

**Design Technology at Compass School Southwark  
2022-2023**

Year 7						
	HT1 Topic/Unit: Graphics Products: Packaging design	HT2 Topic/Unit: Systems and Control Scrapy Circuits	HT3 Topic/Unit: Textiles Monster Plush	HT4 Topic/Unit: Combining Graphics and Electronics	HT5 Topic/Unit Food and Nutrition Design for health	HT6 Topic/ Unit Food and Nutrition Design for health
<b>Key content</b>	<p>Introduction to brief and specification What is a design brief? What aspects do you need to consider? ACCESS FM</p> <p>Existing products – What is already out there? How can you design something innovative?</p> <p>Drawing techniques – isometric drawings</p> <p>Brand identity – Designing own brand colours/logo/lettering</p> <p>Packaging design</p> <p>Nets- What are these? How can they assist in the development of a product?</p> <p>Testing nets- Scamper – Adapting and adjusting designs post making net and ready to create final product</p> <p>Making final product Assessing product against brief</p>	<p>Theory Control Systems</p> <p>Theory- Electrical circuits</p> <p>Identify what current and voltage mean and describe what an electronic circuit is.</p> <p>Investigate what a control system is and how it relates to electrical circuits.</p> <p>Theory- Types of circuits</p> <p>Components of a circuit</p> <p>5 core bricks Create the five core bricks. (Battery, LED, Push Switch, Dial Switch &amp; Binder clip)</p> <p>Identify the components used in each brick. Describe how the materials are creating the circuit.</p> <p>Design Super Hero signal</p> <p>Design and draw the diagram for the superhero circuit using core bricks.</p> <p>Identify how the superhero signal will work.</p> <p>Make Create the circuit using materials outlined in the plan.</p> <p>Evaluation lesson.</p> <p>Evaluate the overall effectiveness of the circuit and discuss any improvements to the circuit</p>	<p>Drawing and rendering basics</p> <p>Introduction to brief and specification What is a design brief? What aspects do you need to consider? ACCESS FM</p> <p>Existing products – What is already out there? How can you design something innovative?</p> <p>Introduction to natural and man-made fibres Fabric testing – How can we test the properties of fabrics</p> <p>Felt making – Practical making understanding how the fabric they will be using, is made</p> <p>Applique - What is applique? How can you achieve a successful piece of applique – Practical practise with applique techniques to use in toy.</p> <p>Decorative stitches and buttons- How can we produce neat stitches that aide to the aesthetics of the toy? Practical sewing on buttons and developing stitching further this tie by creating decorative stitches building on form the applique sewing.</p> <p>Design ideas – How can you design a product that fully fulfils the brief? Use your research, and tests to produce an idea that covers the specification in an innovative way.</p> <p>Final idea development How can you develop a design further? Use teacher feedback to adapt designs in order to develop a final idea SCAMPER</p> <p>Flow chart of making Planning – Put making in order and consider timings</p> <p>Pattern making What are the benefits of making a pattern? How can we make a pattern?</p> <p>Making- Practical following making flow chart students put all tests into practice to create a skilful final product.</p> <p>Evaluating How can we evaluate our product against the brief and specification Machine driving test</p>	<p>Introduction to brief</p> <p>Using and combining skills and knowledge learned Graphics and Systems and control to create a product</p> <p>What ways could you combine Graphics and electronics?</p> <p>Is there anything you know that combines the two?</p> <p>Existing product analysis Access FM</p> <p>Designing skills</p> <p>Designing product</p> <p>Testing and evaluating item</p> <p>SCAMPER- Make adjustment sin response to evaluation</p>	<p>Introduction to food and hazard awareness</p> <p>Personal hygiene and hand washing</p> <p>Equipment in the food room</p> <p>Introduction to eat well plate</p> <p>Eat well guide</p> <p>Hidden sugars in food</p> <p>Nutrition and health</p> <p>Introduction t the Eat well guide</p> <p>Introduction to different food types</p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Following existing recipe</li> <li>• Use of variety of ingredients and equipment</li> <li>• Applying knowledge of safe working practice</li> </ul> <p><b>Knowledge Testing:</b></p> <ul style="list-style-type: none"> <li>• Nutrition and health</li> <li>• Eat well guide</li> <li>• Food types</li> </ul>	<p>Following a recipe to produce a healthy fruit salad</p> <p>Adapting recipes to include more fruit and vegetables increasing nutritional value</p> <p>Existing products</p> <p>Making a range of recipes</p> <p>Designing own recipe in response to set brief.</p> <p>Testing and evaluating product</p> <p>Adapting/ acknowledgement of what is need to adapt to improve the recipe</p>

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Year 8						
	HT1 Topic/Unit Graphics packaging design	HT2 Topic/Unit: Systems and Control – micro Bit	HT3 Topic/Unit: Textiles cultural cushions	HT4 Topic/Unit Systems and Control and Textiles	HT5 Topic/Unit Food and Nutrition Multicultural meal for mates	HT6 Topic/Unit Food and Nutrition Multicultural meal for mates
<b>Key Content</b>	<p>Introduction to brief and specification What is a design brief? What aspects do you need to consider? ACCESS FM</p> <p>Existing products – What is already out there? How can you design something innovative?</p> <p>Drawing techniques – advanced drawing techniques/ different views</p> <p>Brand identity – Designing own brand colours/logo/lettering</p> <p>Packaging design</p> <p>What is Tetra-Pak? How does it differ from other packaging?</p> <p>Nets- What are these? How can they assist in the development of a product?</p> <p>Testing nets- Scamper – Adapting and adjusting designs post making net and ready to create final product</p> <p>Making final product</p> <p>Evaluating final product against brief</p>	<p>Micro bit What is a micro bit? How can it be used? Introduction to BBC Micro bit</p> <p>Interactive badge <b>understand how to program micro:bit to display an image using inputs and outputs.</b></p> <p>Text message—understand how to show a string on the LED screen.</p> <p>Snowflake fall Know how to repeat code using a forever block.</p> <p>Logo up and down understand how to show an image based on screen orientation.</p> <p>Headphone jack – Know how to code musical notes for simple commands</p> <p>Robot – mini project</p> <p>Design Design robot that utilises one or more commands learned for the Microbit</p> <p>Make use cardboard to make the robot and code to command the Microbit</p> <p>Evaluate Use Scamper to evaluate robot</p>	<p>Revisiting - Introduction to brief and specification What is a design brief? What aspects do you need to consider? ACCESS FM</p> <p>Evaluate - Revisiting- Existing products – What is already out there? How can you design something innovative?</p> <p>Make/Evaluate - Batik – Investigating different ways to create surface design on fabrics.</p> <p>Make/Evaluate Revisiting and building - Applique - What is applique? How can you achieve a successful piece of applique – Practical practise with applique techniques to use in cushion</p> <p>Patterns – What is a pattern? How can a pattern be created? How do different cultures use patterns? Design/make and Evaluate Design – How can you design a cushion that fully adheres to the brief?</p> <p>Evaluate- What choices will you make for surface design.</p> <p>Final idea development How can you develop a design further? Use teacher feedback to adapt designs in order to develop a final idea SCAMPER</p> <p>Flow chart of making Planning – Put making in order and consider timings</p> <p>Make sewing machine – re-visiting and building on skills taught in year 7.</p>	<p>Introduction to brief</p> <p>Using and combining skills and knowledge learned Textiles and Systems and control to create a product</p> <p>What ways could you combine Textiles and electronics?</p> <p>Is there anything you know that combines the two?</p> <p>Existing product analysis Access FM</p> <p>Designing skills</p> <p>Designing product</p> <p>Testing and evaluating item</p> <p>SCAMPER- Make adjustment sin response to evaluation</p>	<p>Global foods</p> <p>Cooking methods</p> <p>Import/ export products</p> <p>Seasonal products</p> <p>Importance of hydration</p> <p>Expanding on knowledge of different food types</p> <p>Expand on use of equipment</p> <ul style="list-style-type: none"> <li>• <b>Skills:</b> Costing a recipe using a spreadsheet</li> <li>• Applying knowledge and understanding of cookery methods</li> <li>• Applying knowledge of basic nutrition</li> </ul> <p><b>Knowledge Testing:</b> Nutrition and health Eat well guide Food types Cookery methods</p>	<p>Introduction to brief</p> <p>Research -global foods Fusion foods – testing and creating new recipes</p> <p>Design own multicultural meal</p> <p>Test meal</p> <p>Savoury and sweet dishes</p> <p>Make and evaluate</p> <p>Make adaptation to recipes</p>

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Year 9						
	HT1 Topic/Unit: Graphics- Product design	HT2 Topic/Unit: Systems and control Raspberry Pico Pi	HT3 Topic/Unit: Textiles Surface re-usable tote	HT4 Topic/Unit Systems and Control with Textiles/Graphics	HT5 Topic/Unit Food and Nutrition Event food	HT6 Topic/Unit: Food and Nutrition Event food
<b>Key Content</b>	<p>What is a design brief? What aspects do you need to consider? ACCESS FM Writing own design brief.</p> <p>Existing products – What is already out there? How can you design something innovative?</p> <p>Drawing techniques – advanced drawing techniques/ different views</p> <p>Brand identity – Designing own brand colours/logo/lettering</p> <p>Packaging design Nets- What are these? How can they assist in the development of a product?</p> <p>Testing nets- Scamper – Adapting and adjusting designs post making net and ready to create final product</p> <p>Making final product</p> <p>Testing and evaluating final product against brief</p>	<p>Introduction What is Pico?</p> <p>Going through design, concepts and implementation</p> <p>Define the term physical computing Explain the term embedded systems Create and test a working circuit</p> <p>LED Traffic light Reaction game</p> <p>Synchronise the behaviour of physical hardware components for a given situation - Define the term microcontroller and explain what it can be used for. Identify components associated with a Pico and explain what they are used for. Discuss what Micro Python is and label the IDE. Stretch and Challenge: Open up Micro Python and write a basic line of code for 'Hello World'</p> <p>Know how to wire a switch input into the Pico Know how to process an input to control an output Know how to connect multiple interrupt sources to one handler. Understand how computers simulate analogue outputs</p> <p>Know how to use LEDs and current limit resistors. Know how to use interrupts to control outputs.</p> <p>Know how to design, make and evaluate a mood-indicator using a control system.</p> <p>Design Make Evaluate</p>	<p>Revisiting - Introduction to brief and specification What is a design brief? What aspects do you need to consider? ACCESS FM</p> <p>Evaluate - Revisiting- Existing products – What is already out there? How can you design something innovative?</p> <p>Make/Evaluate – Constructed textiles – Investigating different ways to create 3d Textile pieces</p> <p>Surface pattern – revisiting Batik/ decorative stitching/embellishment image transfer / Printmaking</p> <p>Final idea development How can you develop a design further? Use teacher feedback to adapt designs in order to develop a final idea SCAMPER Design and Evaluate- Evaluate design ideas through use of SCAMPER to develop final design that fully adheres to the brief</p> <p>Flow chart of making Planning – Put making in order and consider timings</p> <p>Making – Using all research and skills learned to create a successful high-quality final pencil pot that fulfils all requirements of the client’s brief.</p> <p>Evaluate – Evaluate final product</p>	<p>Introduction to project</p> <p>Using and combining skills and knowledge learned in Textile/ Graphics and Systems and control to create a product</p> <p>What ways could you combine Graphics/ Textiles and electronics?</p> <p>Students select areas to combine and set brief</p> <p>Existing product analysis Access FM</p> <p>Designing skills</p> <p>Designing product</p> <p>Testing and evaluating item</p> <p>SCAMPER- Make adjustment sin response to evaluation</p>	<p>Introduction to brief</p> <p>Health and safety</p> <p>Use of different equipment and cooking methods</p> <p>Nutrition</p> <p>Food types and seasonality of produce</p> <ul style="list-style-type: none"> <li>• Costing and scaling recipes</li> <li>• Marketing – event foods</li> <li>• Applying knowledge and understanding of cookery methods</li> <li>• Applying knowledge of basic nutrition</li> <li>• Applying knowledge of the seasonality and characteristics of a range of ingredients</li> </ul> <p><b>Knowledge Testing:</b> Nutrition and health Eat well guide Food types Cookery methods Source, characteristics and seasonality of ingredients</p>	<p>Market research</p> <p>Planning menu for event including ingredient quantities in scaled versions with costings</p> <p>Producing marketing materials for event – combining graphics</p> <p>Testing and evaluating menu</p>