

## SSCA DT Knowledge and Skills Mapping

**Knowledge Organisers for the priority subject for each concept to be issued before the learning block is taught.**

**Metacognition:** Metacognition can take many forms; it includes knowledge about when and how to use particular strategies for learning or problem-solving.

	Term	Term	Term
EYFS	30-50	40-60+	ELG
Knowledge	<u>Physical Development: Health and Self-care -</u> <ul style="list-style-type: none"> <li>To understand that equipment and tools have to be used safely.</li> </ul>	<u>Physical Development: Health and Self-care -</u> <ul style="list-style-type: none"> <li>To show understanding of the need for safety when tackling new challenges and consider and manage some risks.</li> <li>To show understanding of how to transport and store equipment safely.</li> </ul> <u>EAD: Exploring and using media and materials -</u> <ul style="list-style-type: none"> <li>To understand that different media can be combined to create new effects.</li> </ul>	<u>EAD: Being Imaginative –</u> <ul style="list-style-type: none"> <li>To use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.</li> </ul>
Skill Progression	<u>Physical Development: Moving and Handling -</u> <ul style="list-style-type: none"> <li>To use one-handed tools and equipment, e.g. makes snips in paper with child scissors.</li> </ul> <u>UTW: Technology -</u> <ul style="list-style-type: none"> <li>To show an interest in technological toys with knobs or pulleys, or real objects.</li> <li>To show skill in making toys work by pressing parts or lifting flaps to achieve effects, such as sound, movements or new images.</li> </ul> <u>EAD: Exploring and using media and materials -</u> <ul style="list-style-type: none"> <li>To enjoy joining in with dancing and ring games.</li> <li>To begin to move rhythmically.</li> <li>To imitate movement in response to music.</li> <li>To tap out simple repeated rhythms.</li> </ul>	<u>Physical Development: Moving and Handling -</u> <ul style="list-style-type: none"> <li>To use simple tools to effect changes to materials.</li> <li>To handle tools, objects, construction and malleable materials safely and with increasing control.</li> </ul> <u>Physical Development: Health and Self-care -</u> <ul style="list-style-type: none"> <li>To practise some appropriate safety measures without direct supervision.</li> </ul> <u>EAD: Exploring and using media and materials -</u> <ul style="list-style-type: none"> <li>To explore what happens when they mix colours.</li> <li>To experiment to create different textures.</li> <li>To manipulate materials to achieve a planned effect.</li> <li>To construct with a purpose in mind, using a variety of resources.</li> <li>To use simple tools and techniques competently and appropriately.</li> </ul>	<u>Physical Development: Moving and Handling -</u> <ul style="list-style-type: none"> <li>To handle equipment and tools effectively, including pencils for writing.</li> </ul> <u>EAD: Exploring and using media and materials -</u> <ul style="list-style-type: none"> <li>To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function</li> </ul> <u>EAD: Being Imaginative –</u> <ul style="list-style-type: none"> <li>To use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.</li> </ul>

	<u>EAD: Being Imaginative –</u> <ul style="list-style-type: none"> <li>To develop preferences for forms of expression.</li> <li>To use movement to express feelings. To create movement in response to music.</li> </ul> <p>To capture experiences and responses with a range of media, such as music, dance and paint and other materials or words.</p>	<ul style="list-style-type: none"> <li>To select appropriate resources and adapt work where necessary.</li> <li>To select tools and techniques needed to shape, assemble and join materials they are using.</li> </ul> <p><u>EAD: Being Imaginative –</u></p> <ul style="list-style-type: none"> <li>To create simple representations of events, people and objects.</li> <li>To choose particular colours to use for a purpose</li> </ul>	
Metacognition/	<b>Classroom discussion</b>	<b>Cognitive task analysis</b>	<b>Jigsaw method</b>
<b>Year 1</b>	<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
Concept	<b>Community and Inheritance</b>	<b>Innovation and Sources</b>	<b>Trade and Exploration</b>
Knowledge	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>To know about the simple working characteristics of materials and components</li> <li>To know about movement of simple mechanisms such as levers, sliders, wheels and axels.</li> </ul>	<b>Textiles</b> <ul style="list-style-type: none"> <li>To know how to join fabrics with <b>glue</b>.</li> <li>To understand the properties of different fabrics.</li> </ul>	<b>Food technology</b> <ul style="list-style-type: none"> <li>To know how to use different kitchen equipment safely.</li> <li>To know that all food comes from plants or animals</li> <li>To know that everyone should eat at least five portions of fruit and vegetables every day.</li> </ul>
Skill Progression	<b>Generating Ideas</b> <ul style="list-style-type: none"> <li>Think of own ideas for design.</li> <li>Use pictures and words to plan.</li> <li>Design a product for myself, following design criteria.</li> </ul>		
	<b>Making</b> <ul style="list-style-type: none"> <li>Explain what is being made and why.</li> <li>Select appropriate tools and equipment for the purpose.</li> </ul>		
	<b>Evaluating</b> <ul style="list-style-type: none"> <li>Talk about pre-existing products, saying what is good or bad about them.</li> <li>Say whether their product does what it is meant to (fits the design brief) and how it could be improved.</li> </ul>		
	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>Use sheet materials and construction tools with appropriate supervision –</li> </ul>	<b>Textiles</b> <ul style="list-style-type: none"> <li>Cut, and then join textiles using <b>glue</b>.</li> <li>Decorate using a range of items (buttons, sequins, beads, ribbons etc), using <b>glue</b>.</li> </ul>	<b>Food technology</b> <ul style="list-style-type: none"> <li>Know how to peel, cut, grate, mix and mould foods (with close supervision).</li> </ul>

	various junk modelling equipment, scissors and glue/tape.		
Metacognition	Classroom discussion	Cognitive task analysis	Jigsaw method
Year 2	Autumn	Spring	Summer
Concept	Community and Inheritance	Innovation and Sources	Trade and Exploration
Knowledge	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>To know about the movement of simple mechanisms such as levers, sliders, wheels and axles</li> <li>To know how freestanding structures can be made stronger, stiffer and more stable</li> </ul>	<b>Food technology</b> <ul style="list-style-type: none"> <li>To know that food ingredients should be combined according to their sensory characteristics</li> <li>To know that food has to be farmed, grown elsewhere (e.g. home) or caught.</li> <li>To how to name and sort foods into the five groups in The Eatwell Plate.</li> </ul>	<b>Textiles</b> <ul style="list-style-type: none"> <li>To know that a 3-D textiles product can be assembled from two identical fabric shapes</li> <li>To know how to complete a <b>simple running stitch or over sewing</b>.</li> </ul>
Skill Progression	<b>Generating Ideas</b> <ul style="list-style-type: none"> <li>Think of own ideas and plan what to do next.</li> <li>Describe designs using pictures, diagrams, models, mock-ups, words and ICT.</li> <li>Design a product for myself and others, following design criteria.</li> </ul>		
	<b>Making</b> <ul style="list-style-type: none"> <li>Explain what is being made and why the audience will like it.</li> <li>Choose appropriate tools and equipment, describing and explaining why they are being used.</li> </ul>		
	<b>Evaluating</b> <ul style="list-style-type: none"> <li>Describe how their own and pre-existing products work, evaluating what went well and what could be done differently.</li> <li>Suggest what went well and what would be done differently when evaluating their own product.</li> </ul>		
	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>Use sheet materials and construction tools with appropriate supervision - <b>cardboard</b>, scissors and glue/tape.</li> </ul>	<b>Food Technology</b> <ul style="list-style-type: none"> <li>Know how to peel, cut, grate, mix and mould foods (with supervision).</li> </ul>	<b>Textiles</b> <ul style="list-style-type: none"> <li>Cut, then join textiles using a <b>simple running stitch or over sewing</b>.</li> <li>Decorate using a range of items (buttons, sequins, beads, ribbons etc).</li> </ul>
Metacognition	Classroom discussion	Cognitive task analysis	Jigsaw method
Year 3	Autumn	Spring	Summer
Concept	Community and Inheritance	Innovation and Sources	Trade and Exploration
Knowledge	<b>Food technology</b>	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>To know about movement of simple mechanisms such as levers and linkages.</li> </ul>	<b>Textiles</b> <ul style="list-style-type: none"> <li>To know what a seam allowance is.</li> </ul>

	<ul style="list-style-type: none"> <li>To know how to handle hot foods and equipment (<b>toasters/microwaves</b>) safely.</li> <li>To know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate.</li> <li>To know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world</li> </ul>	<ul style="list-style-type: none"> <li>To know how to use <b>saws</b> safely.</li> </ul>	<ul style="list-style-type: none"> <li>To know how to complete a <b>running stitch, over sewing and back stitching</b> or how to use <b>various fastenings (buttons etc)</b>.</li> </ul>
Skill Progression	<b>Generating Ideas</b> <ul style="list-style-type: none"> <li>Create a design that meets a range of requirements.</li> <li>Consider the equipment and tools needed when planning</li> <li>Describe a design using an accurately labelled diagram, and in words.</li> </ul>		
	<b>Making</b> <ul style="list-style-type: none"> <li>Use a range of tools and equipment accurately.</li> <li>Measure, mark out, assemble and join materials and components with accuracy.</li> </ul>		
	<b>Evaluating</b> <ul style="list-style-type: none"> <li>Evaluate own and pre-existing products.</li> <li>Suggest what could be changed to improve a design, beginning to link this to the design brief.</li> </ul>		
	<b>Food Technology</b> <ul style="list-style-type: none"> <li>Know how to peel, cut, grate, mix, mould and begin to cook foods (<b>using toasters and microwaves</b> with supervision).</li> </ul>	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>Use sheet materials and construction tools with appropriate supervision – <b>wood, saws, glue/tape</b>.</li> </ul>	<b>Textiles</b> <ul style="list-style-type: none"> <li>Cut, then join textiles using a <b>running stitch, over sewing, back stitch or fastenings</b>.</li> </ul>
Metacognition	<b>Classroom discussion</b>	<b>Cognitive task analysis</b>	<b>Jigsaw method</b>
<b>Year 4</b>	<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
Concept	<b>Community and Inheritance</b>	<b>Innovation and Sources</b>	<b>Trade and Exploration</b>
Knowledge	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>To know about movement of simple mechanisms such as levers and linkages.</li> <li>To know how to use a <b>glue gun</b> safely.</li> </ul>	<b>Textiles</b> <ul style="list-style-type: none"> <li>To know that a single fabric shape can be used to make a 3D textiles product</li> <li>To understand about different decoration techniques (e.g. applique).</li> </ul>	<b>Food technology</b> <ul style="list-style-type: none"> <li>To know that food ingredients can be fresh, pre-cooked and processed</li> </ul>

	<ul style="list-style-type: none"> <li>To know how to make strong, stiff shell structures.</li> <li></li> </ul>		<ul style="list-style-type: none"> <li>To know that to be active and healthy, food and drink are needed to provide energy for the body.</li> </ul>
Skill Progression	<b>Generating Ideas</b> <ul style="list-style-type: none"> <li>Generate more than one idea for how to create a product.</li> <li>Gather information to help design a successful product (e.g. asking others' views).</li> <li>Produce a detailed plan with labelled diagrams, a written explanation and a step-by-step guide.</li> <li>Suggest improvements to develop and refine a planned idea.</li> </ul>		
	<b>Making</b> <ul style="list-style-type: none"> <li>Use a range of tools and equipment with accuracy.</li> <li>Measure, mark out, join, assemble materials and components with accuracy.</li> </ul>		
	<b>Evaluating</b> <ul style="list-style-type: none"> <li>Evaluate the appearance and usability of own and pre-existing products.</li> <li>Explain how the original design could be improved, considering the appearance and usability and linking this to the design brief.</li> </ul>		
	<b>Food Technology</b> <ul style="list-style-type: none"> <li>Know how to peel, cut, grate, mix, mould and begin to cook foods (<b>using toasters and microwaves</b> with supervision).</li> </ul>	<b>Textiles</b> <ul style="list-style-type: none"> <li>Cut, then join textiles using a <b>running stitch, over sewing, back stitch or fastenings</b>.</li> <li>To create simple patterns and appropriate decoration techniques (e.g. applique).</li> </ul>	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>Use sheet materials and construction tools with appropriate supervision – wood, <b>saws, glue</b> (inc <b>glue guns</b> with support)/<b>tape</b>.</li> </ul>
Metacognition	<b>Classroom discussion</b>	<b>Cognitive task analysis</b>	<b>Jigsaw method</b>
<b>Year 5</b>	<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
Concept	<b>Community and Inheritance</b>	<b>Innovation and Sources</b>	<b>Trade and Exploration</b>
Knowledge	<b>Textiles</b> <ul style="list-style-type: none"> <li>To know how to use a fabric pattern.</li> <li>To understand the importance of pinning and tacking fabrics.</li> </ul>	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>To know how mechanical system such as cams, pulleys or gears create movement.</li> <li>To know how to use <b>hammers and nails</b> safely.</li> <li>To know how to reinforce and strengthen a 3D framework.</li> </ul>	<b>Food technology</b> <ul style="list-style-type: none"> <li>To know how to use an <b>oven</b> safely.</li> <li>To know that seasons may affect the food available.</li> <li>To know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health</li> </ul>
Skill Progression	<b>Generating Ideas</b> <ul style="list-style-type: none"> <li>Generate a range of ideas after collating relevant information</li> <li>Produce a detailed plan with step-by-step instructions, cross sectional diagrams and prototypes.</li> <li>Suggest alternative plans, considering the positive aspects and drawbacks of each.</li> </ul>		

	<b>Making</b> <ul style="list-style-type: none"> <li>Use a range of tools and equipment expertly.</li> <li>Consider the aesthetic qualities and functionality of my work when making.</li> </ul>		
	<b>Evaluating</b> <ul style="list-style-type: none"> <li>Evaluate the appearance and function of a product (own and pre-existing) against the original criteria, saying whether it is fit for purpose.</li> <li>Suggest improvements that could be made, considering materials and methods that have been used.</li> </ul>		
	<b>Textiles</b> <ul style="list-style-type: none"> <li>Pin and tack fabrics, use patterns and seam allowances and join fabrics to make products.</li> </ul>	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>Use sheet materials and construction tools with appropriate supervision – wood, <b>saws, nails, hammers.</b></li> </ul>	<b>Food Technology</b> <ul style="list-style-type: none"> <li>Cut, mix, mould and use <b>ovens</b> to heat food, with appropriate supervision.</li> </ul>
Metacognition	<b>Classroom discussion</b>	<b>Cognitive task analysis</b>	<b>Jigsaw method</b>
<b>Year 6</b>	<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
Concept	<b>Community and Inheritance</b>	<b>Innovation and Sources</b>	<b>Trade and Exploration</b>
Knowledge	<b>Textiles</b> <ul style="list-style-type: none"> <li>To know that a 3D textiles product can be made from a combination of fabric shapes.</li> </ul>	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>To know how mechanical system such as cams, pulleys or gears create movement.</li> <li>To know that mechanical and electrical systems have an input, process and output.</li> <li>To know how simple electrical circuits and components can be used to create functional products.</li> <li>To know how to use <b>saws, hammers, drills, nails and screws</b> safely.</li> </ul>	<b>Food technology</b> <ul style="list-style-type: none"> <li>To know how to use a <b>hob</b> safely.</li> <li>To know that a recipe can be adapted by adding or substituting one or more ingredients.</li> <li>To know how food is processed into ingredients that can be eaten or used in cooking.</li> <li>To know that recipes can be adapted to change the appearance, taste, texture and aroma.</li> </ul>
Skill Progression	<b>Generating Ideas</b> <ul style="list-style-type: none"> <li>Use a range of information to inform design (e.g. market research using surveys, interviews, questionnaires or web-based resources).</li> <li>Produce a detailed plan, with cross-sectional diagrams and computer generated designs.</li> <li>Work within constraints, refining and justifying plans as necessary.</li> </ul>		
	<b>Making</b> <ul style="list-style-type: none"> <li>Use a range of tools and equipment precisely.</li> <li>Consider the aesthetic qualities and functionality of my product as making it, refining details as necessary.</li> </ul>		
	<b>Evaluating</b> <ul style="list-style-type: none"> <li>Evaluate the appearance and test the function of a product (own and pre-existing) against the original criteria, saying whether it is fit for purpose.</li> <li>Suggest improvements that could be made, considering materials, methods, sustainability of the product and how much a product costs to make.</li> </ul>		

	<b>Textiles</b> <ul style="list-style-type: none"> <li>Pin and tack fabrics, use patterns and seam allowances and join fabrics to make quality products.</li> </ul>	<b>Construction/mechanisms</b> <ul style="list-style-type: none"> <li>Use sheet materials and construction tools with appropriate supervision – wood, <b>saws, hammers, drills, nails and screws.</b></li> <li>To use simple electrical circuits and components in the product.</li> </ul>	<b>Food Technology</b> <ul style="list-style-type: none"> <li>Cut, mix, mould and use <b>hobs</b> to heat food, developing independence with this as appropriate.</li> </ul>
Metacognition	<b>Classroom discussion</b>	<b>Cognitive task analysis</b>	<b>Jigsaw method</b>