS CE PRIMARY SCHOOL INTENT, IMPLEMENTATION AND IMPACT**

##### **What is Design and Technology?**

Design and Technology prepares children to deal with tomorrow's rapidly changing world. It encourages children to become independent, creative problem-solvers and thinkers as individuals and as part of a team, making positive changes to their quality of life. It enables them to identify needs and opportunities and to respond to them by developing a range of ideas and by making products and systems. Through the study of Design and Technology, they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect



# Garton on the Wolds C.E. (V.C.) Primary School

**Respect, Aspire, Achieve**

*"I have come that they may have life, and have it to the full" (John 10 v.10)"*

## Long Term Plan

### Subject: Design and Technology

on and evaluate present and past design and technology, its uses and its impacts. Design and Technology helps all children to become astute and informed future consumers and potential innovators.

#### Intent

It is the intent of Garton on the Wolds Primary for Design and Technology to be an inspiring subject, taught in all year groups through at least one topic per term, which includes one topic relating to food every two years. Design and Technology projects are often made cross curricular, linking to other subjects taught. Our Enterprise Week enables pupils to experience a purposeful design project. At our school, Design and Technology should enable pupils to use their imagination whilst solving real and relevant problems within a variety of contexts.

#### Implementation

The teaching of Design and Technology follows the National Curriculum through the use of the Design and Technology Association's 'Projects On A Page' planning. Children design products with a purpose for an identified user. Food technology, with a focus on healthy eating, enables children to develop an understanding of where food comes from, the importance of a varied and healthy diet and how to prepare this.

#### Impact

Assessment of children's learning in Design and Technology is carried out using the school's OTrack Assessment System, accompanied by an ongoing monitoring of children's understanding, knowledge and skills by the class teacher throughout lessons. This assessment is then used to inform differentiation, support and challenge as required.

Design and Technology is also monitored by the subject leader throughout the year in the form of lesson observations and pupil interviews to discuss their learning and understanding and establish the impact of the teaching taking place.



#### Cycle A – 2023/24

|                 | Autumn 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Autumn 2 | Spring 1                  | Spring 2 | Summer 1                      | Summer 2 |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------|----------|-------------------------------|----------|
| <b>EYFS</b>     | <b>Expressive Art and Design</b><br><br>- Provide children with a range of materials for children to construct with. Encourage them to think about and discuss what they want to make. Discuss problems and how they might be solved as they arise. Reflect with children on how they have achieved their aims.<br>- Teach children different techniques for joining materials, such as how to use adhesive tape and different sorts of glue.<br>- Provide a range of materials and tools and teach children to use them with care and precision. Promote 74 Children in reception will be learning to: Examples of how to support this: independence, taking care not to introduce too many new things at once.<br>- Encourage children to notice features in the natural world. Help them to define colours, shapes, texture and smells in their own words. Discuss children's responses to what they see. |          |                           |          |                               |          |
| <b>Year 1/2</b> | <b>Vehicles</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          | <b>Perfect Pizzas</b>     |          | <b>Eat More Fruit and Veg</b> |          |
| <b>Year 3/4</b> | <b>Prehistoric World</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          | <b>Ancient Egypt</b>      |          | <b>Romans</b>                 |          |
| <b>Year 5/6</b> | <b>Building Bridges</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          | <b>Chinese Inventions</b> |          | <b>Mexican</b>                |          |



Cycle B – 2024/25

|                 | Autumn 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Autumn 2 | Spring 1                    | Spring 2 | Summer 1                  | Summer 2 |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------|----------|---------------------------|----------|
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| <b>Year 1/2</b> | <b>Moving Explorers</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          | <b>Structures</b>           |          | <b>Puppets</b>            |          |
| <b>Year 3/4</b> | <b>Storybooks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          | <b>Mini Greenhouses</b>     |          | <b>British Inventors</b>  |          |
| <b>Year 5/6</b> | <b>Programming Pioneers</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |          | <b>Fashion and Textiles</b> |          | <b>Birdhouse Builders</b> |          |