Hollywell's DT Curriculum Roadmap

Humankind

Everyday products → **Staying Safe**

YR	Y1	Y2	Y3	Y4	Y5	Y6
Name and explore a range of everyday products and begin to talk about how each is used. Follow rules and instructions to keep safe	Name and explore a range of everyday products and describe how they are used. Follow the rules to keep safe during a practical task.	Explain how an everyday product could be improved. Work safely and hygienically in construction and cooking activities.	Explain how an existing product benefits the user. Use appliances safely with adult supervision.	Investigate and identify the design features of a familiar product. Work safely with everyday chemical products under supervision, such as disinfectant hand wash and surface cleaning spray.	Explain how the design of a product has been influenced by the culture or society in which it was designed or made. Explain the functionality and purpose of safety features on a range of products.	Analyse how an invention or product has significantly changed or improved people's lives. Demonstrate how their products take into account the safety of the user.

Processes

Mechanisms → **Electricity**

YR	Y1	Y2	Y3	Y4	Y5	Y6
Explore, build and play with a range of resources and construction kits with wheels and axles.	Use wheels and axles to make a simple moving model.	Use a range of mechanisms (levers, sliders, wheels and axles) in models or products.	Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products.	Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products. Incorporate circuits that use a variety of components into models or products.	Use mechanical systems in their products, such as pneumatics.	Explain and use mechanical systems in their products to meet a design brief. Understand and use electrical circuits that incorporate a variety of components (switches, lamps, buzzers and motors) and use programming to control their products.

Creativity

Generation of ideas → **Structures** → **Use of ICT**

YR	Y1	Y2	Y3	Y4	Y5	Y6
Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences. Construct simple structures and models using a range of materials.	Create a design to meet simple design criteria. Construct simple structures, models or other products using a range of materials.	Generate and communicate their ideas through a range of different methods. Explore how a structure can be made stronger, stiffer and more stable.	Develop design criteria to inform a design. Create shell or frame structures using diagonal struts to strengthen them. Write a program to make something move on a tablet or computer screen.	Use annotated sketches and exploded diagrams to test and communicate their ideas. Prototype shell and frame structures, showing awareness of how to strengthen, stiffen and reinforce them. Write a program to control a physical device, such as a light, speaker or buzzer.	Use pattern pieces and computer-aided design packages to design a product. Build a framework using a range of materials to support mechanisms.	Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways. Select the most appropriate materials and frameworks for different structures, explaining what makes them strong Use a sensor to monitor an environmental variable, such as temperature, sound or light.

Investigation

Investigation **Evaluation**

YR	Y1	Y2	Y3	Y4	Y5	Y6
Choose and explore appropriate tools for simple practical tasks Adapt and refine their work as they are constructing and making.	Select the appropriate tool for a simple practical task. Talk about their own and each other's work, identifying strengths or weaknesses and offering support.	Select the appropriate tool for a task and explain their choice. Explain how closely their finished products meet their design criteria and say what they could do better in the future.	Use tools safely for cutting and joining materials and components. Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.	Select, name and use tools with adult supervision. 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.	Name and select increasingly appropriate tools for a task and use them safely. Test and evaluate products against a detailed design specification and make adaptations as they develop the product.	Select appropriate tools for a task and use them safely and precisely. Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others

Materials

Cutting and joining textiles **Materials for purpose** **Decorating and embellishing textiles**

YR	Y1	Y2	Y3	Y4	Y5	Y6
	Cut and join textiles using glue and simple stitches. Use gluing, stapling or tying to decorate fabric, including buttons and sequins.	Use different methods of joining fabrics, including glue and running stitch. Add simple decorative embellishments, such as buttons, prints, sequins and appliqué.		Hand sew a hem or seam using a running stitch. Create detailed decorative patterns on fabric using printing techniques.	Combine stitches and fabrics with imagination to create a mixed media collage. Use applique to add decoration to a product or artwork.	Pin and tack fabrics in preparation for sewing and more complex pattern work. Use different methods of fastening for function and decoration, including press studs, Velcro and buttons.

Nature

Food preparation and cooking → **Nutrition** → **Origins of food**

YR	Y1	Y2	Y3	Y4	Y5	Y6
Follow instructions, including simple recipes, that include measures and ingredients. Suggest healthy ingredients that can be used to make simple snacks. Sort foods into groups by whether they are from an animal or plant source.	Measure and weigh food items using non-standard measures, such as spoons and cups. Select healthy ingredients for a fruit or vegetable salad.	Prepare ingredients by peeling, grating, chopping and slicing. Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal. Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables).	Prepare and cook a simple savoury dish. Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars). Identify and name foods that are produced in different places.	Identify and use a range of cooking techniques to prepare a simple meal or snack. Design a healthy snack or packed lunch and explain why it is healthy. Identify and name foods that are produced in different places in the UK and beyond.	Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish. Evaluate meals and consider if they contribute towards a balanced diet. Describe what seasonality means and explain some of the reasons why it is beneficial.	Follow a recipe that requires a variety of techniques and source the necessary ingredients independently. Plan a healthy daily diet, justifying why each meal contributes towards a balanced diet. Explain how organic produce is grown.

Comparison

Compare and Contrast

YR	Y1	Y2	Y3	Y4	Y5	Y6
Describe what, why and how something was made and compare with others.	Describe the similarities and differences between two products.	Compare different or the same products from the same or different brands.	Explain the similarities and difference between the work of two designers.	Create and complete a comparison table to compare two or more products.	Survey users in a range of focus groups and compare results.	Create a detailed comparative report about two or more products or inventions.

Significance

Significant people

YR	Y1	Y2	Y3	Y4	Y5	Y6
Explore significant products.	Describe why a product is important.	Explain why a designer or inventor is important.	Describe how key events in design and technology have shaped the world.	Explain how and why a significant designer or inventor shaped the world.	Describe the social influence of a significant designer or inventor.	Present a detailed account of the significance of a favourite designer or inventor.