



Skills	F.S	Year 1	Year 2	Year 3
<b>Mechanisms</b>	<p>Early experiences of working with paper and card to make simple flaps and hinges. • Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.</p> <p>Designing • Talk about what they want to make and how they might make it.</p> <p>Making • Plan by suggesting what to do next. • Select and use tools, explaining their choices, to cut, shape and join paper and card. • Use simple finishing techniques suitable for the product they are creating.</p> <p>• Evaluate their product by discussing how well</p>	<p><b>Sliders and Levers Investigative and Evaluative Activities (IEAs)</b> Children explore and evaluate a collection of books and everyday products that have moving parts, including those with levers and sliders. e.g. What is it? Who is it for? What is it for? • Use questions to develop children's understanding e.g. What do you think will move? How will you make it move? What part of the product moved and how did it move? How do you think the mechanism works? What else could move in the product? How well does it work? • Introduce and develop vocabulary e.g. lever, pivot, slider, left, right, push, pull, up, down, forwards, backwards, in, out.</p> <p>Focused Tasks (FTs) • Demonstrate simple levers and sliders to the children using prepared teaching aids. It is helpful if these are also used in context e.g. the slider is used to show a snail appearing from behind a stone, the lever is used to show a butterfly flying to a flower. • Use questions to develop children's</p>	<p><b>Wheels and Axels Investigative and Evaluative Activities (IEAs)</b> Explore and evaluate a range of wheeled products such as toys and everyday objects. Through questioning, direct children's observations e.g. the number, size, position and methods of fixing wheels and axles. How do you think the wheels move? How do you think the wheels are fixed on? Why do you think the product has this number of wheels? Why do you think the wheels are round? • Draw an example of a wheeled product, stating the user and purpose, and labelling the main parts e.g. body, chassis, wheels, axles and axle holders. • Walk around the school building and grounds, recording how wheels and axles are used in daily life. • Read a story or non-fiction book that includes a wheeled product. Use this to introduce relevant vocabulary and to emphasise user and purpose.</p> <p>12. Focused Tasks (FTs) • Using construction kits with wheels and axles, ask children to make a product that moves. • Demonstrate</p>	<p><b>Designing</b></p> <ul style="list-style-type: none"> <li>•Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</li> <li>•Describe the purpose of their products.</li> <li>•Indicate the design features of their products that will appeal to intended users.</li> <li>•Explain how particular parts of their products work.</li> <li>•Develop their own design criteria and use these to inform their ideas.</li> <li>•Consider the intended user and purpose of the design.</li> <li>•Share and clarify ideas through discussion.</li> <li>•Use computer-aided design to develop and communicate their ideas.</li> <li>•Make design decisions that take account of the availability of resources.</li> <li>•Understand how well products have been designed, what materials have been used and the construction technique.</li> <li>•Start to understand whether products can be recycled or reused.</li> <li>•Know to make drawings with labels when designing.</li> </ul>

<p><b>Mechanisms Ctd.</b></p>	<p>it works in relation to the purpose. Did it turn out as you had planned?</p>	<p>understanding e.g. How does the slider move? How does the lever move? Which part of the mechanism is the pivot? What does the movement of the slider and lever remind you of? • Following teacher demonstration of the correct use of tools and materials, children should develop their knowledge and skills by replicating the slider and lever teaching aids. Encourage children to add pictures to their mechanisms. Discuss with the children what they will be designing, making and evaluating e.g. Who will your product be for? What will be its purpose? How do you want it to move? Will you use a lever or a slider? • Generate simple design criteria with the children e.g. the mechanism should work smoothly, it should make the right type of movement. • Encourage the children to develop their ideas through talking, drawing and making mock-ups of their ideas with paper and card. • Discuss the finishing techniques the children might use e.g. using digital text and graphics, paint, felt tipped pens or collage. • As a whole class, talk about the order in which the mechanisms will be made. • Ask children to evaluate their</p>	<p>to children how wheels and axles may be assembled as either fixed axles or free axles. • Show different ways of making axle holders and stress the importance of making sure the axles run freely within the holders. • Ensure that children are taught how to mark out, hold, cut and join materials and components correctly. • Using samples of materials and components they will use when designing and making, ask the children to assemble some examples of wheel, axle, axle holder combinations. Display the work completed as a reference for their DMEA. Discuss with the children what they will be designing, making and evaluating within an authentic context. • With the children identify a user and purpose for the product and generate simple criteria. • Ask children to generate, develop and communicate their ideas as appropriate e.g. through talk and drawing. Talk about, evaluate and share ideas with other children/adults. • Make their wheel and axle product using their design ideas and criteria as an ongoing guide. • Discuss how the children might add finishing techniques to their product with reference to their design ideas and criteria. Direct the</p>	<p>•When planning explain their choice of materials and components including function and aesthetic.  <b>Making</b>  *Use learning from science and maths to help design and make products that work.  *Know that materials have both functional properties and aesthetic qualities.  *Know that materials can be combined and mixed to create more useful characteristics.  *Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components.  *Measure, mark out, cut, assemble, join and shape materials and components with some accuracy.  *Order the stages of making.  *Explain their choice of tools and equipment.  *Know how to make strong, stiff shell structures.  *Know how to reinforce and strengthen a 3D framework.  *Learn that a single fabric shape can be used to make a 3D textiles product.  (SEE ART SKILLS PROGRESSION)</p>
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<b>Mechanisms Ctd.</b>		developing ideas and final products against the original design criteria	children to information and communication technology opportunities such as clip art, word processing, paint or simple drawing programs. • Ask children to evaluate their finished product, communicating how it works and how it matches their design criteria, including any changes they made.	<p>*Start to measure, tape or pin, cut and join fabric with some accuracy. Know how mechanical systems such as cams or pulleys or gears create movement. – See Science</p> <p><b>Evaluating</b></p> <ul style="list-style-type: none"> <li>• <b>Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose</b></li> <li>• <b>Begin to disassemble and evaluate familiar products</b> <ul style="list-style-type: none"> <li>○ <b>How well has it been made?</b></li> <li>○ <b>Why have materials been chosen?</b></li> </ul> </li> </ul> <p><b>How has it been made?</b></p>
<b>Structures</b>	Experience of using construction kits to build walls, towers and frameworks. • Experience of using of basic tools e.g. scissors or hole punches with construction materials Experience of different methods of joining card and paper. Designing • Talk about what they want to make and how they might make it. Making • Plan by suggesting what to	Investigative and Evaluative Activities (IEAs) • Go on a walk and/or look at photographs of the local area to explore structures such as playground equipment, street furniture, walls, towers and bridges e.g. What are the structures called and what is their purpose? Who might use them? What materials have been used? Why have these been chosen? How have the parts been joined together? How have the structures been made strong enough? How have they been made stable? • Where possible, ask the children to draw or photograph the structures they have been exploring and label with the correct technical vocabulary in relation to the structure, materials used and		

<p><b>Structures Ctd.</b></p>	<p>do next. • Select and use tools, skills and techniques, explaining their choices. • Select new and reclaimed materials and construction kits to build their structures. • Use simple finishing techniques suitable for the structure they are creating.</p> <p><i>Evaluating</i> • Evaluate their product by discussing how well it works in relation to the purpose. Did it turn out as you had planned?</p>	<p>shapes e.g. wall, tower, framework, base, joint, metal, wood, plastic, brick, triangle, square, rectangle, cuboid, cube.</p> <p>Focused Tasks (FTs) • Demonstrate measuring, marking out, cutting, shaping, joining and finishing techniques with a range of tools and new and reclaimed materials that children are likely to use to make their structures. Discuss the suitability of materials for their products according to their characteristics. • Ask the children to build and explore a variety of freestanding structures using construction kits, such as wooden blocks, interconnecting plastic bricks and those that make frameworks e.g. How can you stop your structures from falling over? How they can be made stronger and stiffer in order to carry a load? Children could make models of the structures they have seen in school and the local area. • Ask children to fold paper or card in different ways to make freestanding structures, using masking tape where necessary to make joins. Encourage them to think about how folding materials can make them stronger, stiffer, stand up and be more stable e.g. Can they support</p>		
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<b>Structures Ctd.</b>		<p>an object on top of their structures without it falling over or breaking? Discuss with the children what structure they will be designing, making and evaluating e.g. Who will your product be for? What will be its purpose? What materials will you use? How will you make it strong and stable? • Generate some simple design criteria with the children e.g. the structure should stand up on its own, it should be strong enough to carry Teddy. • Encourage the children to develop their ideas through talking, drawing and making mock-ups of their ideas with construction kits and other materials. • As a whole class, plan the order in which the structures will be made. Children could make their final products from construction kits, new and reclaimed materials or any combination of these, according to their characteristics. • Ask children to evaluate their developing ideas and final products against original design criteria</p>		
<b>Templates and joining</b>	<p>Explored and used different fabrics. • Cut and joined fabrics with simple techniques. • Designing • Talk about what they</p>		<p>Investigative and Evaluative Activities (IEAs) • Children investigate and evaluate existing products linked to the chosen project. Explore and compare e.g. fabrics, joining techniques, finishing techniques and fastenings used. •</p>	

<p><b>Templates and joining ctd.</b></p>	<p>want to make and how they might make it.</p> <p>Making • Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining</p> <p>Evaluating • Evaluate their product by discussing how well it works in relation to the purpose. Did it turn out as you had planned?</p>		<p>Use questions to develop children's understanding e.g. How many parts is it made from? What is it joined with? How is it finished? Why do you think these joining techniques have been chosen? How is it fastened? Who might use it and why? • Make drawings of existing products, stating the user and purpose. Identify and label, if appropriate, the fabrics, fastenings and techniques used.</p> <p>Focused Tasks (FTs) • Investigate fabrics to determine which is best for the purpose of the product they are creating. • Using prepared teaching aids, demonstrate the use of a template or simple paper pattern. Children could make their own templates or paper patterns. If necessary, they can use ones provided by the teacher. • Using prepared teaching aids, demonstrate the correct use of appropriate tools to mark out, tape or pin the fabric to the templates or paper patterns and cut out the relevant fabric pieces for the product. • Using prepared teaching aids, demonstrate appropriate examples of joining techniques for children to practise in guided groups e.g. running stitch including threading own needle, stapling, lacing and gluing. Talk about the advantages and disadvantages of each technique. •</p>	
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**Templates and joining ctd.**

Using prepared teaching aids, demonstrate examples of finishing techniques for children to practise in guided groups e.g. sewing buttons, 3-D fabric paint, gluing sequins, printing.

Provide the children with a context that is authentic. Discuss with children the purpose and user of the products they will be designing, making and evaluating. Design criteria developed with the teacher should be used to guide the development and evaluation of the children's products.

- Ask the children to generate a range of ideas e.g. What parts will the product need to have and what will it be made from? What size will it be? How will it be joined and finished?
- Through talk, drawings and mock-ups, ask the children to develop and communicate their ideas. Information and communication technology could be used for symmetry and pattern ideas. Choose one idea to follow through.
- Talk with the children about the stages in making before assembling quality products, applying the knowledge, understanding and skills learnt through the IEAs and FTs.
- Evaluate ongoing work and the final products against the intended purpose and with the intended user,

<b>Templates and joining ctd.</b>			drawing on the design criteria previously agreed.	
<b>Food</b>	<p>Explored common fruit and vegetables, trying testing different foods.</p> <ul style="list-style-type: none"> <li>• Been involved in baking activities</li> </ul> <p>Designing • Talk about what they want to make and how they might make it .e.g a sandwich filling</p> <p>Making • Select from and use a range of tools and equipment to perform practical tasks such as mixing, and spreading</p> <p>Evaluating • Evaluate their product by discussing how well it works in relation to the purpose. Did it turn out as you had planned?</p>	<p>Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance taste and smell. • Experience of cutting soft fruit and vegetables using appropriate utensils.</p> <p>Designing • Design appealing products for yourself based on simple design criteria. • Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. • Communicate these ideas through talk and drawings.</p> <p>Making • Use simple utensils and equipment to e.g. cut, slice, squeeze, and chop safely. • Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.</p> <p>Evaluating • Taste and evaluate a range of fruit and vegetables to determine the your preferences. • Evaluate ideas and finished products against design criteria, including intended user and purpose.</p>	<p>Investigative and Evaluative Activities (IEAs) • Children examine a range of fruit/vegetables. Use questions to develop children's understanding e.g. What is this called? Who has eaten this fruit/vegetable before? Where is it grown? When can it be harvested? What are its taste, smell, texture and appearance? What will it look like if we peel it or cut it in half? What are the different parts called? • Provide opportunities for children to handle, smell and taste fruit and vegetables in order to describe them through talking and drawing. e.g. What words can we use to describe the shape, colour, feel, taste? • Evaluate existing products to determine what the children like best; provide opportunities for the children to investigate preferences of their intended users/suitability for intended purposes e.g. What do you prefer and why? What might we want to include in our product to meet our user's preferences? Which fruit/vegetables might be the best for our product to match the occasion/purpose?</p>	

<p><b>Food ctd.</b></p>		<p>Technical knowledge and understanding • Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. • Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate. • Know and use technical and sensory vocabulary relevant to the project.</p>	<p>Focused Tasks (FTs) • Discuss basic food hygiene practices when handling food including the importance of following instructions to control risk e.g. What should we do before we work with food? Why is following instructions important? • Demonstrate how to use simple utensils and provide opportunities for the children to practise food processing skills such as washing, grating, peeling, slicing, squeezing, chopping e.g. Do we eat the whole fruit? Why or why not? Which parts do we eat? What might we have to do before eating this? Why do we cut, grate, peel and slice in this way? Discuss different effects achieved by different processes. • Discuss healthy eating advice, including eating more fruit and vegetables; using The eatwell plate model talk about the importance of fruit and vegetables in our balanced diet e.g. Why is it good to eat fruit and vegetables? How many pieces of fruit/vegetables do you eat per day? Why is it important to wash fruit/vegetables before we eat them? Design, Make and Evaluate Assignment (DMEA) • Set a context for designing and making which is authentic and meaningful. • Discuss with the children the possible products that they might want to</p>	
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<b>Food ctd.</b>			<p>design, make and evaluate and who the products will be for. Agree on design criteria that can be used to guide the development and evaluation of children's products e.g. Who/what is the product for? What will make our product unique/different? How will we know that we designed and made a successful product? • Use talk and drawings when planning for a product; ask the children to develop, model and communicate their ideas e.g. What will you need? What fruit/vegetable will you need? How much will you need? How will you present the product? • Talk to the children about the main stages in making, considering appropriate utensils and food processes they learnt about through IEAs and FTs. • Evaluate as the children work through the project and the final products against the intended purpose and with the intended user, drawing on the design criteria previously agreed.</p>	
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