

	Guidance	Autumn		Spring	Summer
	Areas	Automin		spring	Sommer
	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				
EYFS	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				
-	Topic/Focus	Food – preparing fruit & veg (UK originated) - Fruit Kebabs – Science link - plants	Mechanisms – sliders a	nd levers	Structures – Kite – Science link - Materials
Year	Key knowledge	Safety – to prevent risks of becoming hurt Ingredients - the food stuffs which are combined to create a	Mechanism – a system of p Movement – an act of mo Slider – a lever that is move variable		Structure – an object constructed by several parts Join – link/ connect parts together Stick – to secure the joining of parts using glue, thread, celeotape



	Guidance	Autumn	Spring	Summer	
	Areas				
		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	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	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 kite 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 kite using art tools (paints/ felt tips etc.) Evaluate Talk about their kite – what they like, dislike and would change	
	Key DT planning, investigating, design, evaluate, make, user, purpose, ideas, product Terminology Free contractions of the state of t		I urpose, ideas, product		
r 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 Combine – to join materials 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	
Year	Key skills	Design • Research different breads • 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?	Design • Use ICT to develop and communicate their puppet idea. • State what puppet they are designing and making. • 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	Design • Work confidently within a range of contexts – imaginary. • Say how their vehicle will work. • 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	



	Guidance	Autumn	Spring	Summer
	Areas	Automn	spring	Sommer
				 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, p	urpose, laeas, design criteria, product, function	
	Topic/Focus	Structures – planter box – Science link - Plants	Food – Healthy & Varied Diet – Greek Zucchini Fritters – History – Ancient Greece	Textiles – Roman Bulla (coin purse) – History link – Romans
Year 3	Key knowledge	Container/ planter box - box that has no lid on 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. In the surface and with clean utensils. 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.	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. • Select tools and equipment suitable for planter box. • Make • Select tools and equipment suitable for planter box. • 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. • Identify the strengths and areas for development in their finished product.	Design • Research healthy foods – good for body • Design own realistic ideas • Gather some information about fillings Make • Create their own fritter using tools suitable • Order main stages of process and include hygiene rules Evaluate • Evaluate product – good and points for development • Use design criteria to evaluate their fritters	 <u>Design</u> <u>Describe</u> the purpose of the Roman coin purse <u>Develop</u> own design criteria and use these to inform ideas. <u>Generate</u> realistic ideas, focusing on needs of user. <u>Indicate</u> the design features of the Roman coin purse. <u>Make</u> <u>Select</u> needles and materials suitable for the Coin purse <u>Order</u> the main stages of making a Roman cion purse <u>Measure</u>, mark out, cut and shape materials with some accuracy. <u>Evaluate</u> <u>Identify</u> the strengths and areas for development in their Roman coin purse. <u>Refer</u> to their design criteria as they design and make & use it to evaluate completed Roman coin purse.

DT



Guidance Areas	Autumn	Spring	Summer		
	 Refer to their design criteria as they design and make & use it to evaluate completed planter box. 				
Key DT Terminology	user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing				
Topic/Focus	Mechanical Systems - Levers and linkages – base on core text - Moving story (create own + video)	Food – Healthy & Varied Diet – Biscuits	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. 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, 	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	 Design Develop own design criteria and use these to inform ideas. Draw realistic ideas Use computer-aided design to develop and communicate their ideas. Make 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. Evaluate 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. 	 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 Bake the batch of biscuits using the correct equipment and ingredients Follow the recipe method in the correct order Ensure that all hygiene and safety rules are followed Evaluate product - picking out strengths and areas for development Using design brief and final product as they evaluate their biscuit. 	 Design 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. Make 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. Apply a range of finishing techniques (art) with some accuracy. Evaluate 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. 		



	Guidance Areas	Autumn	Spring	Summer		
	Key DT Terminology	evaluating, design brief, design criteria, innovative, user	, purpose, function, prototype, innovative, appealing, plann	ing, annotated sketch, sensory evaluations		
	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		
Year 5	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 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-Break 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 Till 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 Parallel Circuit – has several different paths for the electricity to flow. Very different to series circuit		
	Key skills	 Desian 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 	 Desian Describe the purpose of the tart. Explain how ingredients work to create the finished tart 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 tarts. 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 	 Desian 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. 		

DT



	Guidance Areas	Autumn	Spring	Summer		
			Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.	 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 specification, design brief, innovative, research, eva	luate, design criteria, annotate, mock-up, prototype		
	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		
Year 6	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 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	 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 Werng Line edge 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 	 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 		
λ.	Key skills	 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 		



Guidance Areas	Autumn	Spring	Summer	
	•			
Key DT Terminology	function, innovative, design specification, design brief, user, purpose, design brief, design specification, prototype, annotated sketch, innovation, research, functional, mock-up			