



# Brenzett CE Primary School



## Design Technology Medium Term Plans

We follow a two-year rotating cycle at Brenzett CE Primary School in our mixed-age classes.  
This allows for full National Curriculum coverage.

### Cycle One

|                      | EYFS                                                                                                                                                                                                                                                                                        | Years 1 and 2                                                                                                                                                                                                                                                              | Years 3 and 4                                                                                                                                                                                                                 | Years 5 and 6                                                                                                                                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Term 1</b>        | <b>Junk Modelling</b>                                                                                                                                                                                                                                                                       | <b>Constructing a Windmill</b>                                                                                                                                                                                                                                             | <b>Constructing a Castle</b>                                                                                                                                                                                                  | <b>Playground</b>                                                                                                                                                                                                                     |
| Aspect of DT         | <b>Structures</b>                                                                                                                                                                                                                                                                           | <b>Structures</b>                                                                                                                                                                                                                                                          | <b>Structures</b>                                                                                                                                                                                                             | <b>Structures</b>                                                                                                                                                                                                                     |
| What will I do?      | Exploring materials through junk modelling, children develop their scissor skills and awareness of different materials and joining techniques. Children begin to make verbal plans and material choices before starting and problem solve while making their model.                         | Construct a windmill to complete a request from a user. Develop an understanding of different types of windmill, how they work and their key features. Begin to use technical skills such as making evenly spaced cuts and adding weight to ensure a successful structure. | Learning about the features of a castle, pupils design and make one of their own. They will also be using configurations of handmade nets and recycled materials to make towers and turrets before constructing a stable base | Design and create a model for a new playground featuring five apparatus, made from three different structures. Using a footprint as the base, practise visualising objects in plain view and get creative including natural features. |
| Substantive Concepts |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |
| Significant People   |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |
| Linked Text          |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |
| <b>Term 3</b>        | <b>Bookmarks</b>                                                                                                                                                                                                                                                                            | <b>Making a moving storybook</b>                                                                                                                                                                                                                                           | <b>Wearable Technology</b>                                                                                                                                                                                                    | <b>Making a Pop-Up Book</b>                                                                                                                                                                                                           |
| Aspect of DT         | <b>Textiles</b>                                                                                                                                                                                                                                                                             | <b>Mechanisms</b>                                                                                                                                                                                                                                                          | <b>Digital World</b>                                                                                                                                                                                                          | <b>Mechanical Systems</b>                                                                                                                                                                                                             |
| What will I do?      | Developing fine motor skills through a range of threading activities before moving on to use binka and a needle. Children design a bookmark, considering what to include and why and then follow their designs to complete their bookmarks.                                                 | Experiment with sliders before planning and making three pages of a moving story book, based on a familiar story, drawing the page backgrounds, creating the moving parts and assembling it.                                                                               | Design, code and promote a piece of wearable technology to use in low light conditions, developing their understanding of programming to monitor and control products to solve a design scenario.                             | Create a four-page pop-up story book design, incorporating a range of functional mechanisms that use levers, sliders, layers and spacers to give the illusion of movement through interaction.                                        |
| Substantive Concepts |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |
| Significant People   |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |
| Linked Text          |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |
| <b>Term 5</b>        | <b>Soup</b>                                                                                                                                                                                                                                                                                 | <b>Smoothies</b>                                                                                                                                                                                                                                                           | <b>Eating Seasonally</b>                                                                                                                                                                                                      | <b>Developing a Recipe</b>                                                                                                                                                                                                            |
| Aspect of DT         | <b>Cooking and Nutrition</b>                                                                                                                                                                                                                                                                | <b>Cooking and Nutrition</b>                                                                                                                                                                                                                                               | <b>Cooking and Nutrition</b>                                                                                                                                                                                                  | <b>Cooking and Nutrition</b>                                                                                                                                                                                                          |
| What will I do?      | Learning about vegetables and where they come from while preparing to make a soup. Children describe the taste of a range of vegetables and design a soup recipe as a class. They practise cutting skills and prepare the vegetables for their class soup before testing the final product. | Handle and explore fruits and vegetables and learn how to identify fruit, before undertaking taste testing to establish chosen ingredients for a smoothie they will make, with accompanying packaging                                                                      | Pupils discover when and where fruits and vegetables are grown and learn about seasonality in the UK. They respond to a design brief to design a seasonal food tart using ingredients harvested in the UK in May and June.    | Research and modify a traditional Bolognese sauce recipe to improve the nutritional value. Cook improved version and create packaging that fits design criteria. Learn about where beef comes from.                                   |
| Substantive Concepts |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |
| Significant People   |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |
| Linked Texts         |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |

**Cycle Two**

|                             | <b>EYFS</b>                                                                                                                                                                                                                                                                                 | <b>Years 1 and 2</b>                                                                                                                                                                                                                   | <b>Years 3 and 4</b>                                                                                                                                                                                             | <b>Years 5 and 6</b>                                                                                                                                                                                                                                                                                              |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Term 1</b>               | <b>Junk Modelling</b>                                                                                                                                                                                                                                                                       | <b>Baby Bear's Chair</b>                                                                                                                                                                                                               | <b>Torches</b>                                                                                                                                                                                                   | <b>Doodlers</b>                                                                                                                                                                                                                                                                                                   |
| <b>Aspect of DT</b>         | <b>Structures</b>                                                                                                                                                                                                                                                                           | <b>Structures</b>                                                                                                                                                                                                                      | <b>Electrical Systems</b>                                                                                                                                                                                        | <b>Electrical Systems</b>                                                                                                                                                                                                                                                                                         |
| <b>What will I do?</b>      | Exploring materials through junk modelling, children develop their scissor skills and awareness of different materials and joining techniques. Children begin to make verbal plans and material choices before starting and problem solve while making their model.                         | Using the tale of Goldilocks and the Three Bears as inspiration, pupils help Baby Bear by making him a brand-new chair, exploring different shapes and materials. When designing the chair, they consider his needs and what he likes. | Pupils apply their scientific understanding of electrical circuits to create a torch made from recycled and reclaimed materials and objects. They design and evaluate their product against set design criteria. | Explore series circuits further and introduce motors. Explore how the design cycle can be approached at a different starting point, by investigating an existing product, which uses a motor, to encourage pupils to problem-solve and work out how the product has been constructed, ready to develop their own. |
| <b>Substantive Concepts</b> |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |
| <b>Significant People</b>   |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |
| <b>Linked Text</b>          |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |
| <b>Term 3</b>               | <b>Soup</b>                                                                                                                                                                                                                                                                                 | <b>Fairground Wheel</b>                                                                                                                                                                                                                | <b>Making a slingshot car</b>                                                                                                                                                                                    | <b>Digital World</b>                                                                                                                                                                                                                                                                                              |
| <b>Aspect of DT</b>         | <b>Cooking and Nutrition</b>                                                                                                                                                                                                                                                                | <b>Mechanisms</b>                                                                                                                                                                                                                      | <b>Mechanical Systems</b>                                                                                                                                                                                        | <b>Navigating The World</b>                                                                                                                                                                                                                                                                                       |
| <b>What will I do?</b>      | Learning about vegetables and where they come from while preparing to make a soup. Children describe the taste of a range of vegetables and design a soup recipe as a class. They practise cutting skills and prepare the vegetables for their class soup before testing the final product. | Design and create a functional Ferris wheel, consider how the different components fit together so that the wheels rotate, and the structure stands freely. Select appropriate materials and develop their cutting and joining skills. | Transform lollipop sticks, wheels, dowel and straws into a moving car. Pupils use a glue gun to construct, make the launch mechanism, design and create the chassis of a vehicle using nets.                     | Program a navigation tool to produce a multifunctional device for trekkers. Combine 3D virtual objects to form a complete product concept in 3D computer-aided design modelling software.                                                                                                                         |
| <b>Substantive Concepts</b> |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |
| <b>Significant People</b>   |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |
| <b>Linked Text</b>          |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |
| <b>Term 5</b>               | <b>Bookmarks</b>                                                                                                                                                                                                                                                                            | <b>Puppets</b>                                                                                                                                                                                                                         | <b>Cross-Stitch - Cushions</b>                                                                                                                                                                                   | <b>Waistcoats</b>                                                                                                                                                                                                                                                                                                 |
| <b>Aspect of DT</b>         | <b>Textiles</b>                                                                                                                                                                                                                                                                             | <b>Textiles</b>                                                                                                                                                                                                                        | <b>Textiles</b>                                                                                                                                                                                                  | <b>Textiles</b>                                                                                                                                                                                                                                                                                                   |
| <b>What will I do?</b>      | Developing fine motor skills through a range of threading activities before moving on to use binka and a needle. Children design a bookmark, considering what to include and why and then follow their designs to complete their bookmarks.                                                 | Explore different ways of joining fabrics before creating hand puppets based upon characters from a well-known fairytale. Develop technical skills of cutting, glueing, stapling and pinning.                                          | Introduce two new skills to add to the pupils' repertoire: cross stitch and appliqué. Pupils apply their knowledge to the design, decoration and assembly of their own cushions.                                 | Select fabrics, use templates, pin, decorate and stitch materials together to create a waistcoat for a person or purpose of their choosing. Create or use a pattern template to fit a desired person or item (e.g. teddy bear).                                                                                   |
| <b>Substantive Concepts</b> |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |
| <b>Significant People</b>   |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |
| <b>Linked Texts</b>         |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                   |