

## Welford on Avon Primary School - Long Term Plan for Design and Technology

### EYFS

During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities.

They have the opportunities to learn to:

- Use different media and materials to express their own ideas
- Use what they have learnt about media and materials in original ways, thinking about form, function and purpose
- Make plans and construct with a purpose in mind using a variety of resources
- Develop skills to use simple tools and techniques appropriately, effectively and safely
- Select appropriate resources for a product and adapt their work where necessary
- Cook and prepare food adhering to good health and hygiene routines

### Key Stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an interactive 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].

When designing and making, 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

## Key Stage 2

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

When designing and making, 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.

|        | Autumn   | Spring   | Summer   |
|--------|--|--|--|
| Year 1 | <b>Homes</b><br>Focus: Structures<br>DATA 1D                     | <b>Moving Pictures</b><br>Focus: mechanisms<br>DATA 1A                     | <b>Eat more fruit and vegetables</b><br>Focus: food<br>DATA 1C |
| Year 2 | <b>Winding Up</b><br>Focus: mechanisms<br>/structures<br>DATA 2C | <b>Puppets</b><br>Focus: textiles<br>DATA 2B                               | <b>Vehicles</b><br>Focus: mechanisms<br>DATA 2A                |
| Year 3 | <b>Packaging</b><br>Focus: structures<br>DATA 3A                 | <b>Photograph Frames</b><br>Focus: structures<br>DATA 3D                   | <b>Moving monsters</b><br>Focus: control<br>DATA 3C            |
| Year 4 | <b>Money Containers</b><br>Focus: structure/textiles<br>DATA 4A  | <b>Lighting It Up</b><br>Focus: control/electrical/<br>computer<br>DATA 4E | <b>Storybooks</b><br>Focus: control/mechanisms<br>DATA 4B      |
| Year 5 | <b>Biscuits</b><br>Focus: food<br>DATA 5D                        | <b>Moving Toys</b><br>Focus: control/mechanisms<br>DATA 5C                 | <b>Musical Instruments</b><br>Focus: structures<br>DATA 5A     |
| Year 6 | <b>Fairgrounds</b><br>Focus: control/electrical<br>DATA 6C       | <b>Shelters</b><br>Focus: structures<br>DATA 6A                            | <b>Slippers</b><br>Focus: structures/textiles<br>DATA 6B       |

The final product can be adapted, though the skills must be covered for each unit.

Use of DATA DT units to structure the lessons.

