Milestones

Design Technology (DT)

Cycle A

It is our aim that children in Year 1 will be achieving at the Basic level as they begin their journey of experiencing these areas of the Design Technology curriculum. Year 2 children will achieve the 'Basic' or 'Expected' levels and Year 3 children will be achieving at the 'Expected' and 'Deep' levels.

Mechanisms (Sliders & Levers)	**Basic:**	**Expected:**	**Deep:**
Prior Learning/ Experiences			
Early experiences of working with paper and card to make simple flaps and hinges.			
Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.			
Designing			
Generate ideas based on simple design criteria and their own experiences, explaining what they could make.			
Develop, model and communicate their ideas through drawings and mock-ups with card and paper.			
Making			
Plan by suggesting what to do next.			
Select and use tools, explaining their choices, to cut, shape and join paper and card.			
Use simple finishing techniques suitable for the product they are creating.			
Evaluating			
Explore a range of existing books and everyday products that use simple sliders and levers.			
Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria.			
Technical knowledge and understanding			
Explore and use sliders and levers.			
Understand that different mechanisms produce different types of movement.			
Know and use technical vocabulary relevant to the project.			
Electrical Systems (Simple Circuits & Switches)	**Basic:**	**Expected:**	**Deep;**
Prior Learning/ Experiences			
Constructed a simple series electrical circuit in science, using bulbs, switches and buzzers.			
Cut and joined a variety of construction materials, such as wood, card, plastic, reclaimed materials and glue.			

Designing			
Gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups.			
Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams.			
Making			
Order the main stages of making.			
Select from and use tools and equipment to cut, shape, join and finish with some accuracy.			
Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities.			
Evaluating			
Investigate and analyse a range of existing battery-powered products.			
Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.			
Technical knowledge and understanding			
Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.			
Apply their understanding of computing to program and control their products.			
Know and use technical vocabulary relevant to the project.			
Structures (Free Standing)	**Basic:**	**Expected:**	**Deep:**
Prior Learning/ Experiences			
Experience of using construction kits to build walls, towers and frameworks.			
Experience of using of basic tools e.g. scissors or hole punches with construction materials e.g. plastic, card.			
Experience of different methods of joining card and paper.			
Designing			
Generate ideas based on simple design criteria and their own experiences, explaining what they could make.			
Develop, model and communicate their ideas through talking, mock-ups and drawings.			
Making			
Plan by suggesting what to do next.			
Select and use tools, skills and techniques, explaining their choices.			

Select new and reclaimed materials and construction kits to build their structures.			
Use simple finishing techniques suitable for the structure they are creating.			
Evaluating			
Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings.			
Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria.			
Technical knowledge and understanding			
Know how to make freestanding structures stronger, stiffer and more stable.			
Know and use technical vocabulary relevant to the project.			