



St Mark's C of E Primary School: Medium Term Planning

Design and Technology: Cycle B Summer Term

LKS2

Unit Focus: Computing: Electronic Charm

<https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/digital-world/>

NC Objectives:

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- Understand how key events and individuals in design and technology have helped shape the world.
- Apply their understanding of computing to program, monitor and control their products.

	Learning Objective What is being learned rather than what is being done	Resources Any links to resources.	End-point knowledge What knowledge should children have gained by the end of the lesson? This will be the focus of retrieval activities and monitoring.
1	To complete a design criteria for a road safety eCharm.	Kapow: Presentation: Smart Wearables, Activity: Product analysis: WAYV harness, Activity: Product analysis: WAYV word bank, Activity: Design criteria Video – Introducing BBC Microbit https://video.link/w/rAnJb	Vocabulary: digital, analogue, Microbit, design criteria <ul style="list-style-type: none"> - I know that the digital revolution is the development of technology from analogue to digital. - I can identify some key product developments that occurred as a result of the digital revolution. - A Microbit is a tiny, pocket-sized computer. - I can name some features of a Microbit: Buttons, LEDs, radio and Bluetooth antenna, temperature sensor, compass. - I can analyse and evaluate an existing product. - I can problem solve by suggesting potential features on the Micro: bit and justifying my ideas. - A design criteria is a set of goals that the product should meet. - I can contribute my ideas to a design criteria.

2	To write a program using the Microbit.	Kapow: Various videos supporting the programming of a Microbit, Activity: Microbit programs Microbits BBC Microbit editor (accessed via the browser on a laptop) Laptops	Vocabulary: program, software, Microbit, bugs - I can follow instructions to use the software BBC Micro:bit editor - I understand what a loop is in programming - I can write a program to initiate a flashing LED. - I can test my completed program in the Micro:bit simulator to check for errors (bugs) - I can explain the basic functionality of my eCharm program
3	To design an eCharm pouch to match design criteria	Kapow: Activity: Design ideas, Activity: Pouch template, Activity: Design ideas exemplars Scissors, stapler, coloured pencils	Vocabulary: pouch, template, mock-up - A pouch is a pocket-type, small bag to carry and keep items safe. - A template is a stencil you use to help to draw the same shape more easily on to other materials. - I can identify the key features of a pouch. - I can design an eCharm pouch to meet the design criteria. - I can create a mock up using a template. - I can cut, fold and secure accurately.
4	To create an eCharm pouch using a template	Kapow: Activity: Pouch template Childrens pouch designs Pouch templates Scissors, glue, stapler, paper clips Pipe cleaners A5 foam sheets Decorative foam stickers Microbits	Vocabulary: pouch - I can use a template when cutting and assembling the pouch. - I can create an eCharm pouch which meets the design criteria.
5	To design a display badge using CAD software.	Kapow: Link to Sketchpad software, Presentation: Point of sale, Videos of how to use Sketchpad Laptops	Vocabulary: CAD, Point of Sale display - I understand what is meant by 'point of sale display': A mixture of images and words that encourage you to buy a product. - I know that CAD stands for computer-aided design and is a way to digitally create drawings and models of products. - I can follow a list of design requirements

			<ul style="list-style-type: none"> - I can draw and manipulate 2D shapes, using computer-aided design, to produce a point of sale badge
6	To evaluate my eCharm	Kapow: Activity: Final evaluation	<p>Vocabulary: evaluate</p> <ul style="list-style-type: none"> - I can evaluate my completed eCharm based on the design criteria. - I can say something that I have learned. - I can evaluate my eCharm pouch and suggest areas for improvement. - I can help to evaluate my peers products by testing them out and offering feedback on design.