Badger Hill PRIMARY SCHOOL

DT Long Term Plan Year Six 2023-24

	Autumn Term	Spring Term-A Wonderful World	Summer Term-Back to the Future
Topic	**Textiles: Waistcoats**	**Structures: Playgrounds**	**Digital World: Navigating the world**
Sticky Knowledge	To understand that it is important to design clothing with the client/target customer in mind. To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric. To understand the importance of consistently sized stitches.	To know that structures can be strengthened by manipulating materials and shapes. To understand what a 'footprint plan' is. To understand that in the real world, design can impact users in positive and negative ways. To know that a prototype is a cheap model to test a design idea.	To know that accelerometers can detect movement. To understand that sensors can be useful in products as they mean the product can function without human input. To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request. To know that 'multifunctional' means an object or product has more than one function. To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.
Vocabulary	annotate decorate design criteria fabric target customer waistcoat waterproof	apparatus design criteria equipment playground landscape features cladding	Pedometer, design criteria, loop, if statement, mouldable, environmentally friendly, product life cycle, GPS tracker, client, duplicate, variable, boolean, light weight, biodegradable, design brief, function, replica, value, corrode, sustainable design , recyclable
Suggested Tasks	**Wow-** Link to history topic and evacuees in WW2! What might they need when they have been sent away? Could it be something that reminds them of home? **Design-** Annotate designs to link to design criteria **Make-** Use a template effectively	**Wow-** Discuss with the class what makes a good playground. Would this depend on the age of the children? Could they visit a playground and evaluate? **Design-** Choose to design a range of playground structures –what would be most effective? **Make-** Use a range of structures and materials	**Wow-** Talk to the class about their perfect adventure! Where would it be and why? **Design-** Create an annotated design for a client **Make-** Choose sustainable materials for the task! **Evaluate-** Pitch the product to a panel (try to include an

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	Evaluate- Continually reflect and adjust during the making process-finish with a fashion show!				**Evaluate-** Use peer evaluation and readjust design. Celebrate with an exhibition				expert in the field)			
Skills linked to outcomes	**Design** Designing a waist coat or similar product linked to a design criteria Annotating designs, to explain their decisions	**Make** Using a template when cutting fabric to ensure they achieve the correct shape Using pins effectively to secure a template to fabric without creases or bulges Marking and cutting fabric accurately, in accordance with their design Sewing a strong running stitch, making small, neat stitches and following the edge Tying strong knots Decorating a waistcoat, attaching	**Evaluate** Reflecting on their work continually throughout the design, make and evaluate the process	**Technical (knowledge)** To understand that it is important to design clothing with the client/target customer in mind To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric To understand the importance of consistently sized stitches	**Design** Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be sued, considering effective and ineffective designs	**Make** Building a range of play apparatus structures drawing upon new and prior knowledge of structures Measuring, marking and cutting wood to create a range of structures Using a range of materials to reinforce and add decoration to structures	**Evaluate** Improving a design plan based on peer evaluation Testing and adapting a design to improve it as it is developed Identifying what makes a successful structure	**Technical (knowledge)** To know that structures can be strengthened by manipulating materials and shapes To understand what a 'footprint' plan is To understand that in the real world, design, can impact users in a positive way and negative ways To know that a prototype is a cheap model to test a design idea	**Design** Writing a design brief from the information submitted by the client Developing design criteria to fulfil the client's request. Considering and suggesting additional functions for my navigation tool Developing a product idea through annotated sketches Placing and manoeuvring objects using CAD Changing the properties of, or combining one or more	**Make** Considering materials and their functional properties, especially those that are sustainable and recyclable Explaining material choices and why they were chosen as part of a product concept Programmin g an NSEW cardinal compass	**Evaluate** Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool Developing an awareness of sustainable design Identifying key industries that utilise 3D CAD modelling and explain why Describing how the product concept fits the client's response and how it will benefit the customers	**Technical (knowledge)** To know that accelerometers can detect movement To understand that sensors can be useful in products as they mean the product can function without human input To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request To know that multifunctional means an object or

		features (such as applique) using thread Finishing the waistcoat with a secure fastening (such as buttons) Learning different decorative stitches Sewing accurately with evenly spaced, neat stitches							3D objects using CAD		Explaining the key functions in my program including any additions Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch Demonstrating a functional program as part of a product concept	product has more than one function To know that magnetometers that measure the Earth's magnetic field to determine which direction you are facing
Assessment Opportunities	Use the quiz at the beginning and end of the unit. Adapt the knowledge catcher to suit the needs/outcomes of your class. Use as part of the evaluation within the unit.				Use the quiz at the beginning and end of the unit. Adapt the knowledge catcher to suit the needs/outcomes of your class. Use as part of the evaluation within the unit.				Use the quiz at the beginning and end of the unit. Adapt the knowledge catcher to suit the needs/outcomes of your class. Use as part of the evaluation within the unit.			

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Previous and Past learning experiences	**Why this topic now?** **This topic follows on from Y1 topic Textiles: Puppets**	**Why this topic now?** **This topic follows on from Y4 Structures: Pavilions**	**Why this topic now?** **This topic follows on from Digital World: Electronic Charm (Y3)**
National Curriculum Links	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 talking, drawing, templates, mock- ups and, where appropriate, information and communication technology. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Evaluate their ideas and products against design criteria. Investigate and analyse a range of existing products Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology. 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 Investigate and analyse a range of existing products Evaluate their ideas and products against design criteria. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	Apply their understanding of computing to program, monitor and control their products 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 talking, drawing, templates, mock- ups and, where appropriate, information and communication technology. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Evaluate their ideas and products against design criteria.