DT

Curriculum Overview

	Guidance Areas	Autumn	Spring	Summer
EYFS	Within the EYFS provision, DT skills are explored and taught via planning, intervention, incidental learning and following children's lines of enquiry throughout the year (not specifically split into terms) **ELG**: hold a pencil effectively – tripod grip use a range of small tools begin to show accuracy and care when drawing			
	Nursery	**Physical Development – Moving & Handling** Hands start to operate independently during a task that uses both. When holding crayons, chalks etc makes connections with their movement and marks. Uses wheeled toys with increasing skill, pedalling, balancing etc. May be beginning to show preference for dominant hand. Shows increasing control in holding, using and manipulating tools, e.g. hammers & make making tools. Holds mark-making tools with thumb and all fingers.	**Expressive Arts & Design: Creating with Materials** Notices and becomes interested in the transformative effect of their action on materials. Experiments with ways to enclose space, create shapes & represent actions/objects. Uses 3D & 2D structures to explore materials & express ideas.	
	Reception	**Physical Development – Moving & Handling** Uses wheeled toys with increasing skill, pedalling, balancing etc. May be beginning to show preference for dominant hand. Shows increasing control in holding, using and manipulating tools, e.g. hammers & make making tools. Holds mark-making tools with thumb and all fingers. Can grasp and release with two hands. Creates lines and circles pivoting from the shoulder and elbow. Manipulates a range of tools and equipment in one hand (paintbrushes, scissors, toothbrushes etc). Shows increasing control over an object in pushing, patting (Range 6)	**Expressive Arts & Design: Creating with Materials** Experiments with ways to enclose space, create shapes & represent actions/objects. Uses 3D & 2D structures to explore materials & express ideas. Develops an understanding of using lines and begins to use drawing to represent objects based on observations, imagination, and experience. Uses various construction materials. Uses tools for a purpose. Develops their own ideas through experimentation with diverse materials. (Range 6)	
	Continuous Provision	Continuous Provision Weather permitting inside and outside reflect: • Junk modelling area • Sensory investigation table (Tinker) • Station with DT resources (connecting materials) • Loose parts station (deconstruction) • Scientific tinker table • Role play dressing up • Creative kitchen (sensory and malleable) • Threading, peg boards, sorting trays • Self-serve crafts (scissor skills) • Weaving bench inside • Vehicles to look at how it works • Visual representations – architecture, bridges etc. • Small construction areas (planning in this area too		

DT

Curriculum Overview

	Guidance Areas	Autumn	Spring	Summer
Year 1	**Topic/Focus**	**Food – preparing fruit & veg (UK originated) - Fruit Kebabs – Science link - plants**	**Mechanisms – sliders and levers**	**Structures – free standing – playground equipment – Science link - Materials**
	Key knowledge	**Hygiene** – to keep hands and surfaces clean **Safety** – to prevent risks of becoming hurt **Ingredients** - the food stuffs which are combined to create a finished food product e.g. fruit kebab **Cut** – divide into pieces using a sharp implement (knife) **Peel** – remove the outer skin Food comes from **plants or animals** Food is **farmed, grown or caught**	**Mechanism** – a system of parts working together **Movement** – an act of movement **Slider** – a lever that is moved horizontally or vertically to control a variable **Lever** – a bar that rests on a pivot **Pivot** – the central point where a mechanism turns (e.g. split pin) **Direction** – a course on which something moves	**Structure** – an object constructed by several parts **Join** – link/ connect parts together **Stick** – to secure the joining of parts using glue, thread, Sellotape **Stronger** – able to withstand force and not break **Stiffer** – not easily bendable or will break **Stable** – not likely to break or give way **Framework** – an essential supporting structure
	Key skills	Design • **Taste** different foods • **Draw** design out • **Talk** about their own design • **Make** a list of ingredients needed Make • **Cut** their chosen fruit • **Create** their design/ pattern Evaluate • **Talk** about their kebab – what they like	**Design and develop** • **Design** an idea • **Communicate** their own idea through **talking** or **drawing** • **Make** a list of resources needed **Making** • **Follow** their design to choose the relevant tools and materials • **Create** their idea using chosen resources **Product and Evaluation** • **Discuss** good points and developments on their idea/ product • **Revisit** design and compare • **Identify** materials and mechanisms in familiar products	Design • **Say** who the structure is for • **Draw** design out • **Talk** about their own design Make • **Create** their design using chosen resources/ tools • **Join** parts of the structure together • **Put** a pattern or design on their structure using art tools (paints/ felt tips etc.) Evaluate • **Talk** about their structure – what they like, dislike and would change • **Test out** playground equipment with a teddy/ mini figure
	Key DT Terminology	planning, investigating, design, evaluate, make, user, purpose, ideas, product		
Year 2	**Topic/Focus**	**Food – Bread – History link – Great Fire of London**	**Textiles – Templates & joining techniques - Puppet**	**Mechanisms – Wheels & Axels – vehicle – History link**
	Key knowledge	**Hygiene** – to keep hands and surfaces clean **Safety** – to prevent risks of becoming hurt **Ingredients** - the food stuffs which are combined to create a finished food product e.g. yeast, flour, oil, water & salt are ingredients to make bread. **Recipe** – A set of instructions for preparing a particular dish **Kneading dough** – to work a dough mixture with hands to forma smooth consistency **Proving** – when the dough rests and rises for the final time before baking	**Joining And Finishing Techniques** – different ways to join and finish puppet product **Tools** – equipment to carry out the task, e.g. needles, thread, glue gun & buttons **Fabrics And Components** – materials (mainly felt) and other objects to complete puppet (buttons) **Template** – a shaped piece of card/ rigid material to follow around for the shape of their puppet **Sewing** – join two materials together (running stitch) **Assemble** – to join materials together **Combine** – to join materials or objects together	**Vehicle** – a thing used for transporting people or goods **Wheel** – a circular object that revolves on an axle **Axle** - a rod or spindle (either fixed or rotating) passing through the centre of a wheel or group of wheels **Chassis** – the base frame of a vehicle **Cutting** – to divide something up into pieces using a sharp implement (saw) **Joining** – link parts together **Fixed** – fastened securely into place
	Key skills	Design • **Research** different breads	Design • **Use** ICT to develop and communicate their puppet idea. • **State** what puppet they are designing and making.	Design • **Work** confidently within a range of contexts – imaginary. • **Say** how their vehicle will work.

DT

Curriculum Overview

	Guidance Areas	Autumn	Spring	Summer
		• **Agree** on simple recipe to use (as a class) - Why they have chosen that particular recipe? Make • **Weigh out** and **use** right ingredients • **Follow** the recipe • **Know** about being **safe** and **clean** while **cooking** Evaluate • **Assess** parts of their design against the design criteria used – what worked well? Did they have to change anything?	• **Model** ideas – making templates and practising sewing with felt Make • Plan by **suggesting** what to do next. • **Use** a range of textiles. • **Assemble**, **join** and **combine** materials together. • **Use** finishing techniques. Evaluate • **Make** simple judgements about their puppet against the design criteria. • **Suggest** how the puppet can be improved	• **Use** simple design criteria to help develop ideas of the vehicle. • **Model** ideas by exploring relevant materials, components and construction kits – **make** mock ups (prototypes) Make • **Select** from a range of tools and equipment • **Use** a range of mechanical components (axles, wheels, triangles for triangulation) • **Assemble**, **join** and **combine** wood and components (axles & wheels) Evaluate • **Make** simple judgements about their vehicle against design criteria. • **Suggest** how the vehicle can be improved.
	Key DT Terminology	investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function		
Year 3	**Topic/Focus**	**Structures –shell structure– sustainable packaging**	**Food – Healthy & Varied Diet – Biscuits**	**Textiles – Roman Bulla (coin purse) – History link – Romans**
	Key knowledge	**Container**– box that can be used to store things in. **Three-dimensional (3-D) shape** – shape that has width, depth, and height **Net** – what structure looks like when it would be opened out flat **Vertex** – the highest point (the top) **Capacity** – the maximum amount the structure can hold **Marking out** – transferring the design onto the workpiece (wood) **Adhesives** – a substance used to stick materials together e.g. glue, tape, cement **Joining** – link or connect something together **Assemble** – fit together the separate parts **Accuracy** – the quality of the product being correct or precise **Stiff** – not easily bent or able to change shape **Strong** – able to withstand force, pressure, wear (weather) **Graphics** – the products of the graphic arts. Visual images	**Hygiene** – to keep hands and surfaces clean when working = wash hands before eating and food preparation. You must work on a clean work surface and with clean utensils. **Healthy diet** - needed to provide energy for a healthy body Food can be fresh, precooked or processed. **Balanced diet** – using foods from the different food groups and appropriate amounts of certain foods. **Preference** – To know there is choice and using foods they have a greater liking to than others **Ingredients** - the food stuffs which are combined to create a finished food product e.g. yeast, flour, oil, water & salt are ingredients to make bread. **Recipe** – A set of instructions for preparing a particular dish **Texture** – the feel, appearance, or consistency of the chosen food/ ingredients **Utensils** – a tool to use when cooking/ baking **Techniques** – a way of carrying out a task – rubbing in, creaming method,	**Fabric** – cloth or other material produced by weaving or knitting fibres **Names of fabrics** – cotton, silk, felt, denim, chiffon etc **Fastening** – a device that closes or secures something **compartment** – a part of a structure/ container **Finishing technique** – different ways to finish the coin purse/ holder **Templates** – a shaped piece of hard material for the purpose of cutting **Stitch** – a loop of thread resulting in a movement of the needle **Seam** – a line where two materials are stitched together **Seam allowance** – area between the edge of material and stitching line
	Key skills	Design • **Describe** the purpose of the planter box. • **Develop** own design criteria and use these to inform ideas. • **Use** computer aided design to develop and communicate ideas. Make • **Select** tools and equipment suitable for planter box.	Design • **Research** biscuits and healthy foods that already exist on the market • **Create** a design brief and their design that follows said brief • **Discuss** design with class – **make** changes if needed Make • **Bake** the batch of biscuits using the correct equipment and ingredients • **Follow** the recipe method in the correct order	Design • **Describe** the purpose of the Roman coin purse • **Develop** own design criteria and use these to inform ideas. • **Generate** realistic ideas, focusing on needs of user. • **Indicate** the design features of the Roman coin purse. Make • **Select** needles and materials suitable for the Coin purse • **Order** the main stages of making a Roman cion purse

DT

Curriculum Overview

	Guidance Areas	Autumn	Spring	Summer
		• **Measure**, **mark out**, **cut** and **shape** wood with some accuracy. • **Assemble**, **join**, and **combine** wood with some accuracy. • **Apply** a range of finishing techniques (art) with some accuracy. <u>Evaluate</u> • **Identify** the strengths and areas for development in their finished product. • **Refer** to their design criteria as they design and make & use it to evaluate completed planter box.	• **Ensure** that all hygiene and safety rules are followed <u>Evaluate</u> • **Evaluate** product – **picking out** strengths and areas for development • **Using** design brief and final product as they evaluate their biscuit. •	• **Measure**, **mark out**, **cut** and **shape** materials with some accuracy. <u>Evaluate</u> • **Identify** the strengths and areas for development in their Roman coin purse. • **Refer** to their design criteria as they design and make & use it to evaluate completed Roman coin purse.
	Key DT Terminology	user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing		
Year 4	**Topic/Focus**	**Mechanical Systems - Levers and linkages – *base on core text* - Moving story (create own + video)**	**Food – Healthy & Varied Diet – breakfast muffins – stand alone**	**Electrical System - Torch – Science link - Simple switch - electricity (motion or light)**
	Key knowledge	**Mechanism** – a system of parts working in a machine **Lever** – a rigid bar resting on a pivot **Linkage** – mechanism made by connecting together rigid levers/ links **Pivot** – the central point where a mechanism turns (e.g. split pin) **Slot** - a slit in a machine for something to be inserted **Process** – the steps taken to achieve an end goal **Linear** – arranged in or moving in a straight line **Rotary** – revolving around a centre/ axis **Oscillating** – moving backwards and forwards in a rhythm **Reciprocating** – Moving backwards and forwards in a straight line	**Hygiene** – to keep hands and surfaces clean when working = wash hands before eating and food preparation. You must work on a clean work surface and with clean utensils. **Healthy diet** - needed to provide energy for a healthy body. Food can be fresh, precooked or processed. **Balanced diet** – using foods from the different food groups and appropriate amounts of certain foods.  Food groups knowledge comes from science topic. **Preference** – To know there is choice and using foods they have a greater liking to than others. **Seasonal** – food may only be available at certain times of the year.	**Some specific knowledge will come from science – components needed -** battery, battery holder, bulb, bulb holder, wires, switch, crocodile clip **Series Circuit** – a path that the current flows along through each component **Fault** – when the circuit is not completed or interrupted **Connection** – where something is linked together **Switch** – a device for making or breaking the electrical current in a circuit **Insulator** – a substance which does not let electrical current flow through **Conductor** – a substance which allows an electrical current flow through **System** – a set of things working together to create a mechanism or electrical system **Input Device** – any hardware that sends messages to the product to let you control it **Output Device** – any hardware that is used to send messages to the product
	Key skills	<u>Design</u> • **Develop** own design criteria and use these to inform ideas. • **Draw** realistic ideas • **Use** computer-aided design to **develop** and **communicate** their ideas. <u>Make</u>	<u>Design</u> • **Research** healthy foods – good for body • **Design** own realistic ideas • **Gather** some information about fillings <u>Make</u> • **Create** their own muffin using tools suitable	<u>Design</u> • **Describe** the purpose of the torch. • Develop own design criteria and use these to inform ideas. • Generate realistic sketches, focusing on needs of user. • **Use** annotated sketches, cross-sectional drawings and exploded diagrams to develop & communicate ideas. <u>Make</u>

DT

Curriculum Overview

	Guidance Areas	Autumn	Spring	Summer
		• **Select** tools to create levers and linkages. • **Select** materials and components suitable for the task – e.g. clay to make characters • **Order** the main stages of making. • **Measure**, **mark out**, **cut** and **shape** materials with some accuracy. • **Assemble**, **join**, **combine** materials with some accuracy. • **Apply** a range of finishing techniques (art) with some accuracy. <u>Evaluate</u> • **Identify** the strengths and areas for development in their ideas and products. • **Refer** to their design criteria as they design and make & use it to evaluate completed product. •	• **Order** main stages of process and **include** hygiene rules <u>Evaluate</u> • **Evaluate** product – good and points for development **Use** design criteria to evaluate their fritters	• **Select** materials and components suitable for the task – e.g. waterproof materials (plastic) • **Explain** their choice of materials and components according to functional properties and aesthetic qualities. • **Order** the main stages of making. • **Measure**, **mark out**, **cut** and **shape** materials with some accuracy. • **Assemble**, **join**, **combine** materials with some accuracy. • **Apply** a range of finishing techniques (art) with some accuracy. <u>Evaluate</u> • **Identify** the strengths and areas for development in their ideas and products. • **Refer** to their design criteria as they design and make & use it to evaluate completed product.
	Key DT Terminology	evaluating, design brief, design criteria, innovative, user, purpose, function, prototype, innovative, appealing, planning, annotated sketch, sensory evaluations		
Year 5	**Topic/Focus**	**Structures – frames – mobile phone holder**	**Food – Celebrating culture and seasonality – 'bait' pastries – History link – Coal Mining**	**Electrical System - Complex switches, programme and monitoring - Battery powered vehicle– History link - trade/ industry**
	Key knowledge	**Frame** – a rigid structure that surrounds an object (mobile phone) **Structure** – a building or object made up of several parts **Strengthen** – To make something stronger **Reinforce** – to strengthen or support using extra materials **Triangulation** – a technique for establishing the distance between any 2 points or the relative position of 2 or more points by using points as vertices of a triangle (with known edges) **Stability** – the state of being stable/ sturdy. Does not break easily **Prototype** – a first version of the product to develop ideas and test out materials	**Hygiene** – to keep hands and surfaces clean when working = wash hands before eating and food preparation. You must work on a clean work surface and with clean utensils. **Ingredients** - the food stuffs which are combined to create a finished food product e.g. sugar, butter (marg), flour, milk & eggs are ingredients to make cakes/tarts. **Recipe** – A set of instructions for preparing a particular dish **Utensils** – a tool to use when cooking/ baking **Techniques** – a way of carrying out a task – rubbing in, creaming method, **Baking** – cook by dry heat without direct exposure to a flame, typically in an oven **Savoury** – category of food relating to taste – not sweet **Sweet** – category of food relating to taste – not savoury **Adapted** – make something suitable for a use or purpose **Substances** – a particular kind of matter that makes up food or drink e.g. nutrients, water & fibre	**Science link vocab** – bulb, bulb holder, battery, battery holder, USB cable, wire, crocodile clip, light emitting diode (LED), light dependent resistor (LDR) **Insulator** – a substance which does not let electrical current flow through **Conductor** – a substance which allows an electrical current flow through **System** – a set of things working together to create a mechanism or electrical system **Input Device** – any hardware that sends messages to the product to let you control it **Output Device** – any hardware that is used to send messages to the product **Reed Switch** – operated by an applied magnetic field **Toggle Switch** – operated by moving a lever up or down **Push-To-Make Switch** – allows electricity to flow when button is pressed in between two things **Push-To-Break Switch** – breaks the connection and stops something from working **Tilt Switch** – used by measuring the tilt of an object in multiple axes **Program** – provide a machine with coded instructions **Series Circuit** – a path that the current flows along through each component

DT

Curriculum Overview

	Guidance Areas	Autumn	Spring	Summer
				Parallel Circuit – has several different paths for the electricity to flow. Very different to series circuit
	Key skills	Design • **Research** frame structures and surveys then create own ideas from this • Before creating final design and brief, **model** ideas to see if they would work • **Design** their product including the purpose and how parts of it would work Make • Accurately **follow** a step by step plan to **create** the design • Accurately **use** measured materials and **assemble** them using the correctly selected tools • **Explain** why they are using their chosen materials Evaluate • **Critically evaluate** the final product • While evaluating **consider** others views to improve it	Design • **Describe** the purpose of the pasty. • **Explain** how ingredients work to create the finished pasty • **Create** innovative ideas, **drawing** on research. • **Carry out** research using surveys, interviews questionnaires, and web-based resources. • **Write** recipe including their own ideas/ take on the traditional recipe • **Use** learning from mathematics to help design and make products that work. Make • **Select** utensils and ingredients suitable for the baking of pasties. • **Formulate** a recipe as a guide to making. • **Follow** procedures for safety and hygiene. Evaluate • **Consider** the views of others, including intended users to improve work • **Critically evaluate** the quality of the design, manufacture and fitness for purpose of their products as they design and make.	Design • **Describe** the purpose of the electrical system. • Explain how the components of their product work. • **Identify** needs, wants, preferences and values of individuals or groups. • Generate prototypes, drawing on research. • **Use** computer aided design to develop and communicate ideas. (CAD) • **Carry out** research using surveys, interviews questionnaires, and web-based resources. • **Use** learning from science to help design and make products that work. Make • **Select** tools and components suitable for making a battery powered vehicle. • **Choose** materials and components suitable for the task. • **Explain** their choice of materials and components according to functional properties and aesthetic qualities. • **Create** a step-by-step plan as a guide to making. • Accurately **measure**, **mark out**, **cut** and **shape** materials. • Accurately **assemble**, **join**, **combine** materials. • Accurately **apply** a range of finishing techniques (art). Evaluate • **Consider** the views of others, including intended users to improve work • **Critically evaluate** the quality of the design, manufacture, and fitness for purpose of their products as they design and make.
	Key DT Terminology	design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, mock-up, prototype		
Year 6	**Topic/Focus**	**Food - Celebrating cultures & seasonality – Rations – History – WW2**	**Textiles - Combining different fabrics –Computer design – kit/ first aid bag – History link - Medicine & disease**	**Mechanical systems – pulleys & gears – fairground ride – maths link**
	Key knowledge	**Hygiene** – to keep hands and surfaces clean when working = wash hands before eating and food preparation. You must work on a clean work surface and with clean utensils. **Safely** – gives protection from danger or risk **Heat source** – items to cook on that provide heat , e.g. oven, hob, grill, microwave **Techniques** – different ways to prepare and cook food, peeling, chopping, slicing, mixing & spreading **Ingredients** - the food stuffs which are combined to create a finished food product **Recipe** – A set of instructions for preparing a particular dish **Utensils** – a tool to use when cooking/ baking	**Seam** – a line where two materials are stitched together **Seam allowance** – area between the edge of material and stitching line **Templates** – a shaped piece of hard material for the purpose of cutting **Wadding** – soft, thick material to line garments. (cotton/ wool fleecy layer) **Reinforce** – strengthen or support using extra material **Right Side** – pretty or printed side of the fabric, the side that will be on show **Wrong Side** – the other surface, the side that will not be on show	**Pulley** - a wheel with a grooved rim around which a cord passes, which acts to change the direction of a force applied to the cord and is used to raise heavy weights. **Gear** – a toothed wheel that works with others to alter the relation between the speed of a driving mechanism **Rotation** - turning around on an axis **Transmit** - to pass on something (electricals signal) **Axle** - a rod or spindle (either fixed or rotating) passing through the centre of a wheel or group of wheels **Mechanical system** - any built system that is powered by machines **Electrical system** – system consisted of electrical components

DT

Curriculum Overview

	Guidance Areas	Autumn	Spring	Summer
		Nutritional value – measure of a well-balanced ratio of essential nutrients, e.g. carbohydrates, protein, fruits, vegetables &fats **Alternative** – availability of other choices or options	**Hem** – the edge of the piece of material is folded and sewn to prevent unravelling of the fabric **Pattern Pieces** – a template to cut out or shape the material needed **Name of textiles and fastenings used** – cotton, linen, silk, zip, button, hook etc	
	Key skills	Design • **Describe** the purpose of the product. • **Explain** how they are going to create their meal. • **Generate** innovative ideas, drawing on research from the past. • **Share and clarify** ideas through discussion. Make • **Select** utensils and food suitable for the task. • **Formulate** a recipe as a guide to making. • **Follow** procedures for safety and hygiene. • **Demonstrate** resourcefulness when tackling practical problems. Evaluate • **Consider** the views of others, including intended users. • **Critically evaluate** the quality of their meal, manufacture, and fitness for purpose of their products as they design and make. •	Design • **Describe** the purpose of the product. • **Explain** how particular parts of their product work • **Identify** needs, wants & preferences • **Generate** innovative ideas, drawing on research. • **Carry out** research using surveys, interviews questionnaires, and web-based resources. • **Use** CAD to create the template. Make • **Select** materials and equipment suitable for sewing. • **Formulate** a step-by-step plan as a guide to making. • **Sew** the materials together using all the stitch types (running, back, cross, tack) Evaluate • **Consider** the views of others, including intended users to improve work • **Critically evaluate** the quality of the design, manufacture, and fitness for purpose of their products as they design and make.	Design • **Research** the product and **carry out** surveys to the intended users • **Create** a design including purpose and explanation of parts of the product • **Model** prototypes before creating their final design Make • **Accurately create** their design by assembling measured cut out shapes • **Use** the correct tools and materials and **explain** why they are chosen • **Create** a step-by-step plan to follow Evaluate • **Critically evaluate** your product • **Use** the views of others within your evaluation
	Key DT Terminology	function, innovative, design specification, design brief, user, purpose, design brief, design specification, prototype, annotated sketch, innovation, research, functional, mock-up		