



## Seaton St Paul's C of E Junior School

### Design and Technology Skills Progression Document

Aspect of DT	Year 3	Year 4	Year 5	Year 6
<b>Everyday products</b>	Explain how an existing product benefits the user. (Making it Move)	Investigate and identify the design features of a familiar product. (Drain Your Drinks)	Explain how the design of a product has been influenced by the culture or society in which it was designed or made. (Architecture)	Analyse how an invention or product has significantly changed or improved people's lives. (Make Do and Mend)
<b>Staying safe</b>	Use appliances safely with adult supervision. (A Healthy Lunch)	Work safely with everyday chemical products under supervision, such as disinfectant hand wash and surface cleaning spray. (Drain Your Drinks)	Explain the functionality and purpose of safety features on a range of products. (Moving Mechanisms)	Demonstrate how their products consider the safety of the user. (Electrical circuits - Science)
<b>Mechanisms and movement</b>	Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products. (Making it Move)	Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products with electrical circuits. (Tomb Builders)	Use mechanical systems in their products, such as pneumatics. (Moving Mechanisms)	Explain and use mechanical systems in their products to meet a design brief. (Engineer)
<b>Electricity</b>	Incorporate a simple series circuit into a model. (Light and Shadows – Science)	Incorporate circuits that use a variety of components into models or products. (Electrical Circuits - Science)	Use electrical circuits of increasing complexity in their models or products, showing an understanding of control. (Moving Mechanisms)	Understand and use electrical circuits that incorporate a variety of components (switches, lamps, buzzers and motors) and use programming to control their product. (Electrical Circuits – Science)

<b>Generation of ideas</b>	Develop design criteria to inform a design. (Making it Move)	Use annotated sketches and exploded diagrams to test and communicate their ideas. (Tomb Builders)	Use pattern pieces and computer-aided design packages to design a product. (Architecture)	Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways. (Engineer)
<b>Structures</b>	Create shell or frame structures using diagonal struts to strengthen them. (Greenhouse)	Prototype shell and frame structures, showing awareness of how to strengthen, stiffen and reinforce them. (Tomb Builders)	Build a framework using a range of materials to support mechanisms. (Architecture)	Describe using scientific language, phenomena associated with refraction of light. (Engineer)
<b>Use of ICT</b>	Write a program to make something move on a tablet or computer screen. (Light and Shadow - Science)	Write a program to control a physical device, such as a light, speaker or buzzer. (Electrical Circuits – Science)	Link a physical device to a computer or tablet so that it can be controlled (such as changing motor speed or turning an LED on and off) by a program. (Moving Mechanisms)	Use a sensor to monitor an environmental variable, such as temperature, sound or light. (Electrical Circuits – Science)
<b>Investigation</b>	Use tools safely for cutting and joining materials and components. (Making it Move)	Select, name and use tools with adult supervision. (Functional and Fancy Fabrics)	Name and select increasingly appropriate tools for a task and use them safely. (Moving Mechanisms)	Select appropriate tools for a task and use them safely and precisely. (Make Do and Mend)
<b>Evaluation</b>	Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account. (Making it Move)	Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements. (Tomb Builders)	Test and evaluate products against a detailed design specification and make adaptations as they develop the product. (Moving Mechanisms)	Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others. (Engineer)
<b>Cutting and joining textiles</b>	Cut and join wools, threads and other materials to a loom. (Skeletal and Muscular Systems - Science)	Hand sew a hem or seam using a running stitch. (Functional and Fancy Fabrics)	Combine stitches and fabrics with imagination to create a mixed media collage. (Painting & Collage: Fashion Design – Art)	Pin and tack fabrics in preparation for sewing and more complex pattern work. (Make Do and Mend)

<b>Decorating and embellishing textiles</b>	Use a variety of materials to decorate a product. (Making it Move)	Create detailed decorative patterns on fabric using printing techniques. (Functional and Fancy Fabrics)	Use applique to add decoration to a product or artwork. (Moving Mechanisms)	Use different methods of fastening for function and decoration, including press studs, Velcro and buttons. (Make Do and Mend)
<b>Materials for purpose</b>	Plan which materials will be needed for a task and explain why. (Making it Move)	Choose from a range of materials, showing an understanding of their different characteristics. (Functional and Fancy Fabrics)	Select and combine materials with precision. (Snack Attack)	Choose the best materials for a task, showing an understanding of their working characteristics. (Engineer)
<b>Nutrition</b>	Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars). (A Healthy Lunch)	Design a healthy snack or packed lunch and explain why it is healthy. (Drain Your Drinks)	Evaluate meals and consider if they contribute towards a balanced diet. (Snack Attack)	Investigate whether takeaway food or fast food can be healthy. (Eatwell)
<b>Food preparation and cooking</b>	Prepare and cook a simple savoury dish. (A Healthy Lunch)	Identify and use a range of cooking techniques to prepare a simple meal or snack. (Drain Your Drinks)	Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish. (Snack Attack)	Follow a recipe that requires a variety of techniques and source the necessary ingredients independently. (Eatwell)
<b>Origins of food</b>	Identify and name foods that are produced in different places. (A Healthy Lunch)	Describe what seasonality means and explain some of the reasons why it is beneficial. (Drain Your Drinks)	Identify and name foods that are produced in different places in the UK and beyond. (Sow, Grow and Farm – Geography)	Research the origins of popular takeaway dishes. (Eatwell)
<b>Compare and contrast</b>	Explain the similarities and difference between the work of two designers. (Greenhouse)	Create and complete a comparison table to compare two or more products. (Functional and Fancy Fabrics)	Survey users in a range of focus groups and compare results. (Moving Mechanisms)	Create a detailed comparative report about two or more products or inventions. (Eatwell)
<b>Significant people</b>	Describe how key events in design and technology have shaped the world. (Making it Move)	Explain how and why a significant designer or inventor shaped the world. (Functional and Fancy Fabrics)	Describe the social influence of a significant designer or inventor. (Architecture)	Present a detailed account of the significance of a favourite designer or inventor. (Engineer)

