United Learning

Primary DT Curriculum

Key Principles

The DT curriculum at United Learning provides children with a:

- **Relevant, coherent, progressive** knowledge of the design process and an appreciation of the work of a range of craftspeople:
  - **Investigate , disassemble and evaluate**
    - *How have materials and components been used?*
    - *How has the product been made?*
    - *Why has it been made this way?*
    - *What are the different parts of a product called and what does each do?*
    - *How does the way a product works relate to its intended purpose?*
  - **Focused practical task**
    - *How can materials, structures and techniques be tested?*
    - *How can materials and structures be joined?*
    - *Where might materials and structures fail?*
  - **Design and make, evaluate**
    - *How will ideas be explored, developed, communicated and modelled in a variety of ways?*
    - *How will a product be made; what materials, equipment and processes will be used?*
    - *What alternatives are there, if initial attempts fail?*
    - *How well did the product work? What were the strengths and areas for development?*
    - *How well did the final product relate to its intended purpose?*

- **Grounding in core disciplinary knowledge,** and the ability to approach challenging, design questions
  - Marking out and cutting skills
  - Fixing and joining skills
  - Mechanical and control skills
  - Finishing skills, including food hygiene
  - Related language skills

3. Overview: Whole School

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	**Cooking & nutrition** • Designing and making with food • Understanding Health and nutrition • Combining tastes and textures to make a product • Using basic cutting tools *Fruit kebabs*	**Textiles: Marking out and joining fabric** • Making a textile product by marking out, cutting and joining fabric *Finger puppets (animals)*	**Free Standing Structures** • Understanding ways in which structures can be made stable • Understand how to stiffen materials *Photo frame (as a present)*	**Mechanisms: Linkages** • Understand how a range of linkage type mechanisms work • Assemble a range of mechanisms including pop ups, spinners, sliders, levers and tabs • Apply to the design of a pop up book *Pop Up Book with moving parts (Guide To The Rainforest)*	**Structures: Musical instruments** • Investigate instruments from different times and cultures • Understand how shape and materials used can alter sound • Investigate a range of finishing techniques *Rainmaker*	**Structures** • Understand why structures sometimes fail • Investigate and use techniques to reinforce and strengthen structures • Design and make a structure for a specific tasks *Design and build an aqueduct*
Spring	**Static Structures** • Creating models from sheet and reclaimed materials • Understand about basic structures and how they can be made stronger/more stable • Use range of fixing techniques *Castles*	**Mechanisms: Wheels, axels, pulleys and levers** • Joining materials with moving joints • Understand how wheels and axels work • Understand winding mechanisms *Moving vehicle (fire engine)*	**Mechanisms and control: Pneumatics** • Consider different types of pneumatic structures • Know about the movement of simple mechanisms , such as levers and linkages *Moving Monster*	**Textiles: Reinforcing fabric** • Investigate ways of reinforcing fabric, e.g. over stitching, running stitch • Create and use a pattern • Develop decorative techniques and fastenings e.g. applique *Purse for the Rio carnival*	**Mechanisms: Moving toys using cams, wheels and axels** • Understand how mechanisms can be used to produce movement • Cut, shape and join components, selecting tools for a specific purpose *Roman siege machines*	**Mechanisms: electrical and computer control** • Understand how products can be driven by electricity • Use motors to control speed and direction of movement • Develop structures with cladding and finishing techniques
Summer	**Mechanisms: Pushes, pulls and levers** • Understand simple mechanisms that create movement e.g. simple levers and sliders *A book with moving parts (transport)*	**Textiles: Using a paper pattern, joining fabric** • Use a graphics programme to design a space suit • Use a simple paper pattern to draw around and cut out fabric • Use simple joining techniques *Space suit for an Astronaut*	**Cooking & nutrition** • Food preparation techniques • Combining appearance, flavour and texture • Understand the balanced plate model for healthy eating *A Greek Salad*	**Electrical Control** • Draw on understanding of simple electrical circuits and switches • Join components, cut and shape material with precision *An alarm system for a precious artefact*	**Cooking and Nutrition** • Understand the function and properties of materials • Identify, select and use food tools and techniques safely • Understand food hygiene *Making bread*	**Textiles** • Design for a range of needs – appearance, safety, size, warmth • Use patterns, templates and detailed working drawings • Develop finishing techniques *T Shirts*