Bincombe Valley Primary School

Design Technology Medium Term Plans

Years 3 and 4 units		Golden Threads:
Digital World: Wearable technology **Cooking and Nutrition:** Eating seasonally **Structures:** Constructing a castle	**Structures:** Pavilions **Mechanical systems:** Making a slingshot car **Electrical systems:** Torches	Design Make Evaluate Technical knowledge

Long Term Plans	Enquiry Theme	Objectives	Golden Threads Links	Assessment
Digital World	Wearable technology	1. I can research and evaluate existing products. 2. I know how to develop design criteria 3. I can use code to program and control a product 4. I can develop and communicate my ideas 5. I can develop ideas through computer-aided design 6. I know how to improve a design based on feedback Link to lesson prompts and vocabulary:		1. Give reasons why a product is useful and why someone would find it useful. 2. Make decisions about who will use my product and what it will do.

		https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/digital-world-wearable-technology/	**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	3. Write a code for a function checking for errors. 4. Draw my product annotating its features. 5. Follow simple design and use Sketchpad to complete a computer aided design. 6. Form opinions about a product in a discussion.
Cooking and Nutrition	Eating Seasonally	1. I can explain why food comes from different places around the world. 2. I can explain the benefits of seasonal food. 3. I know how to develop cutting and peeling skills. 4. I know how to evaluate seasonal ingredients. 5. I can design a mock up using criteria 6. I can evaluate a dish. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/cooking-and-nutrition-eating-seasonally/		1. Identify fruits and vegetables not grown in U.K and label where they are grown. 2. Understand impact of importing food on environment and identify foods grown in each season of U.K. 3. Identify equipment for

			Evaluate: Has my project done what it was designed to do? How could I 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?	preparing food and use safely. 4. Taste various foods and contribute to a taste wheel. 5. Design a puff pastry tart and describe it with the benefits of it's seasonal ingredients. 6. Consider taste, texture and appearance as criteria for evaluating food.
Structures:	Constructing a castle	1. I can recognise how 2D and 3D shapes are combined to form strong and stable structures. 2. I can design a castle 3. I know how to construct 3D nets. 4. I can construct and evaluate my final product. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/structures-constructing-a-castle/		1. Design and label features of a castle to make it strong and stable. 2. Complete a design sheet including: 2 design points to appeal to a person/purpose 3. Draw the design using 2d shapes that will create 3d features and the

				materials and colours used. 4. Successfully use nets to make 3D shapes by cutting, folding, using tabs, and sticking with glue. 5. Judge the success of castle based on the design brief including neatness of 3d shapes, stability and strength and the decoration to create features of castle.
Structures	Pavilions	1. I can create a range of different shaped frame structures. 2. I know how to design a structure 3. I can build a frame structure 4. I can add cladding to a frame structure. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/structure-pavilions/		1. Make a variety of frame structures and what a pavilion is used for. 2. Understand that different materials create different effects and to pick ones for stability and aesthetically pleasing

				3. Refer to design sheet to build a free standing pavilion selecting appropriate materials. 4. Reinforce corners to strengthen structure. 5. Add cladding which reflects the design of pavilion.
Mechanical systems	Making a slingshot car	1. I know how to build a car chassis. 2. I know how to design a shape that reduces air resistance 3. I can make a model based on a chosen design. 4. I know how to assemble and test my completed product. 5. I can evaluate my product and suggest improvements. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/mechanical-systems-making-a-slingshot-car/		1. Understand car design and that a chassis is the frame on which everything is built on. 2. Understand the term kenetic energy and how it applies to the movement of a car. 3. Choose net shapes that changes speed of the car due to air resistance. 4. Successfully create nets to

				make the chassis including measure, marking and cutting panels and decorating them, 5. Assemble panels to the chassis correctly. 6. Evaluate car based on shape, speed and accuracy of the angle in the chassis and axle.
Electrical Systems	Torches	1. I know about electrical items and how they work. 2. I can analyse and evaluate electrical products. 3. I know how to design a product to fit a set of specific user needs. 4. I can make and evaluate a torch. Link to lesson prompts and vocabulary: https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/electrical-systems-torches/		1. Identify electrical products knowing what a conductor and insulators is and that battery contains stored electricity. 2. Identify features of torch and how it works and what is important in its design. 3. Design own torch saying who and what it is for.

				4. Make working circuit, using appropriate materials. 5. Assemble torch which satisfies design criteria and test it.