NORTH CLIFTON PRIMARY SCHOOL

Design Technology – Learning Progression

Key Area	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Design	Know that ideas are the 1st step in the making process. Know that a product can be made from a plan.	Know that a plan/design draws together ideas to make a product Know that there are different ways of creating a design. Know how to develop design ideas by applying findings from earlier research.	Know that a plan/design can be created and adapted. Know that some ways of developing, modelling and communicating ideas are more appropriate than others in the design process. Know how to identify simple design criteria.	Know how to identify a purpose and establish criteria for a successful product. Know that research can inform plans/design criteria which can be altered and improved for a range of purposes. Know how to make drawings with labels when designing. Know about designers in the outside world.	Know how to develop a clear idea of what has to be done; considering purpose, devising criteria, planning how to use equipment, materials and processes and suggesting alternative ideas. Know that the outcome from a design will be affected by the designer's choice. Know how to make detailed drawings with labels when designing. Know about designers in the outside world.	Know how to generate ideas and identify a purpose. Know how to create a specification for design. Know how to plan for equipment, materials and processes, suggesting alternative ideas in first attempts fail. Know that design of a product can be revisited and re-shaped in stages and sections. Know how to make detailed labelled drawings from	Know how to develop a design specification. Know how to explore, develop and communicate aspects of design proposal by modelling ideas in a variety of ways. Know how to plan order of work by choosing appropriate materials, tools and techniques. Know that purpose and audience subsequently shapes the design of a product. Know how to communicate ideas

						different views showing different features. To know about designers in the industry and explain why they are successful.	through detailed labelled drawings. To know about designers in the industry and why they are successful.
Making	Know primarily through their own experiences that tools and materials can be safely used to make things.	Know that there is a range of different tools and materials which can be used to create a product.	Know that some tools and materials are more useful than others when creating a product.	Know that the characteristics of tools and materials informs their use in the making process. Know how to select suitable tools/equipment/materials and begin to use them accurately.	Know that the success of the making process is reliant on the accurate selection and use of appropriate tools and materials. Know how to select suitable tools/equipment/materials, explain choices and use accurately.	Know that a prototype is an experimental process and that preliminary versions can inform the final product. Know how to use selected tools/equipment/materials with good level of precision.	Know that a prototype can be refined, is a key part of the making process and can be tested out on a wide range of users so that the final product is fit for purpose. Know how to use selected tools/equipment/ materials precisely.
Evaluating	Know that an evaluation is a judgement.	Know that a simple evaluation can be used to improve a product.	Know that in order to evaluate ideas and products a set of design criteria is needed.	Know that the purpose of evaluation is for reflection and to help inform any changes required to make a product more effective. Know how to use design criteria to help with evaluation.	Know that your own evaluation and the views of others can lead to modifications to the criteria and the creation of a new and improved design. Know how to use design criteria to help with evaluation	Know that products have evolved over time as a result of constant evaluation and modification in line with the changing world. Know how to evaluate quality of design against specification considering purpose and appearance.	Know that evaluation of past and present DT leads to an understanding about its impact on modern day life. Know how to evaluate quality of design against specification stating if it is 'fit for purpose' and making judgements on appearance

Cooking and Nutrition	Know that there are healthy and unhealthy foods. Know that there are lots of different foods.	Know that food can contribute towards a healthy diet. To know about the basic principles of a healthy and varied diet to prepare dishes. Know that food comes from different sources. To know you follow a simple recipe to make food. To know some of the the name of utensils and equipment	Know that food choices have an impact on health. To know about the basic principles of a healthy and varied diet to prepare dishes. To know that some food sources are more readily available in different countries and different climates. To know you follow a simple recipe to make food. To know the name of utensils and equipment needed for food. To know how to use utensils and equipment correctly. To know the principles of a healthy and	Know how food is grown, reared, and caught in the UK and Europe. Know that food can be classified into groups and that each group can contribute towards a balanced diet. Know how to explore and evaluate different global foods Know that food has a limited lifespan without intervention and that there are methods which can prolong and preserve food. To know how to read a scale and understand units of measure. To know how to follow a recipe. To know the name of utensils and equipment needed for food. To know how to use utensils and equipment correctly.	Know how food is grown, reared, and caught in the UK and Europe. Know that your own food choices have a direct impact on your own health. Know how to explore and evaluate different global foods Know that there are a range of techniques that can be used in preparing and cooking different types of food. To know how to read a scale and understand units of measure. To know how to follow and begin to create a recipe. To know the name of utensils and equipment needed for food and how to use them correctly. To know how to control an oven or hob for cooking. To know how to prepare and cook a	Know how food is grown, reared, and caught and processed in the UK, Europe, and wider world. Know that it can be a challenge to apply knowledge of a healthy diet where for a number of factors, food or a range of food is limited. Know how to explore and evaluate different global foods Know that there are different processes that food goes through to get to the final product and that there are complexities which impact on the distribution of this food. To know, understand and apply the principles of a healthy and varied diet.	Know how food is grown, reared, and caught and processed in the UK, Europe, and wider world. Know that globally health can be adversely impacted when food choices are limited due to environmental and social circumstances beyond an individual's control. Know how to explore and evaluate different global foods Know that not all countries have the necessary infrastructure to support food processes and distribution and that this impacts on the ability to make food choices. To know, understand and apply the principles

		needed for food. To know the principles of a healthy and varied diet. (Eat well plate). To know where some food comes from.	varied diet. (Eat well plate). To know where food comes from. To use the basic principles of a healthy and varied diet to prepare dishes.	To know how to control an oven or hob for cooking To know how to prepare and cook a variety of predominately savoury dishes using a range of cooking techniques. To know what hygiene means and how to keep surfaces, utensils, and hands clean. To Know that there are a range of techniques that can be used in preparing and cooking different types of food To know how to use some techniques such as peeling, chopping, slicing, grating, mixing kneading and baking.	variety of predominately savoury dishes using a range of cooking techniques. To know what hygiene means and how to keep surfaces, utensils, and hands clean. To Know that there are a range of techniques that can be used in preparing and cooking different types of food To know how to use some techniques such as peeling, chopping, slicing, grating, mixing kneading and baking.	To know how to prepare and cook a variety of predominately savoury dishes using a range of cooking techniques. To know and understand seasonality. To know and be able to explain how to be safe and hygienic. To know how to use a range of techniques with growing confidence. To know how to follow and create a recipe.	of a healthy and varied diet. To know how to prepare and cook a variety of predominately savoury dishes using a range of cooking techniques. To know and understand seasonality. To know and be able to explain how to be safe and hygienic. To know that a recipe can be adapted by adding/ substituting ingredients. To know how to use a range of techniques confidently. To know how to follow and create a recipe.

Technical Knowledge - Mechanisms, structures and textiles	Know that products need to be strong. Know that products move.	Know that there are ways to make a product stronger. Know that levers can be used to create movement. Know that textiles can be cut and joined to make a product.	Know that materials can be measured. Know that wheels and axles can be used to create movement. Know that textiles can be joined to make a product.	Know that cuts and holes can be made accurately. Know that simple linkages can be used to create movement. Know that textiles can be joined in different ways.	Know that mistakes can be avoided by measuring carefully. Know that linkages and pneumatics can be used to create movement. Know that there are ways to join textiles in order to make the product strong.	Know that products need to be strong and fit for purpose by being precise. Know that linkages, pneumatics and cams can be used to create movement. Know that user and aesthetics are considered when choosing and joining textiles.	Know that a 3D frame can be reinforced and strengthened. Know that linkages, pneumatics and cams, pulleys and gears can be used to create movement. Know that a 3D textiles product can be made by joining a combination of fabric shapes.

	Project Type	**EY/ KS1 Cycle A**	**EY/KS1 Cycle B**	**KS2 Cycle A**	**KS2 Cycle B**	**S2 Cycle C**	**KS2 Cycle D**
	Mechanisms	Pneumatic mini beasts	Wheel and Axels: Fire engines	Make mountain cable cars	Pop up cards Torches	Steam powered vehicles	Parachutes and rocket mice
	Structures/ materials	Musical instruments		Aqueducts	Anglo-Saxon houses	Clay – Canopic jars	Inukshuk rock art
	Textiles		Puppets	Batik	Tudor purses	Stuffed toys	Peg dolls
	Food and nutrition	Healthy sandwiches	Design a smoothie	Fair Trade	Greek style Pizzas	Preserving food - jam	Fruit Smoothies Mesolithic stewed fruit
Vocabulary	Design process	design, make, evaluate, user, ideas, product, function, features,	purpose, design criteria, function, suitable	prototype, innovative, appealing, design brief, research, evaluate, ideas, constraints, investigate model, annotated sketch, functional, aesthetics, function,		functionality, authentic, user, market research annotated sketches, exploded diagrams	

	Mechanisms	**Sliders and levers** pivot, slot, bridge/guide card, masking tape, paper fastener, join	**Wheels and axels:** vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism	**Pneumatics**: components, attaching, tubing, syringe, plunger, split pin, pneumatic system, input movement, process, output movement, control, compression, pressure, inflate, deflate, pump, seal, air-tight linear, rotary, oscillating, reciprocating (motion) **Electrical circuits** series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip control, program, system, input device, output device	**Cams:** cam, axle, shaft, crank, handle, housing, framework rotation, rotary motion, oscillating motion, reciprocating motion mechanical system, input movement, process, output movement **Electrical circuits:** series circuit, parallel circuit, names of switches and components, input device, output device, system, monitor, control, program, flowchart
	structures	structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, corner, point thinner, thicker, straight, curved metal, wood, plastic		shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity marking out, scoring, shaping, tabs, adhesives, joining, assemble, stiff, strong, corrugating, ribbing, laminating	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent
	textiles	thread, pins, needles, staplers, staples, fabric glue, template, pattern pieces, mark out, join, decorate, finish		fabric, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, pattern pieces	seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces pins, needles, thread, pinking shears, iron transfer paper mock-up, prototype
	Food	fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, ingredients, arranging,		name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, sensory evaluations hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet	ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble