Brenzett CE Primary School

Design and Technology Long Term Plans

Cycle 1			
	Term 1	Term 3	Term 5
Acorn Class NB: Design Technology knowledge and skills will be used and applied in all terms	**Structures:** **Junk Modelling** 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.	**Textiles:** **Bookmarks** 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.	**Cooking and Nutrition:** **Soup** 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.
Cherry Class	**Structures:** **Constructing a Windmill** 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.	**Mechanisms:** **Making a moving story book** 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	**Cooking and Nutrition:** **Smoothies** 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.
Willow Class	**Structures:** **Constructing a Castle** 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.	**Digital World:** **Wearable Technology** 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.	**Cooking and Nutrition:** **Eating Seasonally** 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.
Oak Class	**Structures:** **Playground** 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.	**Mechanical Systems:** **Making a Pop Up Book** 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.	**Cooking and Nutrition:** **Developing a Recipe** 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.

Cycle 2			
	Term 1	Term 3	Term 5
Acorn Class	**Structures:** **Junk Modelling** 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.	**Cooking and Nutrition:** **Soup** 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.	**Textiles:** **Bookmarks** 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.
Cherry Class	**Structures:** **Baby bear's chair** 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.	**Mechanisms:** **Fairground wheel** 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.	**Textiles:** **Puppets** 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.
Willow Class	**Electrical Systems:** **Torches** 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.	**Mechanical Systems:** **Making a slingshot car** 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.	**Textiles:** **Cross Stitch – Cushions** 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.
Oak Class	**Electrical Systems:** **Doodlers** 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.	**Digital World:** **Navigating The World** 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.	**Textiles:** **Waistcoats** 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).