Design and Technology Programmes of Study

When designing and making children should be taught to…

To master practical skills.

- **Food**
  Cut, peel or grate ingredients safely and hygienically.
  Measure or weigh using measuring cups or electronic scales,
  Assemble or cook ingredients.
- **Materials:**
  Cut materials safely using tools provided.
  Measure and mark out to the nearest centimetre.
  Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).
  Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).
- **Textiles:**
  Shape textiles using templates.
  Join textiles using running stitch.
  Colour and decorate textiles using a number of techniques (such as gluing, hinges or combining materials to strengthen).
- **Electricals and Electronics:**
  Diagnose faults in battery operated devices (such as low battery, water damage of battery terminal damage).
- **Computing:**
  Model designs using software.
- **Construction:**
  Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.
- **Mechanics:**
  Create products using levers, wheels and winding mechanisms.

To design, make, evaluate and improve.

- Design products that have a clear purpose for an intended user.
- Make products, refining the design as the work progresses.
- Use software to design.

To take inspirations from design throughout history.

- Explore objects and designers to identify likes and dislikes of the designs.
- Suggest improvements to existing designs.
- Explore how products have been created.

Essential Characteristics of Designers

- Significant levels of originality and willingness to take creative risks to produce innovative ideas and prototypes.
- An excellent attitude to learning and independent working.
- The ability to use time efficiently and work constructively and productively with others.
- The ability to carry out thorough research, show initiative and ask questions to develop an exceptionally detailed knowledge of users' needs.
- The ability to act as responsible designers and makers, working ethically, using finite materials carefully and working safely.
- A thorough knowledge of which tools, equipment and materials to use to make their projects.
- The ability to apply mathematical knowledge.
- The ability to manage risks exceptionally well to manufacture products safely and hygienically.
- A passion for the subject and knowledge of up-to-date technological innovations in materials, products and systems.