

PICKHURST ACADEMY DESIGN AND TECHNOLOGY PROGRESSION MAP

WHERE EVERY CHILD COUNTS

OUR CORE VALUES

We want all of our children to BE **P.I.C.K.H.U.R.S.T**

Proud **I**nquisitive **C**onfident **K**ind **H**ealthy **U**nderstanding **R**espectful **S**uccessful **T**rustworthy

Pickhurst Academy is committed to ensuring all of our pupils are equipped with the knowledge and cultural capital they need to succeed in life. Our curriculum and provision ensure that all our pupils acquire the essential knowledge they need to be educated citizens. We ensure that we are introducing them to the best that has been thought and said, and it is our mission to engender an appreciation of human creativity and achievement. We want all of our pupils to leave Pickhurst, by the end of KS2, with aspirational goals for their future, without any limitations.

We have carefully considered four domains for promoting and improving each child's level of cultural capital, based on research by Bourdieu (1986). We believe that the more cultural capital a child has, the more likely they are to succeed in life and reach their potential.

KNOWLEDGE (what we know)	SKILLS (what we do)	APPRECIATION (what we value)	ASPIRATION (who we want to be)
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INTENT	IMPLEMENTATION	IMPACT	PROGRESSION
At Pickhurst, we aim to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through planning, creation and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, testing and to be reflective learners who evaluate their work and the work of others. Through our lesson plans and resources, we aim to build an awareness of the impact of Design and Technology on our lives and encourage children to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements. Our unique curriculum, which uses Kapow's scheme as a framework, facilitates teachers to plan lessons that enable children to meet the objectives in line with the National Curriculum.	Our units consist of lessons that are in line with the National Curriculum objectives. When designing and making, through a variety of creative and practical activities, pupils should be taught to: Design Make Evaluate Use technical knowledge Be exposed to have knowledge of cooking and nutrition This is achieved through a 6-week block of 1-hour lessons each term. These lessons are taught by the class teacher. Teachers follow a secure assessment tracking system to ensure good progress by all pupils. We also have a subject monitoring process, which identify areas for improvement as well as opportunities for celebrations. Observing	Through learning the principles of design and technology in conjunction with other areas of the curriculum (Science, Maths, Engineering and Art), pupils can develop their skills to become well rounded individuals. Through individual and team projects, they will learn the importance of clear planning, effective and efficient production, collaboration with others, self and peer-evaluation. These skills will have a clear impact on their ability to adapt and thrive in the world of work at a later stage of their lives as well as in the classroom and local community. Additionally, they will learn to be resourceful and pro-active in everyday problem-solving situations through knowledge of the importance of flexibility of approach and through listening to the ideas of others. This delivery of DT will work to equip our pupils with the key skills of project-management, teambuilding, and a sense of pride in their creativity. They will become more pro-	Skills and knowledge are introduced then revisited in different units and in different contexts. This provides a spiral curriculum in which children can continue to develop and improve their skills. This enables progression to be identified, planned for, developed and monitored. By providing a starting point (cold task), they can each make their own progress whilst on their journeys to becoming analytical, creative individuals.

	children speaking and listening in another language.	active, more able to lead and more practical in their thinking and solving of problems that affect society.	
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TEACHER SUBJECT KNOWLEDGE & SUBJECT DEVELOPMENT

The Pickhurst Design and Technology curriculum is supported by the Kapow framework. This enables teachers to set high expectations for the quality of teaching within the subject. The lesson plans allow all teachers to access necessary subject knowledge and skills as well as activities for each year group.

Unit	Year 3	Unit	Year 4	Unit	Year 5	Unit	Year 6
Unit 1 Structures	<u>Castles</u> In this unit children will:	Unit 1 Cooking and Nutrition	<u>Adapting a recipe</u> In this unit children will:	Unit 1 Electrical Systems	<u>Greeting Cards</u> In this unit children will:	Unit 1 Textiles	<u>Stuffed Toys</u> In this unit children will:
Design	Design a castle with key features to appeal to a specific person/purpose Draw and label a castle design using 2D shapes, labelling: -the 3D shapes that will create the features - materials and colours needed	Design	Design a biscuit within a given budget, drawing upon previous taste testing	Design	Design an electronic greetings card with a copper track circuit and components Create a labelled circuit diagram showing positive and negative parts in relation to the LED and the battery Write design criteria for an electronic greeting card Compile a mood board relevant to my chosen theme, purpose and recipient	Design	Design a stuffed toy considering the main component shapes required and create an appropriate template Consider the proportions of individual components

Make	Construct a range of 3D geometric shapes using nets Create special features for individual designs Make facades from a range of recycled materials	Make	Follow a baking recipe Cook safely, following basic hygiene rules Adapt a recipe	Make	Make a functional series circuit Create an electronics greeting card, referring to design criteria Map out where different components of the circuit will go	Make	Create a 3D stuffed toy from a 2D design Measure, mark and cut fabric accurately and independently Create strong and secure blanket stitches when joining fabric Use applique to attach pieces of fabric decoration
Evaluation	Evaluate own work and the work of others based on the aesthetic of the finished product and in comparison to the original design Suggest points for modification of the individual designs	Evaluation	Evaluate a recipe, considering: taste, smell, texture and appearance Describe the impact of the budget on the selection of ingredients Evaluate and compare a range of products	Evaluation	Evaluate a peer's product against design criteria and suggest modifications that could be made to improve the reliability or aesthetics of the card State what Sir Rowland Hill invented and why	Evaluation	Test and evaluate an end product and give ideas for further improvements

			Suggest modifications		it was important for greeting cards Analyse and evaluate a range of existing greeting cards		
Unit 2 Cooking and Nutrition	<u>Eating seasonally</u> In this unit children will:	Unit 2 Structures	<u>Pavilions</u> In this unit children will:	Unit 2 Textiles	<u>Waistcoats</u> In this unit children will:	Unit 2 Cooking and nutrition	<u>Come dine with me</u> In this unit children will:
Design	Create a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish	Design	Design a stable pavilion structure that is aesthetically pleasing Select materials to create a desired effect Build a frame structures designed to support weight	Design	Design a waistcoat in accordance to specification linked to set of design criteria to fit a specific theme Annotate designs	Design	Write a recipe, explain the key steps, method and ingredients Include facts and drawings from research undertaken
Make	Know how to prepare themselves Know how to prepare a work space to cook safely in	Make	Create a range of different shaped frame structures Make a variety of free-standing frame structures	Make	Use a template when pinning panels onto fabric Mark and cut fabric accurately,	Make	Follow a recipe, including using the correct quantities of each ingredient

	Learn the basic rules to avoid food contamination Follow the instructions within a recipe		of different shapes and sizes Select appropriate materials to build a strong structure Reinforce corners to strengthen a structure Create a design in accordance with a plan Learn to create different textural effects with materials		in accordance with a design Sew a strong running stitch, make small, neat stitches and follow the edge Tie strong knots Decorate a waistcoat - attaching objects using thread and adding a secure fastening		Adapt a recipe based on research Work to a given timescale Work safely and hygienically with independence
Evaluation	Establish and use design criteria to help test and review dishes Describe the benefits of seasonal fruits and vegetables and the impact on the environment	Evaluation	Evaluate structures made by the class Describe what characteristics of a design and construction made it the most effective	Evaluation	Evaluate work continually as it is created	Evaluation	Evaluate a recipe, considering: taste, smell, texture and origin of the food group Taste testing and scoring final products

	Suggest points for improvement when making a seasonal tart		Consider effective and ineffective designs				Suggest and write up points of improvements in productions Evaluate health and safety in production to minimise cross contamination
Unit 3 Textiles	<u>Cushions</u> In this unit children will:	Unit 3 Digital world	<u>Mindful moments timer</u> In this unit children will:	Unit 3 Food and Nutrition	<u>What could be healthier?</u> In this unit children will:	Unit 3 Electrical systems	<u>Steady hand games</u> In this unit children will:
Design	Design and make a template from an existing cushion and apply individual design criteria	Design	Write design criteria for a programmed timer (Micro:bit) Explore different mindfulness strategies Apply the results of my research to further inform my design criteria Develop a prototype case for my mindful moment timer	Design	Adapt a traditional recipe Understand that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients Write an amended method for a recipe to incorporate the relevant changes to ingredients	Design	Design a steady hand game Identify and name the components required Draw a design from three different perspectives Generate ideas through sketching and discussion

			Use and manipulate shapes and clipart, use computer-aided design (CAD), to produce a logo Follow a list of design requirements		Design appealing packaging to reflect a recipe		Model ideas through prototypes Understand the purpose of products (toys), including what is meant by 'fit for purpose' and 'form over function'
Make	Follow design criteria to create a cushion Select and cut fabrics with ease using fabric scissors Sew cross stitch to join fabric Decorate fabric using appliqué Complete design ideas with stuffing and sewing the edges	Make	Develop a prototype case for mindful moment timer Create a 3D structure using a net	Make	Cut and prepare vegetables safely Use equipment safely, including knives, hot pans and hobs Know how to avoid cross-contamination Follow a step by step method carefully to make a recipe	Make	Construct a stable base for a game Accurately cut, fold and assemble a net Decorate the base of the game to a high-quality finish Make and test a circuit Incorporate a circuit into a base

Evaluation	Evaluate an end product and think of other ways in which to create similar items	Evaluation	Investigate and analyse a range of timers by identifying and comparing their advantages and disadvantages Evaluate micro:bit program against points on design criteria and amending them to include any changes made Document and evaluate project Understand what a logo is and why they are important in the world of design and business	Evaluation	Identify the nutritional differences between different products and recipes Identify and describe healthy benefits of food groups	Evaluation	Test own and others finished games Identify what went well and make suggestions for improvement Gather images and information about existing children's toys Analyse a selection of existing children's toys
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