DESIGN & TECHNOLOGY - KEY OBJECTIVES

Foundation Stage

Designing and Making - Recycled sculptures, Places of worship, Fairies, Rockets

- I can use a range of materials and techniques to build and join my designs and ideas.
- I can talk about how I made my designs, what went well and what I might change.

Designing and Making – Mini-beast Gardens

- I can say what other creatures would need to survive.
- I can plan and make a suitable place for a mini-beast to live in.

Food Technology – Little Red Hen's bread, Handa's fruit basket, The Three Bear's Porridge, Grandma Lena's Turnip Soup

- I can stay safe when preparing food.
- I can begin to understand the need to follow a recipe when cooking.
- I can talk about what we made.
- I can begin to explain how to make healthy choices when eating.

Year 1

Frame structures - Chair

- I can analyse and explain how to stabilise a freestanding structure.
- I can test the different properties of materials and implement them accordingly to create a free-standing structure (chair).

Couscous

- I can stay safe when preparing food.
- I can explain why we need to make healthy choices when eating.

Slider Mechanisms

- I can use materials to plan and create a moving mechanism.
- I can evaluate my products and ideas against their simple design criteria (explain positives and improvements

Year 2

Solid structures

- I can explain what makes one solid structure stronger than another.
- I can add supports to my design to increase its strength.

Portable snacks

- I can design and evaluate my food product using sensory terms such as chewy, sweet, salty, spicy, dry, and crunchy.
- I can plan and prepare ingredients and combine them to produce a product that matches my design.

Lever mechanism

- I can describe the main features of a lever mechanism using technical vocabulary.
- I can refine my own lever mechanism to make it more efficient.

Year 3

Shell structures

- I can identify natural and manufactured shell structures.
- I can demonstrate an understanding that materials have both functional properties and aesthetic qualities and use this knowledge to inform my design.

Fruit salad

- I can recognise that fruits have a range of textures to help me decide which to include in my recipe.
- I can use a range of cutting and knife techniques to prepare my ingredients.

Linked levers

- I can use annotated diagrams to explain how linked levers are made and attached.
- I can choose materials to use based on their functional properties and aesthetic qualities.

Year 4

Frame structures

- I can make frame structures more rigid by using joining plates or Jinks corners.
- I can rethink techniques as my design progresses to make it better fit the design brief.

Dips

- I can apply my knowledge of ingredients and techniques to identify those that would be most suitable.
- I can evaluate my finished product using feedback from my intended users and suggest improvements.

Paper circuits

- I can make a simple switch and explain how it works.
- I can use my understanding of circuits and their components to make a light up picture.

Year 5

Frame structures

- I can use a range of techniques for joining materials to create strong 3-d shapes.
- I can research and develop design criteria for an innovative product with a stated purpose.
- I can evaluate my product against my design criteria.

Cooking – Vegetable soup

- I can plan, prepare and cook a savoury dish safely and hygienically.
- I can evaluate my dish for taste, appearance, texture and aroma.
- I can explain seasonality, and how this may affect food availability and price, and plan accordingly.

Pneumatics

- I can identify some items that use pneumatics.
- I can explain in simple terms the components of pneumatic machines and how these operate.
- I can design, make and evaluate a simple pneumatic lifting device.

Year 6

Electronic motors

- I can explain in simple terms the components of electronic motors and how these operate.
- I can label and annotate the design features of a motorised vehicle.
- I can evaluate and rethink my design decisions by applying my technical and practical knowledge of motors, electrical circuits, pulleys, wheels and axles.

Fairtrade packaging

- I can use my research to inform and develop an appealing product fit for purpose.
- I can integrate aesthetic considerations into my product to ensure that it is appealing to a consumer.
- I can explain, in simple terms, how fair-trade products benefit the consumer and the producer.

Pulley, and gears

- I can use my research to inform and develop an appealing product fit for purpose.
- I can disassemble a product to explore the mechanics of pulleys, gears and cams.
- I can teste and implement pulleys and belts to create my own structure with moving parts.