

DT at Claycots

Claycots Primary School



DT team

Mrs Ansari is our DT Leader at Claycots





The vision for DT

“Design is not just what it looks like and feels like. Design is how it works.” Steve Jobs, Co-founder of Apple. Inc

Our vision for pupils at Claycots Primary School, the largest school in the UK is to create a learning environment that is designed to equip students with the skills, knowledge, and confidence they need to succeed in the 21st century. We will emphasize the use of technology and innovation to promote creativity, collaboration, and problem-solving. In design and technology, we aim to develop children's skills and knowledge in design, structures, mechanisms, electrical control, programming, textiles and a range of materials, including food.

By engaging in technological activity, children can explore, investigate and evaluate a range of existing products, and analyse the work of past and present designers and technologies. This helps them to develop a critical understanding of the impact of design and technology on daily life and the wider world as well as preparing them for future STEM related careers. At Claycots we provide teachers with the necessary training and support to ensure they are comfortable using the newest technologies and can effectively integrate them into their classrooms. Ultimately, our goal is to create a learning environment that will foster a culture of innovation and collaboration, enabling students to develop the skills and knowledge needed to thrive in the 21st century.



DT Intent

At Claycots Primary School, we aim for our pupils to be innovative, creative and critical thinkers. Our objective is for them to master Design and Technology to such an extent that they can go on to have careers in this field and apply the knowledge to their everyday lives. Using creativity, imagination and drawing on inspiration from existing products/designs, 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.

We hope for the pupils to appreciate the iterative design cycle consisted of design, make and evaluate through their work at Claycots Primary School. The DT curriculum has been designed with clear progression of skills and sequential learning where the pupils have the opportunity to build on their previous learning. Through our carefully designed bespoke curriculum, the pupils at Claycots will have an awareness of the impact of DT on our lives and encourage them to become resourceful, enterprising and innovative citizens who will gain skills to make further progress in the subject as well as their contribution to the wider world. At Claycots the DT curriculum enables pupils to meet the end of key stage attainment targets in the national curriculum and aims to develop their investigative and problem-solving skills.



DT Implementation

At Claycots Primary School, we follow a broad and balanced DT curriculum that builds on previous learning. The five strands within the National curriculum are clearly outlined within our progression of skills document which outlines the knowledge gained across all year groups. The pupils at Claycots have exposure to all areas of Design and Technology curriculum which include:

Mechanisms/mechanical systems, structures, textiles, cooking and nutrition (Food), Electrical systems and programming. Each of the areas taught follow the iterative process (design, make and evaluate) and has a carefully selected theme or topic from the additional knowledge or cooking and nutrition section of the curriculum. Children have the opportunity to work both independently as well as collaboratively to research, design, make and evaluate.

All areas of DT have been allocated evenly throughout primary, so the pupils have access to broad and balanced curriculum. Year 1 – Year 6 have at least three units allocated on the timetable throughout the year. Over the half-term when DT is being taught, 7-8 hours of DT must be covered, and each lesson must be taught in sequence in line with the provided planning. The DT curriculum is enhanced further with STEM related workshops. All year groups are provided with the units of works and have an opportunity to work closely with the subject leader prior to the teaching of the unit.

DT overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year R	Junk Modelling (part of continuous provision throughout the year)	Hibernation Box		Easter egg decoration	Ginger Breadman biscuits	Coloured Pasta bracelets
	Toy Box	Xmas- Xmas tree using sticks (Decorations)		Loose play and construction: constructing farms	Flower Threading	Floating and sinking- Boats
	Sandwiches: jam, butter, honey	Cupcakes: Baking and decorating		Exploring vegetables and fruits- healthy food		
Year 1			Food Making fruit and vegetable smoothies (Superheroes)	Structures Freestanding structures	Mechanics and Mechanisms Making Fire engines	
Year 2		Mechanisms Moving dragons (pivots, levers & linkages)			Textiles Puppets	Food A balanced diet-healthy picnic
Year 3	Structures Photograph Frames			Textiles Pouches		Food Seasonal foods
Year 4	Food Healthy varied diet		Electrical systems Torches/light sources	Lego Programming Workshop (STEM) Spike the robot (bevel gear mechanism and gear)		Mechanisms and mechanical systems Storybooks
Year 5	Mechanisms and Mechanical systems Making Toys using cams mechanism		Electrical systems Project using crumble	Lego Programming Workshop (STEM) Drumming Monkey (cams, levers and crown gear)		Food Bread - adapting recipes
Year 6	Textiles Hats/ caps	Structures Bridges		Electronics/programming Programming with Micro: bits	Lego Programming Workshop (STEM) Hungry Alligator (perpendicular gear mechanisms, levers, pulleys and motion sensor.	



Subject progression map



Progression of skills in Design Technology at Claycots Primary School

Structures		EYFS Junk Modelling	EYFS Boats	Year 1 (Stable structures)	Year 2	Year 3 (Photo Frames)	Year 4	Year 5	Year 6 (Bridges)
Skills	Design	<ul style="list-style-type: none"> • Making verbal plans and material choices. • Developing a junk model. • To say who they are making / building / constructing for • To talk about what materials, they are going to use when making / building / constructing 	<ul style="list-style-type: none"> • Designing a junk model boat. • Using knowledge from exploration to inform design 	<ul style="list-style-type: none"> • Designing a stable structure that can stand • Build structures, exploring how they can be made stronger, stiffer and more stable 		<ul style="list-style-type: none"> • Design a photograph frame for a particular purpose • Draw and label the frame, considering how they will ensure it is strong, stable and free-standing. • Design using 2D shapes, labelling: -the 3D shapes that will create the features - materials needed and colours 			<ul style="list-style-type: none"> • Designing a stable structure that is able to support weight • Creating frame structure with focus on triangulation
	Make	<ul style="list-style-type: none"> • Improving fine motor/scissor skills with a variety of materials. • Joining materials in a variety of ways (temporary and permanent). • Joining different materials together. • To build / construct structures that are tall or strong. • To know that tape and glue can join materials together and can make structures stronger. • Describing their junk model, and how they intend to put it together. • To know that tape and glue can join materials together and can make structures stronger. 	<ul style="list-style-type: none"> • Making a boat that floats and is waterproof, considering material choices 	<ul style="list-style-type: none"> • 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 		<ul style="list-style-type: none"> • Making a structure according to design criteria. • Creating joints and structures from paper/card/other materials and tape. • Building a strong and stiff structure by folding paper. • Creating special features for individual designs. 			<ul style="list-style-type: none"> • Making a range of different shaped beam bridges • Using triangles to create truss bridges that span a given distance and supports a load • Building a wooden bridge structure • Independently measuring and marking wood accurately • Selecting appropriate tools and equipment for particular tasks • Using the correct techniques to saws safely • Identifying where a structure needs reinforcement and using card corners for support • Explaining why selecting appropriating materials is an important part of the design process • Understanding basic wood functional properties
	Evaluate	<ul style="list-style-type: none"> • To know there are a range to different materials that can be used to make a model and that they are all slightly different. • To talk about their constructions / products, and what they are pleased with and simple suggestions of how they can improve their models 	<ul style="list-style-type: none"> • Making predictions about, and evaluating different materials to see if they are waterproof. • Making predictions about, and evaluating existing boats to see which floats best. • Testing their design and reflecting on what could have been done differently. • Investigating the how the shapes and structure of a boat affect the way it moves. 	<ul style="list-style-type: none"> • Explore and evaluate a range of existing products • Evaluate their ideas and products against design criteria • Explore and evaluate a range of existing products 		<ul style="list-style-type: none"> • Evaluating own and the work of others based on the aesthetics of the finished products as well as functionality. • Suggesting points for modification of the individual designs. • Describing what characteristics of a design and construction made it the most effective. 			<ul style="list-style-type: none"> • Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary • Suggesting points for improvements for own bridges and those designed by others



Progression of skills in Design Technology at Claycots Primary School

Knowledge	Technical		<ul style="list-style-type: none">• To know that 'waterproof' materials are those which do not absorb water.	<ul style="list-style-type: none">• Build structures, exploring how they can be made stronger, stiffer and more stable• Explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products		<ul style="list-style-type: none">• To understand the importance of strength and stiffness in structures.• To know that a 'free-standing' structure is one which can stand on its own.			<ul style="list-style-type: none">• To understand some different ways to reinforce structures• To understand how triangles can be used to reinforce bridges• To know that properties are words that describe the form and function of materials• To understand why material selection is important based on their properties• To understand the material (functional and aesthetic) properties of wood
	Additional		<ul style="list-style-type: none">• To know that some objects float and others sink.• To know the different parts of a boat.	<ul style="list-style-type: none">• Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products		<ul style="list-style-type: none">• To know that aesthetics is how a product looks• To know that a product's function means its purpose.• To understand that the target audience means the person or group of people a product is designed for.			<ul style="list-style-type: none">• To understand the difference between arch, beam, truss and suspension bridges• To understand how to carry and use a saw safely• To know that a prototype is a cheap model to test a design idea.



Progression of skills in Design Technology at Claycots Primary School

Mechanisms/ mechanical systems		Year 1 (Moving Vehicles: wheels and axles)	Year 2 (Moving dragons Levers, pivots)	Year 3	Year 4 (Story Books)	Year 5 (Making Toys using cams)	Year 6
Skills	Design	<ul style="list-style-type: none"> Designing a vehicle that includes wheels, axles and axle holders, that when combined, will allow the wheels to move. Creating clearly labelled drawings that illustrate movement 	<ul style="list-style-type: none"> Creating a class design- criteria for a moving monster. Designing a moving monster for a specific audience in accordance with a design criteria 		<ul style="list-style-type: none"> Designing a pop-up book which uses a mixture of structures and mechanisms. Naming each mechanism, input and output accurately. Storyboarding ideas for a book. 	<ul style="list-style-type: none"> Experimenting with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement. Understanding how linkages change the direction of a force. Making things move at the same time. Understanding and drawing cross-sectional diagrams to show the inner-workings of my design. 	
	Make	<ul style="list-style-type: none"> Adapting mechanisms, when: <ul style="list-style-type: none"> they do not work as they should. to fit their vehicle design. to improve how they work after testing their vehicle. 	<ul style="list-style-type: none"> Making linkages using card for levers and split pins for pivots. Experimenting with linkages adjusting the widths, lengths and thicknesses of card used. Cutting and assembling components neatly 		<ul style="list-style-type: none"> Following a design brief to make a pop-up book, neatly and with focus on accuracy. Making mechanisms and/or structures using sliders, pivots and folds to produce movement. Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. 	<ul style="list-style-type: none"> Measuring, marking and checking the accuracy of the jelutong and dowel pieces required. Measuring, marking and cutting components accurately using a ruler and scissors. Assembling components accurately to make a stable frame. Understanding that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles. Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set. 	
	Evaluate	<ul style="list-style-type: none"> Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and recognising that a wheel needs an axle in order to move. 	<ul style="list-style-type: none"> Evaluating own designs against design criteria. Using peer feedback to modify a final design. 		<ul style="list-style-type: none"> Evaluating the work of others and receiving feedback on own work. Suggesting points for improvement. 	<ul style="list-style-type: none"> Evaluating the work of others and receiving feedback on own work. Applying points of improvement to their toys. Describing changes, they would make/do if they were to do the project again. 	
Knowledge	Technical	<ul style="list-style-type: none"> To know that wheels need to be round to rotate and move. To understand that for a wheel to move it must be attached to a rotating axle. To know that an axle moves within an axle holder which is fixed to the vehicle or toy. To know that the frame of a vehicle (chassis) needs to be balanced. 	<ul style="list-style-type: none"> To know that mechanisms are a collection of moving parts that work together as a machine to produce movement. To know that there is always an input and output in a mechanism. To know that an input is the energy that is used to start something working. To know that an output is the movement that happens as a result of the input. To know that a lever is something that turns on a pivot. To know that a linkage mechanism is made up of a series of levers 		<ul style="list-style-type: none"> To know that mechanisms control movement. To understand that mechanisms can be used to change one kind of motion into another. To understand how to use sliders, pivots and folds to create paper-based mechanisms. 	<ul style="list-style-type: none"> To understand that the mechanism in an automata uses a system of cams, axles and followers. To understand that different shaped cams produce different outputs. 	



Progression of skills in Design Technology at Claycots Primary School

	Additional	<ul style="list-style-type: none"> To know some real-life items that use wheels such as wheelbarrows, hamster wheels and vehicles. 	<ul style="list-style-type: none"> To know some real-life objects that contain mechanisms. 		<ul style="list-style-type: none"> To know that a design brief is a description of what I am going to design and make. To know that designers often want to hide mechanisms to make a product more aesthetically pleasing. 	<ul style="list-style-type: none"> To know that an automata is a hand powered mechanical toy. To know that a cross-sectional diagram shows the inner workings of a product. To understand how to use a bench hook and saw safely. To know that a set square can be used to help mark 90° angles 	
--	------------	---	---	--	--	---	--

Electrical systems and programming (KS2 only)		Year 1 Year 2	Year 3	Year 4 (Light sources/torches)	Year 5 (Programmable Modelling using crumble)	Year 6 (programming with Micro: bits)
Skills	Design			<ul style="list-style-type: none"> Designing a light source, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas 	<ul style="list-style-type: none"> Design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations. 	<ul style="list-style-type: none"> Writing a design brief from information submitted by a client Developing design criteria to fulfil the client's request Considering and suggesting additional functions for chosen toy Developing a product idea through annotated sketches Placing and manoeuvring 3D objects, using CAD Changing the properties of, or combine one or more 3D objects, using CAD.
	Make			<ul style="list-style-type: none"> Making a light source with a working electrical circuit and switch (Link to their knowledge of conductors and insulators from Science) Using appropriate equipment to cut and attach materials Assembling a product according to the design and success criteria 	<ul style="list-style-type: none"> To use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture 	<ul style="list-style-type: none"> 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 Programming the micro: bit for a clear function/purpose as per the design brief.
	Evaluate			<ul style="list-style-type: none"> Evaluating electrical products Testing and evaluating the success of a final product 	<ul style="list-style-type: none"> Evaluating the functionality of their products and providing feedback to others 	<ul style="list-style-type: none"> Explaining how my program fits the design criteria and how it would be useful as part of a toy Developing an awareness of sustainable design Identifying key industries that utilise 3D CAD modelling and explain why



Progression of skills in Design Technology at Claycots Primary School

						<ul style="list-style-type: none"> • Describing how the product concept fits the client's request and how it will benefit the customers • 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 toy to the client as part of a product concept pitch • Demonstrating a functional program as part of a product concept
Knowledge	Technical			<ul style="list-style-type: none"> • To understand that electrical conductors are materials which electricity can pass through • To understand that electrical insulators are materials which electricity cannot pass through • To know that a battery contains stored electricity that can be used to power products • To know that an electrical circuit must be complete for electricity to flow • To know that a switch can be used to complete and break an electrical circuit 	<ul style="list-style-type: none"> • To apply computing and use electronics to embed intelligence in products that respond that respond to inputs e.g. sensors, and control outputs e.g. actuators, using programmable components e.g. microcontrollers • uses a simple drag and drop programming language and directly drives motors, lamps and LEDs 	<ul style="list-style-type: none"> • To understand that sensors/movement can be useful in products as they mean the product can function without human input. •To understand micro: bits are small computers. •The device contains a range of sensors, connectors, and inputs that offer multiple ways of using the device
	Additional			<ul style="list-style-type: none"> • To know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens • To know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison 	<ul style="list-style-type: none"> • apply their understanding of computing to programming, monitor and control their products 	<ul style="list-style-type: none"> • 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

Textiles		EYFS	Year 1	Year 2 (Puppets)	Year 3 (Pouches)	Year 4	Year 5	Year 6 (Hats/Head piece)
Skills	Design	<ul style="list-style-type: none"> • Designing a simple pattern (Easter egg decorations) • Discussing what a good design should have 		<ul style="list-style-type: none"> • Using a template to create a design for a puppet. 	<ul style="list-style-type: none"> • Designing a pouch for an intended user with a clear functionality. (Designing for themselves) 			<ul style="list-style-type: none"> •Design and generate creative ideas through an iterative process to reach a deign solution that meets specified design criteria focused on users needs and fitness for purpose. •Communicate ideas using sketching, labelling, exploded diagrams as well as using simple CAD-presenting these orally to others.



Progression of skills in Design Technology at Claycots Primary School

	Make	<ul style="list-style-type: none"> • Develop threading and weaving skills • Develop fine motor skills with threading and weaving so that they can use a range of tools competently, safely and confidently. • To use thread or wool to practise threading (Easter egg decoration) 		<ul style="list-style-type: none"> • Cutting fabric neatly with scissors. • Using joining methods to decorate a puppet. • Sequencing steps for construction. • Begin to sew with a running stitch or over stitch. 	<ul style="list-style-type: none"> • Selecting and cutting fabrics for sewing. • Decorating a pouch using fabric glue or running stitch. • Threading a needle. • Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. • Neatly pinning and cutting fabric using a template. • Sewing cross-stitch to join fabric. • Decorating fabric using appliqué. 			<ul style="list-style-type: none"> • To use templates to mark out, cut, shape, join combine and assemble hats/caps for heir users. • To build on different stitches learnt in KS1 as well as blanket stitching to join fabric. • Threading needles independently. • Using appliqué to attach pieces of fabric decoration. • Applying blanket stitch so the spaces between the stitches are even and regular.
	Evaluate	<ul style="list-style-type: none"> • To talk about their finished product (Egg decoration, flower threading, coloured pasta bracelets) • To compare their product to the designs 		<ul style="list-style-type: none"> • Reflecting on a finished product, explaining likes and dislikes. 	<ul style="list-style-type: none"> • Troubleshooting scenarios posed by teacher. • Evaluating the quality of the stitching on others' work. • Discussing as a class, the success of their stitching against the success criteria. • Identifying aspects of their peers' work that they particularly like and why. 			<ul style="list-style-type: none"> • Pupils will explore existing products for their aesthetics and functionality. • Evaluate their own and others design ideas against the design criteria • Evaluate the function and the views of their intended user <p>Look at ways of how to improve further following feedback from others.</p>
Knowledge		<ul style="list-style-type: none"> • Products are made after they have been planned • To know the motions of threading, a movement of the thread from one side of the thread to another. 		<ul style="list-style-type: none"> • To know that 'joining technique' means connecting two pieces of material together. • To know that there are various temporary methods of joining fabric by using staples. glue or pins. • To understand that different techniques for joining materials can be used for different purposes. • To understand that a template (or fabric pattern) is used to cut out the same shape multiple times. • To know that drawing a design idea is useful to see how an idea will look. 	<ul style="list-style-type: none"> To know that sewing is a method of joining fabric. • To know that different stitches can be used when sewing. • To understand the importance of tying a knot after sewing the final stitch. • To know that a thimble can be used to protect my fingers when sewing • To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces. • To know that when two edges of fabric have been joined together it is called a seam. • To know that it is important to leave space on the fabric for the seam. • To understand that some products are turned inside out after sewing so the stitching is hidden. 			<ul style="list-style-type: none"> • To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. • To understand that it is easier to finish simpler designs to a high standard. • To know that small, neat stitches which are pulled taut are important to ensure that the structure is strong and holds securely.



Progression of skills in Design Technology at Claycots Primary School

Cooking and nutrition		EYFS Baking	Year 1 (Making smoothies)	Year 2 (Balanced diet- picnic)	Year 3 (Seasonal foods)	Year 4 (Healthy Varied Diet)	Year 5 (Bread- Adapting recipes)	Year 6
Skills	Design	<ul style="list-style-type: none">•Design packaging for food items• Design and plan for decorations for gingerbread man biscuits, cupcakes and Easter eggs.	<ul style="list-style-type: none">• Designing smoothie carton packaging by-hand or on ICT software• Designing a healthy wrap based on a food combination which work well together	<ul style="list-style-type: none">• Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish.	<ul style="list-style-type: none">• Designing an Indian snack within a given budget, drawing upon previous taste testing Judgements and tasting of existing products.	<ul style="list-style-type: none">• Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients.• Writing an amended method for a recipe to incorporate the relevant changes to ingredients.• Designing appealing packaging to reflect a recipe.		
	Make	<ul style="list-style-type: none">• Practise chopping and cutting with a knife using playdough safely• Marking and cutting using templates for gingerbread man• Develop small motor skills so that they can use a range of tools competently, safely and confidently.• To follow simple instructions	<ul style="list-style-type: none">• Chopping fruit and vegetables safely to make a smoothie• Identifying if a food is a fruit or a vegetable• Learning where and how fruits and vegetables grow• Slicing food safely using the bridge or claw grip• Constructing a wrap that meets a design brief	<ul style="list-style-type: none">• Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination.• Following the instructions within a recipe.	<ul style="list-style-type: none">• Following a baking recipe, from start to finish, including the preparation of ingredients.• Cooking safely, following basic hygiene rules.• Adapting a recipe to improve it or change it to meet new criteria (e.g. from savoury to sweet or vice versa).	<ul style="list-style-type: none">• Cutting and preparing vegetables safely.• Using equipment safely, including knives, hot pans and hobs.• Knowing how to avoid cross-contamination.• Following a step by step method carefully to make a recipe.		
	Evaluate	<ul style="list-style-type: none">• To discuss why different packaging may be used for different foods (shapes, materials)• To verbally talk about their packaging and aesthetics of their finished product• To say what they are pleased about	<ul style="list-style-type: none">• Tasting and evaluating different food combinations• Describing appearance, smell and taste• Suggesting information to be included on packaging• Describing the taste, texture and smell of fruit and vegetables• Taste testing food combinations and final products• Describing the information that should be included on a label• Evaluating which grip was most effective.	<ul style="list-style-type: none">• Establishing and using design criteria to help test and review dishes.• Describing the benefits of seasonal fruits and vegetables and the impact on the environment.• Suggesting points for improvement when making a seasonal tart.	<ul style="list-style-type: none">• Evaluating a recipe, considering: taste, smell, texture and appearance.• Describing the impact of the budget on the selection of ingredients.• Evaluating and comparing a range of food products.• Suggesting modifications to a recipe (e.g. This biscuit has too many raisins, and it is falling apart, so next time I will use less raisins).	<ul style="list-style-type: none">• Identifying the nutritional differences between different products and recipes.• Identifying and describing healthy benefits of food groups.		



Progression of skills in Design Technology at Claycots Primary School

<div>Knowledge</div> <div>Cooking and Nutrition</div>	<ul style="list-style-type: none">• To recognise different foods as either healthy or unhealthy• To explore fruits and vegetables and the differences between them.• To use adjectives to describe how fruits and vegetables look, feel, smell and taste•To know that vegetables are grown•To know different packaging that is used to sell food items.	<ul style="list-style-type: none">• Understanding the difference between fruits and vegetables• To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber)• To know that a blender is a machine which mixes ingredients together into a smooth liquid• To know that a fruit has seeds and a vegetable does not• To know that fruits grow on trees or vines• To know that vegetables can grow either above or below ground• To know that vegetables can come from different parts of the plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber)• To know that ‘diet’ means the food and drink that a person or animal usually eats• To understand what makes a balanced diet• To know where to find the nutritional information on packaging• To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar• To understand that I should eat a range of different foods from each food group, and roughly how much of each food group• To know that nutrients are substances in food that all living things need to make energy, grow and develop• To know that ‘ingredients’ means the items in a mixture or recipe• To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy• To know that many food and drinks we do not expect to contain sugar do; we call these ‘hidden sugars’	<ul style="list-style-type: none">• To know that not all fruits and vegetables can be grown in the UK.• To know that climate affects food growth.• To know that vegetables and fruit grow in certain seasons.• To know that cooking instructions are known as a ‘recipe’.• To know that imported food is food which has been brought into the country.• To know that exported food is food which has been sent to another country.• To understand that imported foods travel from far away and this can negatively impact the environment.• To know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre.• To understand that vitamins, minerals and fibre are important for energy, growth and maintaining health.• To know safety rules for using, storing and cleaning a knife safely.• To know that similar coloured fruits and vegetables often have similar nutritional benefits.	<ul style="list-style-type: none">• To know that the amount of an ingredient in a recipe is known as the ‘quantity.’• To know that it is important to use oven gloves when removing hot food from an oven.• To know the following cooking techniques: sieving, creaming, rubbing method, cooling.•To understand the importance of budgeting while planning ingredients for biscuits.	<ul style="list-style-type: none">• To understand where meat comes from - learning that beef is from cattle and how beef is reared and processed, including key welfare issues.• To know that I can adapt a recipe to make it healthier by substituting ingredients.• To know that I can use a nutritional calculator to see how healthy a food option is.• To understand that ‘cross-contamination’ means bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects.	

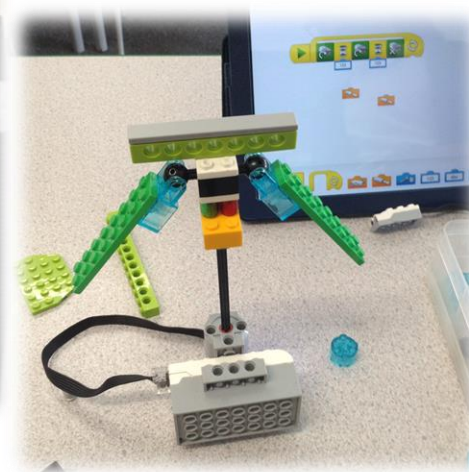
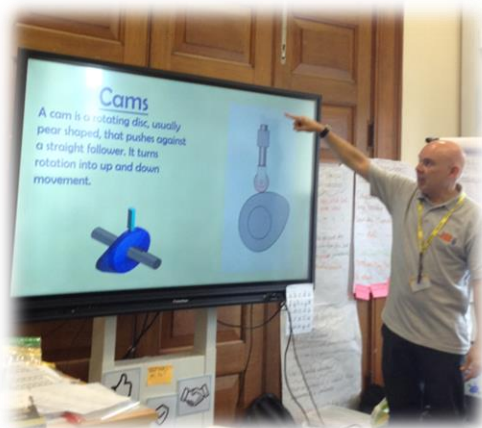
How we measure progress

- ❑ At Claycots, we measure progress in DT in a variety of ways:
- ❑ At the beginning of the unit, we ask the pupils to recall all previous learning undertaken within the strand and discuss the future learning with them.
- ❑ At the end of each session through the iterative process, we provide children with time to self-evaluate their progress against the learning intention as well as reflect on ways they can improve.
- ❑ Teachers use specific targeted questioning to assess the children's understanding of skills and content.
- ❑ We monitor, moderate samples from each class in the year group to measure progress within the project under study.
- ❑ Collaborative work and discussion play an important role in DT throughout the design, make evaluate stages in the projects, so we provide children opportunities to discuss their views and reach decisions.
- ❑ We are currently working on creating a whole school portfolio for DT that can be used as a reference point when assessing children against end of Y2, Y4 and Y6 National Curriculum criteria.

Workshops and Experiences



Lego Programming Workshop



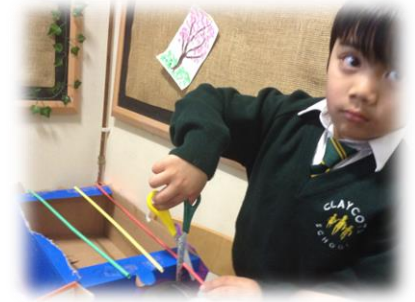
Examples of Learning



Baking and Decorating in EYFS



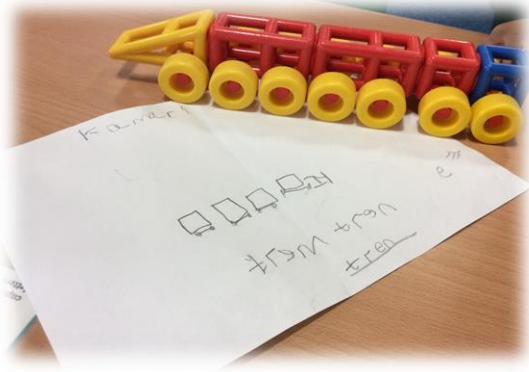
Exploring construction and stability of bridge



Fine motor and junk modelling



Exploring of wheels and how they can be used to move structures

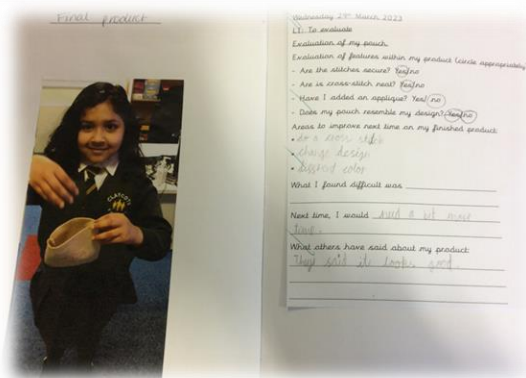
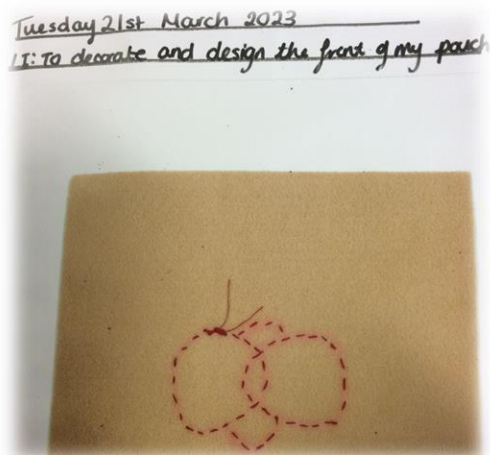
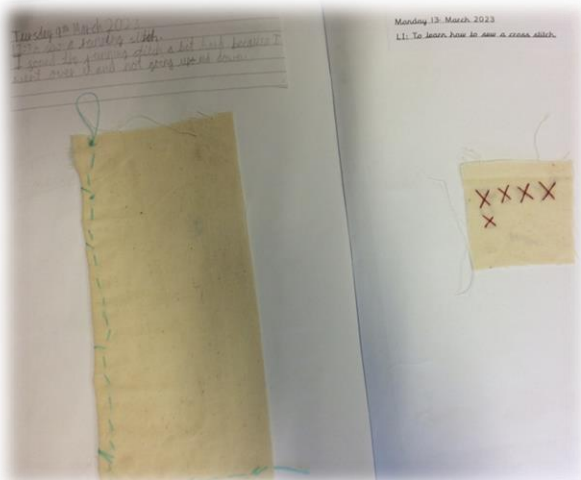


Plan and Build in EYFS

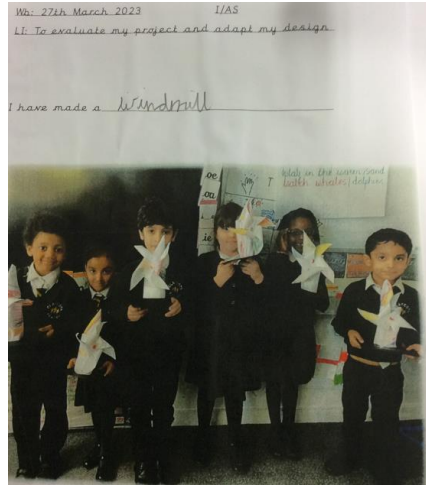
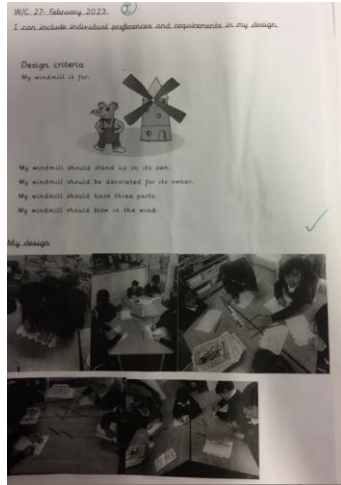
Children explore and discover a range of skills in EYFS through their continuous provision which they will build on in the following years in DT.

Examples of learning

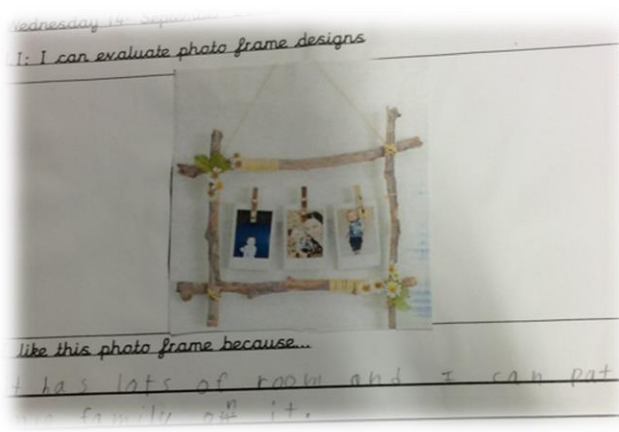
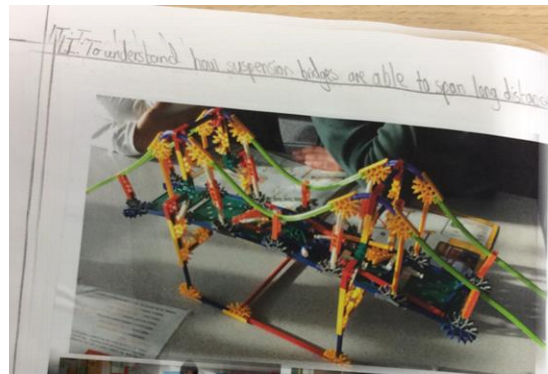
Textiles: Pouches/bags



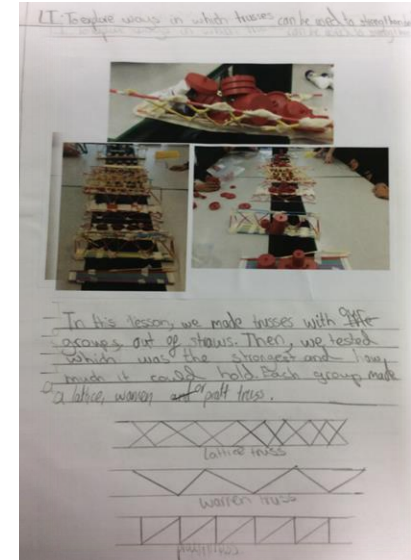
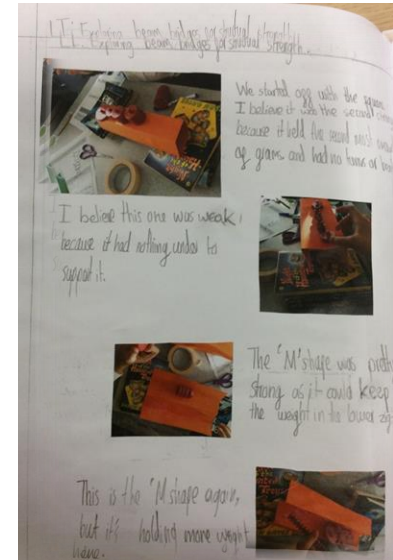
Examples of learning



Year 1 made free standing windmills with a rotating turbine using an axle



Year 3 photo frames



Year 6 testing and designing a prototype of a bridge for a power station based on the given design criteria

Examples of Learning

Food: Cooking and Nutrition



Year 4 learning to make samosas, learning about healthy varied diet.

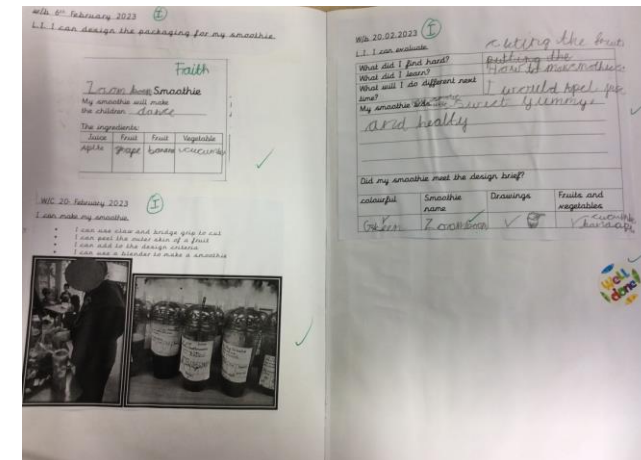


Year 1 learnt about different parts of the plant and which parts are edible. They then evaluated which fruits and vegetables they preferred before designing and making their own superhero smoothies.

W/c 23rd January 2023
L1: I can identify where plants grow and which parts we eat.

Apple and orange grow on trees

Fruits and vegetables	I like it	I do not like it	Smooth	Soft	Hard	Taste (use a word to describe)
Bananas	✓			✓		Sweet
Apples	✓			✓	✓	juicy
Grapes	✓			✓		juicy ✓
Cucumber	✓			✓		bland
Carrots	✓				✓	Sweet
Spinach	✓			✓		bland
Beetroot		✓				tangy ✓



Examples of Learning

My moving monster is for:

My moving monster is for pictures.

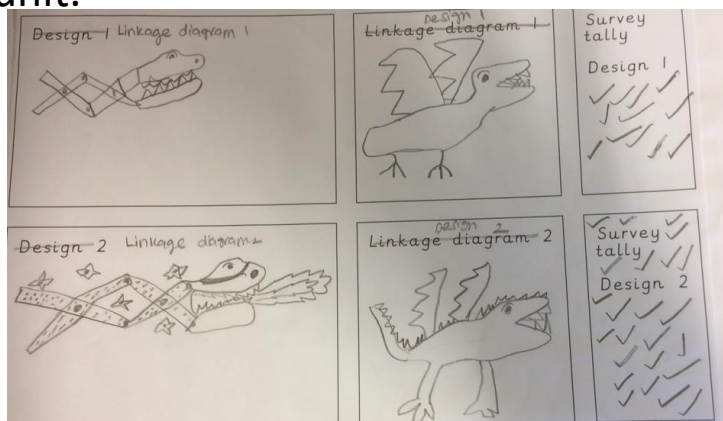
My moving monster should:

1. My moving monster should move.
2. My moving monster should be shiny.
3. My moving monster should be glittery.

Design criteria	Design 1	Design 2
1. My dragon should move	✓	✓
2. My dragon should be shiny	✓	✓
3. My dragon should be glittery	✓	✓
4. My dragon should be scary	X	✓

Final design
The design that meets most of the criteria is Design 2.
The most popular design is Design 2.
I have decided to make Design 2 because it met all of the criteria.

Design Criteria from KS1 from Moving dragons unit.



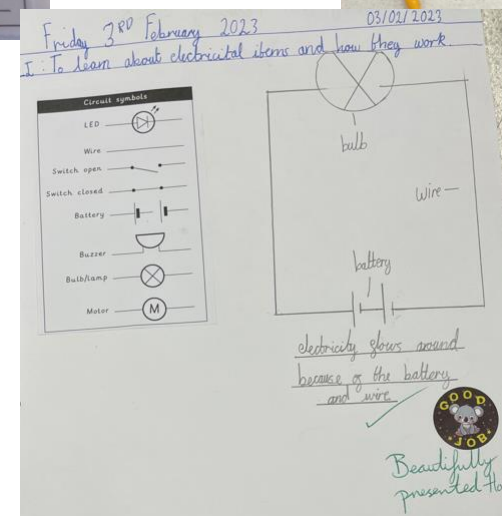
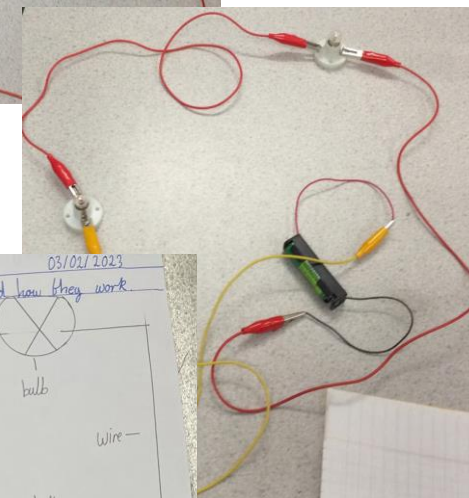
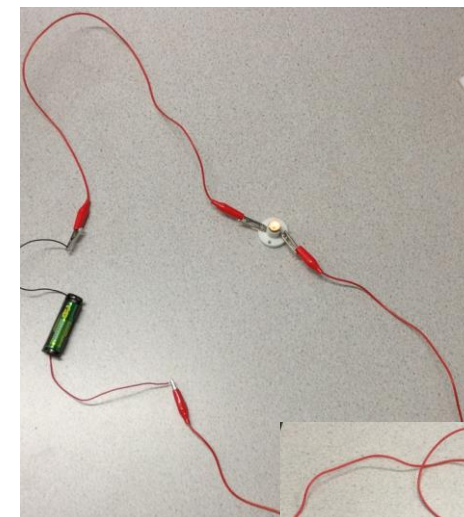
What I liked about my monster was:

I liked the shiny glitter in my monster

If I were to make it again, one thing I would like to improve would be:

The thing I would like to improve is adding some glitter and glue on the other side

Evaluation sheet



Circuits to make torches/light sources



Pupil voice

“I liked tasting the fruits and vegetables because I did not even know what beetroot was! I did not use it in my superhero smoothie because I didn’t like it. I enjoyed using a blender to make my own smoothie as I have never used a blender...” – Faith, Year 1

“I made a jewellery box for my mum for mother’s day. I used tape, scissors and junk modelling.” EYFS

“I loved the Lego programming workshop; it was the best day ever. I learnt how to use gears, cams, levers, sensors along with creating an algorithm in scratch to design and make a dancing monkey.” Jonild, Year 5

“When we were studying The Plague, we went on a trip to Southwark. During this trip we saw lots of different bridges that we were learning about in our DT unit on bridges. It was so much fun to use different materials, especially kennex to create prototypes before testing their strength...” Yusuf, Year 6



Pupil voice

“I always have samosas at home but didn’t know they are this easy to make. I had to be careful when cutting the potatoes and making the samosa strip” – Year 4

“ I made a fire breathing dragon with levers, linkages and pivots. When I close the dragon it becomes longer and open it mouth with the fire sticking out. I used thick card and scissors. I drew out my design and cut it out and made it work.” Hashim, Year 2

“ It was hard to do the running stitch at first but I drew a line with a ruler. It was easy to then do this. I made a pouch for my stationary. I put my pencil in it and it worked, next time I would like to add a button or a zip.” Anvita, Year 3