Bincombe Valley Primary School

Design & Technology Medium Term Plans

Years 5 and 6 Units		Golden Threads:
Electrical Systems: Doodlers **Mechanical Systems:** Making a pop-up book **Cooking and Nutrition:** Developing a recipe	**Textiles:** Waistcoats **Structure:** Playgrounds **Digital World:** Navigating the world	Design Make Evaluate Technical knowledge

Composites	Enquiry Theme	Components	Golden Threads Links	Assessment
Electrical Systems	Doodlers	1. I know how motors are used in electrical products 2. I can investigate and existing product to determine the factors that affect the product's form and function. 3. I can apply the findings from research to develop a unique product. 4. I know how to develop a DIY kit for another individual to assemble their product.		1. Identify simple circuit components and explain what a series circuit is. 2. Determine which parts of product affect its function and

		Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/electrical-systems-doodlers/	**Design:** Use a range of existing designs to look at how they are made. Design on the recording sheets, thinking about purpose, user and each stage of the process. **Make:** Using taught techniques, carefully construct each project **Evaluate:** Has my project done what it was designed to do? How could I	form by taking it apart and reassembling it. 3. Conduct an investigation and design a circuit incorporating a motor. 4. Explain how to build an electrical system for my product including list of materials, equipment and components required explaining steps required to assemble correctly.
Mechanical Systems	Making a pop-up book	1. I can design a pop-up book. 2. I know how to follow my design brief to make my pop-up book. 3. I know how to use layers and spacers to cover the working of mechanisms. 4. I can create a high-quality product suitable for a target user. Link to lesson prompts and vocabulary:		1. Remember terms input and output, knowing that structures use movement of the pages to work. 2. Use paper, card and glue to

		https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/mechanical-systems/option-1-gears-and-pulleys/	improve on the design? **Technical knowledge:** Did I use my knowledge of techniques and design to the best effect? What new techniques, tools or vocabulary do I now know how to use?	make book structure and make mechanisms as detailed in design template by using sliders, pivots and folds to produce movements. 3. Complete mechanisms and structures as detailed in design template, making book look neater and more attractive using layers and spacers. 4. Complete a pop-up book by adding story through pictures and captions which are neat, accurate and securely assembled.

Cooking and Nutrition	Developing a recipe	1. I know how ingredients are grown, reared and processed. 2. I can make adaptions to design a recipe. 3. I know how to evaluate nutritional content. 4. I can practice food preparation skills. 5. I can design a product label. 6. I know how to follow and make an adapted recipe. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/new-cooking-and-nutrition-developing-a-recipe/	1. Identify ingredients in spaghetti Bolognese and create informative poster explaining journey of beef. 2. Compare two sauces and plan using research an adaptation for a recipe. 3. Use nutrition calculator comparing values and using to make ingredient choices to modify recipe. 4. Cut foods safely and understand safety working with hot food and avoid cross-contamination. 5. Measure and cut to fit dimensions for a label thinking about colours, ingredients and content of jar. 6. Use a recipe to gather correct

			quantities and select equipment for each preparation.
Textiles	Waistcoats	1. I know how to design a waistcoat. 2. I can mark and cut fabric according to a design. 3. I can assemble a waistcoat 4. I can decorate a waistcoat. 5. I can evaluate my waistcoat design and suggest improvements. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/textiles-waistcoats/	1. Annotate designs for clothing to criteria. 2. Compare design and template marking out the outline of panels for waistcoat and cutting neatly and accurately. 3. Sew a strong running stitch, ensuring they are small, neat and follow the edge and tie with strong knots to secure the thread in place. 4. Secure fastening and attach objects for decoration using thread. 5. Evaluate work according to criteria.

Structure	Playgrounds	1. I can design a playground with a variety of structures 2. I know how to build a range of structures 3. I can improve and add detail to structures. 4. I can create a surrounding landscape. 5. I can evaluate my playground design and suggest ways to improve it. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/structure-playgrounds/		1. Identify structures on playground and design 5 different pieces using 3 different structures. 2. Explain that structures can be strengthened by manipulating materials and shapes. 3. Measure, mark, cut and shape wood to create a structure. 4. Use a range of materials to reinforce and add decoration to my structures. 5. Attach structures to a base reinforcing the join where necessary and creating landscape features using

				range of materials.
Digital World	Navigating the world	1. To write a design brief and criteria based on a client request. 2. Write a program to include multiple functions as part of a navigation device 3. To develop a sustainable product concept 4. To develop 3D CAD skills to produce a virtual model. 5. To present a pitch to sell product to a specified client. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/digital-world-navigating-the-world/		1. Write a design brief from information from a client and develop design criteria for their wishes. 2. Program a cardinal compass and explain the key functions in my program including additions explaining how program fits design criteria. 3. Consider materials and properties including sustainability. 4. Place and manoeuvre 3D objects using CAD combining one or more 3D objects to

				produce a 3d CAD model. 5. During presentation explain key functions of navigation tool, explain material choices and how product fits the clients request.