DESIGN TECHNOLOGY POLICY

INTENT

At Wickersley Partnership Trust (primary) we aim to ensure our Design Technology curriculum is designed to sequence learning and embed the key skills that are required to develop curious students into competent designers, engineers, architects and chefs.

We believe that Design Technology prepares children for the rapidly changing world that we live in. It encourages children to exercise their creativity and use of imagination through designing, making and evaluating their work. It stimulates them to become practical problem solvers and thinkers, individually and as part of a team. As we live in a technological world, Design Technology should have a real life purpose and children should be inspired by engineers, designers, architects and chefs.

It is vital that curriculum knowledge and skills are not learnt in isolation. We teach Design Technology through the progression of skills and knowledge, both of which are planned in a sequential document and include in this, key lines of inquiry to develop links across the curriculum as well as to the bigger concepts that drive our curriculum intent, such as democracy and equality.

HOW WE INTEND TO REMOVE BARRIERS

In Design Technology we remove barriers to learning and support students' ability to access the curriculum through the development of literacy, numeracy, oracy skills and vocabulary acquisition. Misconceptions do not go unchallenged and the supportive environment within each and every lesson ensures that students develop their own literacy and vocabulary.

LITERACY
Students are given many opportunities to read widely and often with students directed to texts related to Design Technology, as well as researching independently. Pupils take part in learning opportunities with a range of contexts for reading and writing. These will develop from being supported to independent.

NUMERACY
Throughout each year of the curriculum data handling skills are sequenced to become more complex over time. This ensures students build on the fundamental aspects of each one and develop their confidence and understanding.

ORACY
In order to develop their oracy within a subject specific context pupils are given opportunities to talk about their learning. Staff challenge use of technological design related language and will direct pupils towards the correct terminology when appropriate.

VOCABULARY
Students are introduced to key subject specific vocabulary and have regular opportunities to reinforce their understanding. Key Design Technology vocabulary is highlighted to the pupils and pupils are guided to use this in their work.

HOW WE DEVELOP SKILLS FOR LEARNING

Students are given opportunities to develop their skills for learning in each and every lesson. Engaging starter activities help students to recall the key concepts of prior learning. Our aspiring designers are presented with a variety of experiences and learning opportunities. They are challenged to think critically and form opinions.

The skills for learning process within the Design Technology curriculum both reinforces the key design skills content and helps our students to know, remember and be able to do more at each stage of the curriculum.

Teacher assessment informs planning and progression within the curriculum.

HOW WE FOSTER PERSONAL ATTRIBUTES

In Design Technology our curriculum intent embodies that of the school. We are committed to ensuring students are exposed to the wider world context in order to develop them as well rounded individuals. Our curriculum demands independence, resilience and responsibility in line with SCHOOL Way.

Design and technology is an inspiring, rigorous and practical subject. It allows children to use their creativity and imagination. Pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world.

HOW WE INTEND TO ENRICH STUDENT EXPERIENCES AND BROADEN THE HORIZONS OF STUDENTS

Design Technology is a curriculum that is rooted in the wider world of work. To this end we broaden the horizons of all our students and enrich their learning through a range of first hand experiences. All our students have exposure to learning beyond the traditional mainstream lesson and have opportunities to enrich their experiences. As a trust, we have developed links with the Advanced Manufacturing Park in order to enable pupils to see a real world context for the subject. Primary schools are developing links with the subject specialist departments in the secondary schools in order to enhance opportunities and inspire pupils to see how the study of Design Technology can lead to future roles in society. Design Technology is planned as part of cross curricular topics to support links in learning.

DESIGN TECHNOLOGY CURRICULUM OVERVIEW

			EYFS	KS1	LOWER KS2	UPPER KS2
KNOWLEDGE		Design	I know how to communicate my ideas through talking.	I know how to design a purposeful and functional product. I know how to communicate my ideas through talking, drawing, templates and mock ups.	I know how to research a design. I know how to communicate my ideas.	I know how to research and develop a design. I know how to communicate my ideas in different ways.
		Make	I know how to use a variety of construction materials. I know which tools to use to shape, assemble and join materials.	I know how to build structures. I know how to use mechanisms such as levers, sliders, wheels and axles. I know how to make models stronger, stiffer and more stable	I know how to strengthen and stiffen and reinforce more complex structures.	I understand how to use electrical systems in my products I understand how to use mechanical systems in my products I know how to combine techniques to create pieces. I can recall a range of stitches I know what a seam allowance is and why it should be used.
		Evaluate	I know how I could improve my model. I know what is good about my model. I know why I have chosen those materials.	I know about existing products. I know how to use my design criteria to evaluate my product.	I know how to investigate and analyse existing products. I know how to evaluate my ideas and products against my own design criteria. I know how to consider the views of others to improve my work.	I know how to analyse the effect of different electrical systems in my products I know how to analyse the effect of different mechanical systems in my products
		Impact of Humans	I know why this product has been made. I know what this product is for.	I know what materials can be recycled and why this is important.	I know how to recycle and what the process of recycling is.	I know why sustainability is important
		Significant Person	I know what an engineer is	I understand what engineering is and the role of an engineer	I understand what the role of an engineer entails	I can describe what an engineer and engineering is and give examples I can explain the effects of engineering on the ever changing world. I can explain how key events and individuals have shaped the world.
SKILLS	FOOD	Key Questions	What does an appealing food product look like? What will you need to make your product? What does your food product taste like?	How can I make my food product appealing? What equipment and ingredients will you need to make your product? What did your product taste like? How could you make it better?	How do I know my design is fit for purpose? How will you work safely and hygienically to make your product? What techniques will you use to make your product?	How do I know if my design is suitable for the intended audience? Which cooking techniques do you need to use?
		Design	I can decorate a food product to make it appealing.	I can design an appealing food product for myself and others. I can talk about my design.	I can develop the design criteria of an appealing food product that is fit for purpose. I can discuss my design.	I can research and design an innovative , functional and appealing food product that is aimed at specific individual or group. I can discuss my design and make appropriate changes.
		Make	I can peel and chop foods using the correct equipment. I can use simple tools and techniques competently and appropriately.	I can describe food using my senses. I can use the right tools to cut, peel grate and chop. I can read a scale to measure and weigh out ingredients I can select from and use a range of equipment to perform practical tasks	I can analyse taste, texture, smell and appearance of a range of foods. I can join and combine a range of ingredients. I can work safely and hygienically. I can weigh and measure using scales. I can cut and shape ingredients using tools and equipment. I can join and combine food ingredients by beating, kneading & rubbing in. I can select from and use a wider range of equipment to perform practical tasks accurately	I can analyse taste, texture, smell and appearance of a range of foods. I can join and combine a range of ingredients. I can work safely and hygienically. I can weigh and measure using scales. I can cut and shape ingredients using tools and equipment. I can join and combine food ingredients by beating, kneading & rubbing in
		Evaluate	I can talk about existing food products. I can talk about my own food product.	I can explore and evaluate existing products. I can evaluate my own design and product.	I can evaluate my design against my design criteria.	I can evaluate and improve my design after product testing.
	TEXTILES	Key Questions	Can you create a...? Can you choose an appropriate material for your creation?	Can you design and create a ... for a purpose? What techniques do I need to use?	Can you design and create a prototype of your product? Can you create your design against a certain criteria?	Can you design, create and evaluate a prototype against a criteria and use this to inform and evaluate your final design?
		Design	I can talk about my ideas before I make something. I can talk about the materials I am going to use. I can select the correct tools and techniques.	I can use a design criteria. I can design an appealing product for my self and others to use. I can draw and label my design.	I can research and use this to inform my design. I can create annotated sketches of my design. I can design a product that is fit for purpose.	I can research and develop design criteria to design a product fit for purpose. I can design a product aimed at a specific individual or group. I can generate, develop, model and communicate my ideas through a computer aided design.

			EYFS	KS1	LOWER KS2	UPPER KS2
SKILLS	TEXTILES	Make	I can begin to be interested in and describe the texture of things. I can use tools and techniques appropriately e.g. taking needle for a walk over fabric. I can select tools and techniques needed to shape, assemble and join materials i.e. scissors I can experiment to create different textures. I can use simple tools and techniques competently and appropriately.	I can colour fabrics using paints to print & paint. I can use a template to cut out shapes. I can join fabrics using glue & a running stitch. I can decorate textiles using buttons, beads, sequins, braids & ribbons. I can attach embellishments to create a desired effect using glue and/ or a stitch. I can select from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing) I can use weaving to create a pattern.	I can create a prototype (using J clothes or other cheap materials). I can use appliqué to decorate by gluing, & stitching. I can create a simple pattern. I can select from and use a wider range of tools and equipment to perform practical tasks accurately I can shape and stitch materials together. I can use basic cross stitch and back stitch. I can colour fabric. I can create weavings using a wide range of textiles, choosing colours for purpose. I can quilt, pad and gather fabric to create a desired effect.	I can use a seam allowance. I can join fabrics using a running stitch, over stitch & back stitch. I can show precision in techniques. I can choose from a range of stitching techniques.
		Evaluate	I can share my creation with others. I can explain the process I have used.	I can use existing products to inform my design. I can evaluate my product against my design criteria.	I can investigate a range of existing products and use this to support my design ideas. I can use design criteria and the views of others to improve my work.	I can investigate and analyse a range of existing products and use this to support my design ideas. I can use existing products to adapt my design.
	CONSTRUCTION	Key Questions	Can you construct...? Can you talk about how you are going to make your construction? Can you draw your design?	Can you draw a design to fit a given design criteria? Can you make a template? Can you choose an appropriate technique to join materials? Can you de-construct a product and explain how it works?	Can you design a product for a specific purpose and user? Can you de-construct a product, explain how it works and use this to influence your own design? Can you redraft your design after discussions with others? Can you choose an appropriate technique from a range of options to join your materials and justify why you have chosen this? Can you incorporate a circuit into your design, where appropriate?	Can you conduct market research? Can you identify a gap in the market? Can you create a design to meet a consumer need? Can you evaluate your product against existing products and explain why your design is innovative? Can you explain your material/assembly/technique/mechanism choices on your design? Can you redraft your design after testing a prototype? Can you suggest improvements to your product after listening to feedback?
		Design	I can talk through my ideas before I make a model. I can think of a simple solution to a known problem I can draw my design and talk about it	I can think of a solution to a known problem. I can draw a simple design and label the key parts of my design I can design a purposeful and functional product for myself and others. I can generate and develop my ideas through talking, drawing, templates and mock-ups. I can communicate my ideas for my design.	I can research to support my design criteria. I can generate and communicate my ideas through discussion, sketches and diagrams. I can think of a solution to a problem and consider the practicality of my design I can design my idea and improve I can label all parts of my design	I can research and develop design criteria to inform the design of innovative and functional products. I can design a product that is fit for purpose. I can think of a practical solution to a problem (known, global, national...) I can generate, develop and communicate my ideas through discussion, annotated sketches, diagrams, prototypes and computer-aided design. I can design my solution and include labels and annotations
		Make	I can use various construction materials to build with. I can join construction pieces together to build and balance. I can construct with a purpose in mind. I can manipulate materials to achieve a planned effect. I can select tools and techniques needed to shape, assemble and join materials I am using. I can use simple tools and techniques competently and appropriately. I can explain how a glue gun is used (by an adult)	I can attach wheels to a chassis using an axle. I can join materials using tape & glue. I can mark out materials using a template I can independently cut wood/dowelling using a hacksaw and bench hook I can use a glue gun with close supervision (one to one). I can fold, tear & cut paper and card. I can roll paper to create tubes. I can cut along straight lines and curved lines. I can create hinges I can use tape and glue to create temporary joins, fixed joins, & moving joins. I can use a hole- punch. I can select from and use handsaws to perform practical tasks (for example cutting, shaping, joining and finishing	I can create a shell or frame structure, strengthening with diagonal struts. I can measure and mark a square section & dowelling to the nearest cm. I can use a glue gun with close supervision I can cut slots. I can cut internal shapes. I can use lolly sticks/ card to make levers and linkages. I can select from and use a wider range of tools and equipment to perform practical tasks accurately such as handsaws, craft knife (under supervision) I can use 'jigs; to help measure. I can work safely. I can use a simple circuit in a model.	I can use a bradawl to mark hole- positions. I can use a hand drill to make tight holes & loose holes. I can cut accurately to 1mm: strip wood, dowel & square section. I can build frameworks using a range of materials: wood, card, corrugated plastic. I can use a glue gun with close supervision. I can cut accurately and safely to a marked line. I can use a craft knife, cutting mat and safety ruler under one to one supervision (if appropriate). I can make a model using multiple pieces/parts with a moving element. I can use an increasingly more complex circuit in a model
		Evaluate	I can talk about my model. I can say how I could make my model better.	I can explore and evaluate a range of existing products. I can evaluate my ideas and products against design criteria.	I can describe my idea and how it solves the problem	I can describe and explain my idea, how it works and how it solves the problem I can analyse my design and identify/resolve design faults

		EYFS	KS1	LOWER KS2	UPPER KS2
EXEMPLIFICATIONS	Food	Buns, Biscuits, Fruit Salads, Sandwiches, Smoothies, Stir Fry, Pancakes, Porridge, Bread (Little Red Hen), Soup,	Buns, Biscuits, Fruit Salads, Sandwiches, Smoothies, Stir Fry, Bake Off,	Pizza, Pie, Cooked Meals, Food From Other Cultures,	Design and Cook a Menu, Cater for Dietary Needs, Cook for a Specific Audience, Design a Product to Sell for Enterprise
	Textiles	Waterproof Shelters, Stockings, Weaving, Umbrella, Storybook Character Clothing, Puppets	Purses, stuffed animals, Merchandise,	Clothing, Tapestry, Rugs, Blankets, Velcro Fastenings	Clothing With More Than One Pattern Piece, Zipped Clothing, Button Fastenings
	Construction	Workshop, Homes, Beds, Cars, Community Buildings,	Cars, Pulleys, Moving Picture Sliders,	Bridges, Motorised Vehicle's, Toys, Board Games,	Moon Buggies, fairground rides, robots, lighthouses, simulations