DT Key Concepts Progression

| **Mechanisms** | | | | |
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|  | EYFS | KS1 | LKS2 | UKS2 |
| Systems | Explore systems in toys e.g. pop up books within continuous provision. | Explore existing mechanisms (wheels and axles, slider and levers). | Explore levers and linkages.  Use scientific knowledge of transference of force to choose appropriate mechanisms. | Explore pulleys and gears. |
| Motion | Manipulate items (pushing toys forwards and backwards) within continuous provision. | Create a product that moves forwards and backwards. | Create a product that moves up, down or left and right. | Create a product driven by an electrical system. |
| Joining | Explore a variety of joining techniques to understand cause and effect (glue, tape, hole puncher, stapler, treasury tags, split pins) within continuous provision. | Fix wheels securely to an axle using a fixed joint.  Use materials to practise glueing and sawing. | Use split pins to support making a pivot joint. | Use a mixture of joints (paper fasteners, elastic bands, glue). |

| **Textiles** | | | | |
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|  | EYFS | KS1 | LKS2 | UKS2 |
| Joining | Safely use and explore a variety of tools and techniques. Exploring a variety of joining techniques to understand cause and effect (glue, tape, hole puncher, stapler, treasury tags, split pins) within continuous provision. | Join using a running stitch. | Join with appropriate stitching. | Join textiles with a variety of stitches and select appropriate technique to join. (back stitch for seams and running stitch for decorations). |
| Embellishment | Explore a variety of effects to express their ideas using materials for decorative purposes (sequins, buttons, junk modelling, loose parts) within continuous provision. | Colour and decorate a product (adding sequins, dying, printing).  Shape textiles using templates. | Select and use a variety of embellishment techniques (sew buttons on, adding velcro). | Select and use a variety of embellishment techniques focussing on the quality of materials (EG. such as soft decoration for comfort on a cushion). |
| Finishing |  |  | Understand and use a seam allowance. | Join textiles with a range of finishing techniques (back stitch for seams, running stitch for embellishment). |
| Aesthetics |  |  |  | Consider the qualities of materials to create suitable visual and tactile effects. |

| **Food** | | | | |
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|  | EYFS | KS1 | LKS2 | UKS2 |
| Nutrition | Understand the need for healthy choices. | Understand a healthy and varied diet. Looking at the Eat well plate. | Apply the principles of a healthy and varied diet. | Apply and promote the principles of a healthy and varied diet. |
| Food Safety | Manage your own basic hygiene and personal needs. | Use utensils and equipment safely and hygienically. | Prepare food hygienically, keeping surfaces, utensils and hands clean. | Store and handle ingredients safely. |
| Production | Plant seeds and care for growing plants.  Understand where some foods come from. | Understand where food comes from. | Discuss how a variety of ingredients are reared, caught and grown. | Understand local produce and know how a variety of ingredients are reared, caught and grown. |
| Seasonality |  |  | Understand what seasonality means. | Understand the seasonality of food and the implications this can have. |
| Skill | Use one-handed tools and equipment. | Measure or weigh using measuring cups or scales. | Follow a recipe.  Control a hob or oven for cooking.  Measure ingredients to the nearest gram accurately. | Create and refine their own recipe.  Measure accurate ratios of ingredients.  Demonstrate a range of cooking skills and techniques. |

| **Electrical Systems** | | | | |
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|  | EYFS | KS1 | LKS2 | UKS2 |
| Circuitry |  |  | Create simple closed and parallel circuits. | Create circuits using a range of components (EG. buzzers, motors, LEDs, resistors). |
| Testing |  |  | Diagnose a fault in a battery operated device.  Diagnose a fault within a circuit. | Diagnose a fault within a circuit and explain why the circuit cannot operate. |
| Repair |  |  | Repair a fault in a circuit with adult assistance. | Independently repair a fault within an electrical system. |

| **Structures** | | | | |
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|  | EYFS | KS1 | LKS2 | UKS2 |
| Construction | Construct for a purpose within continuous provision. | Name and use a range of materials to construct.  Measure and mark to the nearest cm. | Choose suitable materials, techniques and components to construct with and repair items. | Use a wide range of tools and materials to construct a frame structure. |
| Strengthening |  | Select and use techniques to strengthen a product. | Strengthen using a variety of techniques (laminating, corrugating and ribbing). | Strengthen using a variety of techniques (choosing the correct materials to support their frame structure). |
| Joining | Safely use and explore a variety of tools and techniques. Exploring a variety of joining techniques to understand cause and effect (glue, tape, hole puncher, stapler, treasury tags, split pins)within continuous provision. | Demonstrate  A range of joining techniques (such as glueing, using hinges, or combining materials to strengthen)  Use tools safely to join materials together. | Use nets correctly to join and construct a shape.  Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). | Select appropriate joining techniques to secure their structure together. |
| Repair | Return to and build on their previous learning and refining their ideas within continuous provision. |  | Identify and repair a fault with adult assistance. | Use a range of practical skills to repair items (cutting, glueing, nailing and sanding etc).  Independently repair a fault on a frame structure. |
| Finishing |  |  |  | Cut materials with precision and refine the finish with appropriate tools (sanding and filing).  Consider the qualities of materials to create suitable visual and tactile effects. |