Yew Tree Primary School

DESIGN AND TECHNOLOGY CURRICULUM OVERVIEW

RESPONSIBILITY:
We are responsible for what we do – if it's to be, it's up to me! We are prepared, organised and recognise consequences of our actions on ourselves and others.

RESPECT:
We are respectful by treating others how we wish to be treated – using manners, being thoughtful, kind and celebrating diversity

COURAGE:
We are brave and we take chances. We develop resilience to keep going even when things are tough. We face our fears and we are not afraid to make mistakes.

AMBITION:
We believe we can achieve in anything that we put our mind to. We aim high, love learning, have a positive 'can do' attitude and aim to be the best!

PRIDE:
We are proud of who we are and where we are from. We believe in our abilities and celebrate our success. We are a family at Yew Tree!

Intent	**Curriculum Aim**	To offer a broad, balanced & inclusive curriculum which acts as a starting point to stimulate awe, wonder & curiosity and which encompasses 'Learning Without Limits' so that children are empowered and able to achieve their full potential.	**What does this mean for Design and Technology**. • Design and technology is an inspiring, rigorous and practical subject. It should provide children with opportunities to use their creativity and imagination to solve problems both as individuals and as members of a group. Within topics, children should be able to design, make and evaluate their final products this also includes designing, making and evaluating different foods. • Children will follow the following process: - IDEAS (Investigative, disassembly and evaluative activities - FPT's (Focussed practical tasks) - DMA's (Design and make activities) • In our curriculum design and technology requires children to be active learners with the confidence to 'have a go,' taking risks and the resilience to persist with a project when challenges occur • The design and technology curriculum is designed to help pupils to gain a broad range of subject knowledge whilst drawing on other subjects such as mathematics, science, engineering, computing and art. • The children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.
	Curriculum Objectives	• To develop the child as a responsible and confident citizen who is prepared to live in an ever-changing and diverse world. • To develop the child as an individual who embraces challenge and makes the most of every opportunity to learn. • To develop the child as a life-long learner who has a range of skills, which ensure a high level of achievement.	

Yew Tree Primary School
Design and Technology Key Skills Progression

Idea	Aspect	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Creativity	**Generation of Ideas**	Develop their own ideas and explore a variety of resources, including blocks and construction kits to create 'small worlds' and objects linked to their interests. Choose the right resources to carry out their own plan (physical dev)	Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences.	Create a design to meet simple design criteria.	Generate and communicate their ideas through a range of different methods.	Develop design criteria to inform a design.	Use annotated sketches and exploded diagrams to test and communicate their ideas.	Use pattern pieces and computer-aided design packages to design a product.	Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways.
	Topics where covered	Me and My Community Once Upon a Time Dangerous Dinosaurs Big Wide World	All projects	Taxi Chop, Slice and Mash Puppets	Beach Hut Remarkable Recipes Christmas Cards	Stone Age Pouches Cook well, eat well Structures	Structures Fresh food, good food	Architecture	A Child's War Electrical Programming
	Use of ICT	Seek support from adults to use digital devices to create a digital record of their creations.	Use digital devices to take digital images or recordings of their creations to share with others.	Use design software to create a simple plan for a design.	Use design software to create a simple labelled design or plan.	Write a program to make something move on a tablet or computer screen.	Write a program to control a physical device, such as a light, speaker or buzzer.	Link a physical device to a computer or tablet so that it can be controlled (such as changing motor speed or turning an LED on and off) by a program.	Use a sensor to monitor an environmental variable, such as temperature, sound or light.
	Topics where covered	Throughout projects	Animal Safari		Beach Hut				Electrical programming

	Structures	Make simple structures using a range of materials.	Construct simple structures and models using a range of materials.	Construct simple structures, models or other products using a range of materials.	Explore how a structure can be made stronger, stiffer and more stable.	Create shell or frame structures using diagonal struts to strengthen them.	Prototype shell and frame structures, showing awareness of how to strengthen, stiffen and reinforce them.	Build a framework using a range of materials to support mechanisms.	Select the most appropriate materials and frameworks for different structures, explaining what makes them strong.
	Topics where covered	Once Upon A Time Starry Night Dangerous Dinosaurs	All projects		Beach Hut	Rocks, Relics and Rumbles	Invasion - Structures	Architecture	
Investigation	**Investigation / Tools**	Explore simple tools within practical tasks and experiment with joining materials.	Choose and explore appropriate tools for simple practical tasks.	Select the appropriate tool for a simple practical task.	Select the appropriate tool for a task and explain their choice. *E.g. scissors, wood, cardboard*	Use tools safely for cutting and joining materials and components. *E.g. junior hacksaws, bench hooks, hammer, nails, needles, glue gun*	Select, name and use tools with adult supervision. *E.g. junior hacksaws, bench hooks, hammer, nails, needles, glue gun*	Name and select increasingly appropriate tools for a task and use them safely. *e.g. blades, chisels, hammer, hacksaws.*	Select appropriate tools for a task and use them safely and precisely. *e.g. needles, hacksaws, bench hooks, knives, drills*
	Topics where covered	Exploring Autumn Once Upon a Time	Build it up Long Ago	Taxi! Chop, Slice and Mash Puppets	Beach Hut Remarkable Recipes Christmas Cards	Rocks Relics and Rumbles – Structures Stone Age Pouches	Invasion - Structures	Firedamp and Davylamp – Torches	CAM toy Make Do and Mend Electrical Programming
	Evaluation	Share their creations with others and respond to questions and suggestions about how it was made.	Adapt and refine their work as they are constructing and making. Recognise that it is possible to change and alter their designs and ideas as they are making them.	Talk about their own and each other's work, identifying strengths or weaknesses and offering support.	Explain how closely their finished products meet their design criteria and say what they could do better in the future.	Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.	Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements.	Test and evaluate products against a detailed design specification and make adaptations as they develop the product.	Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others
	Topics where covered	Once upon a Time Sparkle and Shine! Dangerous Dinosaurs	Build it up Animal Safari	Taxi! Chop, Slice and Mash Puppets	Christmas Cards Beach Hut Remarkable Recipes	Stone Age Pouches Structures Cook Well, Eatwell	All DT projects	All DT projetcs	All DT projects
Nature	**Food Preparation and Cooking**	Explore measuring ingredients using cups and spoons.	Follow instructions including simple recipes that include measures and ingredients.	Measure and weigh food items using non-standard measures, such as spoons and cups	Prepare ingredients by peeling, grating, chopping and slicing.	Prepare and cook a simple sweet or savoury dish.	Identify and use a range of cooking techniques to prepare a simple meal.	Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish.	Follow a recipe that requires a variety of techniques and source the necessary ingredients independently.

	Topics where covered	Provision where necessary	Lets Explore Stories and Rhymes	Chop Slice and Mash (School Days)	Magnificent Monarchs (Remarkable Recipes)	Cookwell, Eatwell	Fresh food, good food	Eat the Seasons	Transition activiy
	Nutrition	Help to prepare a range of healthy snacks	Suggest healthy ingredients that can be used to make simple snacks	Select healthy ingredients for a fruit or vegetable salad.	Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal.	Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars).	Design a healthy snack or packed lunch and explain why it is healthy.	Evaluate meals and consider if they contribute towards a balanced diet.	Plan a healthy weekly diet, justifying why each meal contributes towards a balanced diet.
	Topics where covered	Exploring Autumn	Marvellous Machines Animal Safari	School Days (Chop, slice and mash)	Magnificent Monarchs (Remarkable Recipes)	Cook well, Eatwell	Fresh food good food	Eat the Seasons	
	Origins of Food	Explore and try a range of foods and suggest where they come from.	Begin to identify the origins of some foods.	Sort foods into groups by whether they are from an animal or plant source.	Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables).	Identify and name foods that are produced in different places.	Identify and name foods that are produced in different places in the UK and beyond.	Describe what seasonality means and explain some of the reasons why it is beneficial.	Explain how organic produce is grown.
	Topics where covered	Sparkle and Shine	Animal Safari	School Days (Chop, Slice and Mash)	Magnificent Monarchs (Remarkable Recipes)	Cook well, Eatwell	Fresh food good food	Sow, Grow and Farm Eat the Seasons	
Materials	**Materials for purpose**	Explore and choose freely from a variety of materials when making. Select and use resources with support when needed (PSED)	Select appropriate materials when constructing and making. Constructs with a purpose in mind using a variety of resources	Select and use a range of materials, beginning to explain their choices.	Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect.	Plan which materials will be needed for a task and explain why.	Choose from a range of materials, showing an understanding of their different characteristics.	Select and combine materials with precision.	Choose the best materials for a task, showing an understanding of their working characteristics.
	Topics where covered	Once upon a time Dangerous Dinosaurs Sunshine and Sunflowers	Build it Up Long Ago Animal Safari	Taxi!	Beach Hut Christmas Cards	Rocks, relics and rumbles - structures Stone Age Pouches	Misty Mountain, Winding River Warp and Weft Structures Mechanisms	Architecture Firedamp and Davy lamp – mining torch	Mechanisms – CAM toy Make do and mend
Processes	**Electricity**	Explore battery powered objects using switches to turn them off and on.	Identify products that use electricity to make them work.	Identify products that use electricity to make them work and describe how to switch them on and off.	Create an operational, simple series circuit.	Incorporate a simple series circuit into a model.	Incorporate circuits that use a variety of components into models or products.	Use electrical circuits of increasing complexity in their models or products, showing an understanding of control.	Understand and use electrical circuits that incorporate a variety of components (switches, lamps, buzzers and motors) and use programming to control their products.

	Topics where covered	Starry Night	Ongoing	School Days			This could be covered through the science in Year 4.	Firedamp and Davy Lamps	Electrical programming
	Mechanism and Movement	Explore, build and play with a range of resources and construction kits with wheels. Choose the right resources to carry out their own plan (PD)	Explore, build and play with a range of resources and construction kits with wheels and axles. Constructs with a purpose in mind using a variety of resources (e.g. making vehicles).	Use wheels and axles to make a simple moving model.	Use a range of mechanisms (levers, sliders, wheels and axles) in models or products. (Use slides / levers to make a Christmas card)	Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products.	Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products. Make a mechanism to move stones to build pyramids	Use mechanical systems in their products, such as pneumatics and hydraulics.	Explain and use mechanical systems in their products to meet a design brief.
	Topics where covered	Big Wide World	Lets Explore Long Ago Stories and Rhymes	Taxi!	Christmas Cards		Ancient Civilisations - Mechanisms		CAM operated toys
Comparison	**Compare and Contrast**	Share their creations with others and begin to notice how the work of others is the same or different to their own.	Describe what, why and how something was made and compare with others. Look closely at similarities and differences (Understanding the World)	Describe the similarities and differences between two products.	Compare different brands of the same product and explain their similarities and differences.	Explain the similarities and difference between the work of two designers	Create and complete a comparison table to compare two or more products.	Survey users in a range of focus groups and compare results.	Create a detailed comparative report about two or more products or inventions.
	Topics where covered	Throughout projects	Build it Up Lets Explore Stories and rhymes	Taxi! Puppets	Christmas Cards	Stone Age Pouches		Eat the Seasons	Make do and mend CAM mechanisms
Humankind	**Everyday products**	Name and explore a range of everyday products and explore how things work.	Name and explore a range of everyday products and begin to talk about how they are used.	Name and explore a range of everyday products and describe how they are used.	Explain how an everyday product could be improved.	Explain how an existing product benefits the user.	Investigate and identify the design features of a familiar product.	Explain how the design of a product has been influenced by the culture or society in which it was designed or made.	Analyse how an invention or product has significantly changed or improved people's lives.
	Topics where covered	Sunshine and Sunflowers	Let's Explore	Taxi!	Beach Hut	Rocks Relics and rumbles - structures	Misty Mountains, Winding River Fresh food, Good food	Ground-breaking Greeks (Architecture) Firedamp and Davy lamp (miner's torch)	Make do and mend Electrical mechanisms

	Staying Safe	Show an understanding that tools and equipment need to be used safely and collaborate with others when moving large equipment. It is important to listen to adults and follow simple rules and procedures when using equipment and tools.	Follow rules and instructions to keep safe.	Follow the rules to keep safe during a practical task. Rules are made to keep people safe from danger.	Work safely and hygienically in construction and cooking activities.	Use appliances safely with adult supervision. Electrical appliances must only be used under the supervision of an adult.	Work safely with everyday chemical products under supervision, such as disinfectant hand wash and surface cleaning spray.	Explain the functionality and purpose of safety features on a range of products.	Demonstrate how their products take into account the safety of the user.
	Topics where covered	All projects	All projects	Taxi! Chop, slice and mash Puppets	Magnificent Monarchs (Remarkable Recipes) Beach Hut	Cook well, eat well	Fresh food, good food	Mining lamps	Electrical programming
Significance	**Significant people**	Begin to talk about important products	Explore significant products.	Describe why a product is important.	Explain why a designer or inventor is important.	Describe how key events in design and technology have shaped the world.	Explain how and why a significant designer or inventor shaped the world.	Describe the social influence of a significant designer or inventor.	Present a detailed account of the significance of a favourite designer or inventor.
	Topics where covered		All projects	Taxi! School Days (Chop, Slice and mash)	Magnificent monarchs (remarkable recipes)	Cook well, eat well Structures	Warp and Weft Fresh food, good food	Architecture Firedamp and Davy Lamps – mining torches	