St Peter's CE (VA) Primary School

Skills Progression Map - DT

Objectives	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Developing, planning and communicating ideas.	**How are ideas planned?** Through questioning, visual examples and discussions.	**How are ideas planned?** Draw on their own experience to help generate ideas. Suggest ideas and explain what they are going to do. Develop their design ideas applying findings from their earlier research more as a whole class.	**How are ideas planned?** Generate ideas by drawing on their own and other people's experiences. Develop their design ideas through discussion, observation, drawing and modelling. Identify a purpose for what they intend to design and make. Identify simple design criteria Make simple drawings and label parts.	**How are ideas planned?** Generate ideas for an item, considering its purpose and the design brief. Identify a purpose and establish criteria for a successful product. Begin to do market research to identify the best product. Explore, develop and communicate design proposals by modelling ideas. Make drawings with labels when designing.	**How are ideas planned?** Generate ideas, considering the purposes for which they are designing according to the design brief. Evaluate products and identify criteria that can be used for their own designs. Begin to develop criteria for market research. Make labelled drawings of several designs. Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.	**How are ideas planned?** Generate ideas through brainstorming and identify a purpose for their product. Use the design brief and research to plan the specification for their design. Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail. Use results of investigations, information sources, including ICT when developing design ideas	**How are ideas planned?** Research ideas independently and brainstorm ideas identifying the purpose of their product. Plan and carry out their own market research. Communicate their ideas through detailed labelled drawings from different angles with close ups of specific areas, dimensions and materials. Develop a design specification through their designs. Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways. Plan the order of their work, choosing appropriate materials, tools and techniques.	**How are ideas planned?** - Use research and exploration, such as the study of different cultures, to identify and understand user needs. - Identify and solve their own design problems and understand how to reformulate problems given to them - Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations - Use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses - Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools.
Working with tools, equipment, materials and components to make quality products (including food)	**How can I make my product?** Pupils begin to develop an understanding or how to use tools such as rolling pins, playdough cutters, scissors, tape and glue to combine materials together with help from an adult. Pupils follow teacher demonstrations	**How can I make my product?** Make their design using appropriate techniques. **What pupils need to know:** With help, pupils need to measure, mark out, cut and shape a range of materials. Use tools eg scissors and a hole punch safely before using these. An adult can assist with this if needed.	**How can I make my product?** Begin to select tools and materials; use vocab' to name and describe them. **What pupils need to know:** Pupils need to be shown how to measure but with guidance. Pupils need to know how to cut using scissors with more accuracy. They need to know how to use tools and these need to be demonstrated	**How can I make my product?** Select tools and techniques for making their product. **What pupils need to know:** Pupils need to know how to to measure and mark out using a ruler and pencil. They need to be shown how to cut, score and assemble components with more accuracy and independence. Pupils need to be shown the cut and	**How can I make my product?** Select appropriate tools and techniques for making their product. **What pupils need to know:** Pupils need to know how to measure in cm and how to mark out accurately. Pupils need to know how to use cutting tools safely. Pupils need to understand how to do a cut and slot join technique in cardboard and also make and use a cardboard hinge.	**How can I make my product?** Select appropriate materials, tools and techniques. **What pupils need to know:** Pupils need to know how to measure and mark out accurately to the nearest mm. They need to be reminded of how to mark out, score and cut different materials safely and accurately. They need to be able to attach using the cut and slot, cardboard hinges	**How can I make my product?** Select appropriate tools, materials, components and techniques. **What pupils need to know:** Pupils need to know how to measure and mark accurately to the nearest mm. They need to be able to score, cut and find a range of ways of attaching. Pupils needed to apply their knowledge of joints in cardboard such as, cut and slot, slot and tabs, hinges and flange techniques to	**How can I make my product?** - Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture - Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties. - Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions. - Understand how more advanced mechanical systems used in their products enable changes in movement and force - Understand how more advanced electrical and electronic systems can be powered and used in their

		Skills Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. Use simple finishing techniques to improve the appearance of their product.	and at times assisted by an adult. **Skills** Use hand tools safely and appropriately with guidance. Assemble, join and combine materials in order to make a product. Cut, shape and join fabric to make a simple product. Use basic sewing techniques. Follow safe procedures for food safety and hygiene. Choose and use appropriate finishing techniques.	slot technique of attaching cardboard. **Skills** Work safely and accurately with a range of simple tools. Think about their ideas as they make progress and be willing change things if this helps them improve their work. Measure, tape or pin, cut and join fabric with some accuracy. Demonstrate hygienic food preparation and storage. Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT.	**Skills** Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques more independently. Join and combine materials and components accurately in temporary and permanent ways. Sew using a range of different stitches, weave and knit. Measure, tape or pin, cut and join fabric with some accuracy. Use simple graphical communication techniques.	and slot and tabs techniques. **Skills** Use skills in using different tools and equipment safely and accurately with more independence. Weigh and measure accurately (time, dry ingredients, liquids) Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens. Cut and join with accuracy to ensure a good- quality finish to the product.	create curves in cardboard. **Skills** Assemble components make working models. Use tools safely and accurately and independently. Construct products using permanent joining techniques. Make modifications as they go along. Pin, sew and stitch materials together create a product. Achieve a quality product.	products [for example, circuits with heat, light, sound and movement as inputs and outputs] - Apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers]. - Understand and apply the principles of nutrition and health - Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet - Become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] - Understand the source, seasonality and characteristics of a broad range of ingredients.
Evaluating processes and products	**How can products be evaluated?** Through questioning and discussions. Using a plan, do review technique.	**How can products be evaluated?** Evaluate their product by discussing how well it works in relation to the purpose. Evaluate their products as they are developed, identifying strengths and possible changes they might make. Evaluate their product by asking questions about what they have made and how they have gone about it.	**How can products be evaluated?** Evaluate against their design criteria. Evaluate their products as they are developed, identifying strengths and possible changes they might make. Talk about their ideas, saying what they like and dislike about them	**How can products be evaluated?** Evaluate their product against original design brief e.g. how well it meets its intended purpose. Think about how things that work well and why. How could it be improved.	**How can products be evaluated?** Evaluate their work at the end of the unit but also ongoing evaluation to make improvements and solve problems. Evaluate what works well in their design and problems they overcame.	**How can products be evaluated?** Evaluate a product against the original design brief. Evaluate it personally and seek evaluation from others. Identify problems their overcame. Think of ways that their product would be even more appealing and meet the design brief more successfully.	**How can products be evaluated?** Evaluate their products, identifying strengths and areas for development. Evaluate the products of others throughout the unit and provide feedback to their peers. Identify problems they overcame. Evaluate against their own design brief and suggest ways that their product could be improved to be more appealing and successful.	**How can products be evaluated?** - Analyse the work of past and present professionals and others to develop and broaden their understanding. - Investigate new and emerging technologies test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups. - Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.