Grove Lea Primary DT Curriculum Progression Skill Grid

EYFS	3-4 Year Olds	Reception	ELG
Expressive Arts	Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures.	Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills.	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used.

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Textiles	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Knowledge	**By the end of Y1 we should know…**	**By the end of Y2 we should know…**	**By the end of Y3 we should know…**	**By the end of Y4 we should know…**	**By the end of Y5 we should know…**	**By the end of Y6 we should know…**
	To know what a template is To know how a simple 3D textile product is made To know how to join two pieces of fabrics using different joining techniques (gluing, stapling, stitching) To know a range of finishing techniques available	To know why designers use templates To know when to use certain fabrics based on their suitability to the product To know how to use simple stitch techniques To know which finishing technique to use depending upon the required effect	To know how to strengthen, stiffen and reinforce existing fabrics To know how to securely join two pieces of fabric together using a range of stitches To know why designers use patterns To know what seam allowances are	To know why designers might need to strengthen, stiffen and reinforce existing fabrics To know how/when to use decorative stitches to finish a product To know what constitutes a renewable/ sustainable material/fabric	To know that a 3D textile product can be made from a combination of accurately made pieces To know when to combine multiple different fabrics to create a 3D product To know how embroidery can embellish a product To know when to use particular stitch types (including finishing stitches)	To know that a 3D textile product can be made from a combination of accurately made pieces To know when to combine multiple different fabrics to create a 3D product To know how embroidery can embellish a product To know when to use particular stitch types (including finishing stitches)

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Vocabulary	**Tier 3** Pattern mark out join decorate running stitch needle fabric	**Tier 3** Template Quality suitable features dye overstitch design fray mock-up seam	**Tier 3** Fastening Compartment Zip Finishing technique Function Prototype Back stitch Felted Woven Knitted Bonded	**Tier 3** Aesthetics seam allowance, pinning, embroidery, back stitch, blanket stitch, cross stitch	**Tier 3** Specification tacking working drawing clasp pinking shears design criteria hem, reinforce stem stitch satin stitch tie dye	**Tier 3** Applique, annotate, evaluate, innovation, functionality, renewable, authentic, chain stitch
Skills	To build ideas form a template To deconstruct a 3D textile product To join two pieces of fabrics using different joining techniques (gluing, stapling, stitching)	To build ideas form a template To work with a variety of fabrics. To apply simple stitch techniques	To strengthen, stiffen and reinforce existing fabrics To securely join two pieces of fabric together using a range of stitches	To strengthen, stiffen and reinforce existing fabrics To decoratively stitch.	To combine multiple different fabrics to create a 3D product To apply embroidery To apply different stitch types (including finishing stitches)	To combine multiple different fabrics to create a 3D product To apply embroidery To apply different stitch types (including finishing stitches)

Grove Lea Primary DT Curriculum Progression Skill Grid

Structures	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Knowledge	**By the end of Y1 we should know…**	**By the end of Y2 we should know…**	**By the end of Y3 we should know…**	**By the end of Y4 we should know…**	**By the end of Y5 we should know…**	**By the end of Y6 we should know…**
	To know how to make freestanding structures stronger, stiffer and more stable To know how to join some simple materials To know a simple order of making a structure To know some simple finishing techniques to complete their structure To know the name of simple 2D shapes	To know how to make freestanding structures stronger, stiffer and more stable To know how to join some simple materials To know a simple order of making a structure To know some simple finishing techniques to complete their structure To know the name of simple 3D shapes	To know more sophisticated methods for stiffening/ strengthening structures To know what a net is To know the names of more complex 3D shapes To know which tools are appropriate for cutting and scoring materials To know how to test a material's strength To know how to use CAD to develop a product	To know more sophisticated methods for stiffening/ strengthening structures To know what a net is To know which tools are appropriate for cutting and scoring materials To know how to test a material's strength To know how to use CAD to develop a product	To know how to stiffen, strengthen and reinforce a range of 3-D frameworks To know which materials are best suited to stiffen and reinforce by selecting them due to their properties To know which shapes are the strongest and will support the most weight in a structure To know how to use a range of tools i.e. junior hacksaws, G-clamps, bench hooks, hand drills safely	To know how to stiffen, strengthen and reinforce a range of 3-D frameworks To know which materials are best suited to stiffen and reinforce by selecting them due to their properties To know which shapes are the strongest and will support the most weight in a structure To know how to use a range of tools i.e. junior hacksaws, G-clamps, bench hooks, hand drills safely

Grove Lea Primary DT Curriculum Progression Skill Grid

Vocabulary	**Tier 3** Cut Fold Join Fix Weak strong	**Tier 3** Structure Base underneath, thicker thinner corner point straight curved rectangle cube cuboid cylinder	**Tier 3** Shell Structure Net marking out, material, joining, three dimensional, stiff	**Tier 3** Assemble prism, vertex, breadth, capacity, scoring, adhesives, reduce, reuse, recycle, corrugating, ribbing, laminating	**Tier 3** Reinforce, triangulation, stability, temporary, permanent, prototype, innovation, functional, design brief	**Tier 3** Reinforce, triangulation, stability, temporary, permanent, prototype, innovation, functional, design brief
Skills	To make freestanding structures stronger, stiffer and more stable To join some simple materials To apply some finishing techniques to complete their structure To describe the structure using the name of simple 2D shapes	To make freestanding structures stronger, stiffer and more stable To join some simple materials To apply some finishing techniques to complete their structure To describe the structure using the name of simple 2D shapes	To apply sophisticated methods for stiffening/ strengthening structures To describe a product using the names of more complex 3D shapes To cut and score materials To test a material's strength	To apply sophisticated methods for stiffening/ strengthening structures To describe a product using the names of more complex 3D shapes To cut and score materials To test a material's strength	To stiffen, strengthen and reinforce a range of 3-D frameworks To use a range of tools i.e. junior hacksaws, G-clamps, bench hooks, hand drills safely	To stiffen, strengthen and reinforce a range of 3-D frameworks To use a range of tools i.e. junior hacksaws, G-clamps, bench hooks, hand drills safely

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Electrical Systems	Y1	Y2	Y3	Y4	Y5	Y6
Knowledge	**By the end of Y1 we should know…**	**By the end of Y2 we should know…**	**By the end of Y3 we should know…**	**By the end of Y4 we should know…**	**By the end of Y5 we should know…**	**By the end of Y6 we should know…**
			To know what an electrical circuit is To know a range of simple electrical components and their functions, such as a bulb, buzzer and switch To know how to control and program a product using computing (i.e. beebots) To know how to construct a simple series circuit To know how to make a range of simple secure connections (twisting wires together, wrapping ends, taping over, connecting block)	To know what an electrical circuit is To know a range of simple electrical components and their functions, such as a bulb, buzzer and switch To know how to control and program a product using computing (i.e. beebots) To know how to construct a simple series circuit To know how to make a range of simple secure connections (twisting wires together, wrapping ends, taping over, connecting block)	To know how to incorporate simple self-made switches in a circuit To know how to test components in more complex circuits (series and parallel) To know how simple switches can be made To know how to assess faults in their own electrical systems To know how to test components in a simple series circuit	To know how to incorporate simple self-made switches in a circuit To know how to test components in more complex circuits (series and parallel) To know how simple switches can be made To know how to assess faults in their own electrical systems To know how to test components in a simple series circuit

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Vocabulary			**Tier 3** User Fault toggle switch, insulator, conductor, battery holder, crocodile clip	**Tier 3** Series circuit, connection, push-to-make switch, push-to-break switch, innovative, appealing, control box, input device, output device, system	**Tier 3** Parallel circuit, light emitting diode, monitor, flowchart, design specification, reed switch, tilt switch	**Tier 3** Light dependent resistor, interface control, micro switch, latching switch
Skills			To control and program a product using computing (i.e. beebots) To construct a simple series circuit To make a range of simple secure connections (twisting wires together, wrapping ends, taping over, connecting block)	To control and program a product using computing (i.e. beebots) To construct a simple series circuit To make a range of simple secure connections (twisting wires together, wrapping ends, taping over, connecting block)	To incorporate simple self-made switches in a circuit To test components in more complex circuits (series and parallel) To assess faults in their own electrical systems	To incorporate simple self-made switches in a circuit To test components in more complex circuits (series and parallel) To assess faults in their own electrical systems

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Food	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Knowledge	**By the end of Y1 we should know…**	**By the end of Y2 we should know…**	**By the end of Y3 we should know…**	**By the end of Y4 we should know…**	**By the end of Y5 we should know…**	**By the end of Y6 we should know…**
	To know how to use simple cutting tools to prepare soft fruit and vegetables To know how to follow simple health and safety procedures To know how to peel, chop, slice and grate foods.	To know how to prepare simple dishes safely and hygienically, without using a heat source To know how to use techniques such as cutting, peeling and grating with greater confidence and independency	To know how to chop a wider range of foods using different techniques i.e. claw grip, bridge grip. To know how to use sensory information to evaluate a variety of ingredients To know how to combine foods using different utensils i.e. whisk, spatula To know relevant health and safety procedures when handling and preparing foods	To know how to chop a wider range of foods using different techniques i.e. claw grip, bridge grip. To know how to use sensory information to evaluate a variety of ingredients To know how to combine foods using different utensils i.e. whisk, spatula To know relevant health and safety procedures when handling and preparing foods	To know some more advance methods for mixing ingredients i.e. rubbing in To know how to measure ingredients accurately using different units To know how to follow a recipe To know how to select appropriate utensils for specific jobs. To know how to cut, shape and knead dough	To know some more advance methods for mixing ingredients i.e. rubbing in To know how to measure ingredients accurately using different units To know how to follow a recipe To know how to select appropriate utensils for specific jobs. To know how to cut, shape and knead dough

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Vocabulary	**Tier 3** Fruit Vegetables Soft Juicy Crunchy Sticky Smooth sharp crisp sour hard flesh skin seed pip core slicing peeling cutting squeezing healthy diet choosing ingredients planning, tasting, arranging	**Tier 3** Fruit Vegetables Soft Juicy Crunchy Sticky Smooth sharp crisp sour hard flesh skin seed pip core slicing peeling cutting squeezing healthy diet choosing ingredients planning, tasting, arranging	**Tier 3** Texture Taste appearance preference greasy moist fresh savoury hygienic edible grown reared caught frozen tinned processed seasonal harvested	**Tier 3** Texture Taste appearance preference greasy moist fresh savoury hygienic edible grown reared caught frozen tinned processed seasonal harvested	**Tier 3** Ingredients Yeast Dough wholemeal unleavened baking soda spice herbs carbohydrate sugar fat protein vitamins nutrients gluten allergy intolerance, savoury seasonality pour mix kneed whisk beat combine fold rubbing in	**Tier 3** Ingredients Yeast Dough wholemeal unleavened baking soda spice herbs carbohydrate sugar fat protein vitamins nutrients gluten allergy intolerance, savoury seasonality pour mix kneed whisk beat combine fold rubbing in
Skills	To use simple cutting tools to prepare soft fruit and vegetables To follow simple health and safety procedures To peel, chop, slice and grate foods.	To prepare simple dishes safely and hygienically, without using a heat source To use techniques such as cutting, peeling and grating with greater confidence and independency	To chop a wider range of foods using different techniques i.e. claw grip, bridge grip. To use sensory information to evaluate a variety of ingredients	To chop a wider range of foods using different techniques i.e. claw grip, bridge grip. To use sensory information to evaluate a variety of ingredients	To apply advance methods for mixing ingredients i.e. rubbing in To measure ingredients accurately using different units To follow a recipe	To apply advance methods for mixing ingredients i.e. rubbing in To measure ingredients accurately using different units To follow a recipe

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			To combine foods using different utensils i.e. whisk, spatula	To combine foods using different utensils i.e. whisk, spatula	To cut, shape and knead dough	To cut, shape and knead dough

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Mechanisms	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**
Knowledge	**By the end of Y1 we should know…**	**By the end of Y2 we should know…**	**By the end of Y3 we should know…**	**By the end of Y4 we should know…**	**By the end of Y5 we should know…**	**By the end of Y6 we should know…**
	To know what wheels, axels and axel holders are To know the difference between fixed and free moving axels To know simple methods to fix wheels and axels to a product To know the names of some simple tools and their purpose	To know how to operate sliders and levers To know that different mechanisms create different types of movement To know the name of simple tools and their purpose To know some simple fixing techniques and when to use them (i.e. masking tape to secure a lollipop stick slider) To know what a pivot is	To know the difference between a fixed and loose pivot To know how to use lever and linkage mechanisms To know the difference between inputs and outputs To know how to increase accuracy when measuring, marking out and cutting (i.e. measure in mm rather than cm or inches)	To know the difference between a fixed and loose pivot To know how to use lever and linkage mechanisms To know the difference between inputs and outputs To know how to increase accuracy when measuring, marking out and cutting (i.e. measure in mm rather than cm or inches)	To know that mechanical and electrical systems have an input, process and output To know what a gear is To know what a pulley is To know that gears and pulleys can be used to speed up, slow down or change the direction of movement To know how to accurately draw an exploded diagram	To know that mechanical and electrical systems have an input, process and output To know what a gear is To know what a pulley is To know that gears and pulleys can be used to speed up, slow down or change the direction of movement To know how to accurately draw an exploded diagram

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Vocabulary	**Tier 3** Wheel Axel Fixed Free Design Make Cutting Joining hacksaw, vice dowel body cab shaping	**Tier 3** Mechanism Lever Slider Slot pivot guide/bridge masking tape fastener pull push down straight, work design evaluate purpose,	**Tier 3** Loose pivot fixed pivot system, input process	**Tier 3** Loose pivot fixed pivot system, input process output linear rotary, reciprocating, innovative, appealing, linkage oscillating	**Tier 3** Pulley Gear Driver follower, rotation motor belt spindle motor, circuit switch ratio transmit, annotated drawings, exploded diagrams, functionality	**Tier 3** Transmit annotated drawings, exploded diagrams, functionality
Skills	To apply simple methods to fix wheels and axels to a product	To operate sliders and levers To apply some simple fixing techniques and when to use them (i.e. masking tape to secure a lollipop stick slider)	To use lever and linkage mechanisms To increase accuracy when measuring, marking out and cutting (i.e. measure in mm rather than cm or inches)	To use lever and linkage mechanisms To increase accuracy when measuring, marking out and cutting (i.e. measure in mm rather than cm or inches)	To accurately draw an exploded diagram	To accurately draw an exploded diagram