Design & Technology Progression of skills 2025-26

At Ellison Primary Academy, we aim for a high-quality design and technology curriculum which should inspire in pupils a creative imagination and appreciation of the world designed around us.

To equip children with:

- the ability to take risks, become resourceful, innovative, enterprising and capable citizens;
- the understanding of how past and present designs and technologies have informed our lives today;
- the understanding of how design and technology is an essential contribution to the creativity, culture, wealth and well-being of the nation;
- the skills to design, make and evaluate having taken risks, reflected upon and enhanced their processes.

Concept	EYFS	Y1	Y2	Y3	Y4	Y5	Y6
Design	**Design**	**Design**	**Design**	**Design**	**Design**	**Design**	**Design**
Innovation/ Make	**Innovation/ Make**	**Innovation/ Make**	**Innovation/ Make**	**Innovation/ Make**	**Innovation/ Make**	**Innovation/ Make**	**Innovation/ Make**
Evaluate	**Evaluate**	**Evaluate**	**Evaluate**	**Evaluate**	**Evaluate**	**Evaluate**	**Evaluate**
Nutrition	**Nutrition**	**Nutrition**		**Nutrition**			**Nutrition**
Functionality	Functionality	Functionality	Functionality		Functionality	Functionality	
Technology		**Technology**			**Technology**	**Technology**	

Learning sequence	Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1	Exploration of construction materials and resources.	Cooking and Nutrition: Fruit smoothies.	Structures: Three little pigs building using a range of materials.	Mechanisms: Pneumatic toys	Textiles: Egyptian clothing	Mechanisms: Pop up books: The Lion, the Witch and the Wardrobe.	Structures: Playground design
2	Exploration of joining and fastenings of new materials.	Mechanism: Making moving story books.	Textiles (functionality): Pouches, running stitch.	Cooking and Nutrition: Eating seasonally.	Structures: Setting of The Tempest.	Structures: Bridges, treasure island.	Electrical systems: Steady hand game
3	Expansion of vocabulary; what I have made and how I have made it.	Textiles: The Tiger who came for tea puppets.	Mechanisms: Summer Ferris wheel:	Structures: Castles	Mechanisms: Slingshot cars.	Electrical systems: Electric greetings cards. Harry Potter and the Philosophers stone..	Cooking and Nutrition: Farm to fork.
Skill	Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	I can begin to explore the concept of designing. I can experiment with different construction resources around me.	I can begin to design with a purpose in mind and for a specific audience. I can decide which resources I need for a moving mechanism	I can design a wheel having selected the most appropriate materials based on their properties. I can communicate my design through drawings and templates.	I can begin to use research to inform my designs of my products. I can annotate my design sketches and diagrams to demonstrate my ideas. I can begin to create prototypes to communicate my ideas.	I can use my research to inform my design criteria for a desired product. I can articulate my decisions when designing a purposeful, functional product.	I can research to inform an innovative, functional and appealing product to influence my design criteria. I can design a range of mechanisms, structures and electrical systems having selected the most appropriate materials and features.	I can draw a design from three different perspectives. I can generate ideas through sketching and discussion. I can successfully model ideas through prototypes. I can design a product featuring a variety of different structures, giving careful

						I can create a labelled circuit diagram showing positive and negative parts in relation to the LED and the battery in an electrical system.	consideration to how the structures will be used, considering effective and ineffective designs.
Make	I can construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. I can construct with a purpose in mind, using a variety of resources.	I can follow my design to create moving models that use simple levers and sliders. I can experiment joining and connection resources together.	I am able to follow a design brief. I can select materials according to their characteristics which would best suit my design. I can select from and use a range of tools and equipment to perform practical tasks.	I can select materials due to their functional and aesthetic characteristics. I can begin to manipulate materials to create different effects by cutting, creasing, folding, weaving.	I can make and test a paper template with accuracy and adapt if necessary. I can measure, mark and cut fabric using a paper template.	I can make mechanisms and/or structures using sliders, pivots and folds to produce movement. I can use layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. I can make a functional series circuit. I can map out where different components of the circuit will go to create a desired effect.	I can build a range of play apparatus structures drawing upon new and prior knowledge of structures. I can measure mark and cut a range or materials to create a range of structures. I can use a range of materials to reinforce and add decoration to structures. I can construct a stable base for a game. I can accurately cut, fold and assemble a net. I can decorate the base of the game to a high quality finish. I can make and test a circuit Incorporating a circuit into a base.

Evaluate	I can realise tools can be used for a purpose. I can select appropriate resources and adapts work where necessary.	I can test a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. I can begin to reflect and review upon existing products. I can begin to evaluate my design by testing it with its intended audience.	I can evaluate the success of my creation and begin to use the correct language to show that I am a reflective designer.	I can research and comment upon a range of existing products which meet my brief. I can use the views of others to improve designs. I am able to test and modifying the outcome of my design and suggest any improvements which I need to make.	I can evaluate the speed of a final product based upon my criteria and purpose of the final product. I can use the views of others to improve designs such as the aesthetics of my design.	I can evaluate the work of others and receive feedback on own work throughout peer assessment. I can suggest points for improvement to my peers and reflect on their suggestions also. I can analyse and evaluate a range of existing greeting cards.	I can test own and others finished games, identifying what went well and making suggestions for improvement. I can gather images and information about existing children's toys. I can analyse a selection of existing children's toys
Cooking	I can begin to follow a simple recipe. I can begin to measure ingredients for a simple recipe.	I can begin to use my cooking knowledge to prepare a range of foods. I can talk about how we can stay healthy and which foods are healthy and unhealthy.		I can prepare a variety of foods which apply to a varied and healthy diet. I can understand and apply the principles of a healthy and varied diet in relation to exercise and food intake.			I can follow a recipe, including using the correct quantities of each ingredient. I can adapt a recipe based on research. I can work safely and hygienically with independence
Knowledge	Rec	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Cooking	I know a range of simple processes and changes when cooking.	I can begin to know and understand where food comes from and understand a varied and healthy diet. I know that 'diet' means the food and drink that a person or animal usually eats. I understand which foods make a balanced diet.		I can begin to know and understand what is meant by the term 'seasonality'. I can begin to understand and talk about where and how a variety of ingredients are grown, reared, caught and processed. I know where to find the nutritional information on packaging			I know and understand what is meant by the term 'seasonality'. I know that many countries have 'national dishes' which are recipes associated with that country. I know that 'processed food' means food that has been put through multiple changes in a factory. I understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides. I understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork)
Making Textiles	I know how to explore and compare a range of fabrics and materials.	I know that 'joining technique' means connecting two pieces of material together. I understand that a template (or fabric pattern) is used to cut out the	I know that sewing is a method of joining fabric. I know that different stitches can be used when sewing. I understand the importance of tying		I know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric. I know that when two edges of fabric have been joined together it is called a seam.		

		same shape multiple times. I know that drawing a design idea is useful to see how an idea will look.	a knot after sewing the final stitch.		I know that it is important to leave space on the fabric for the seam.		
Making Structures	I can begin to understand how to use a variety of materials, tools and techniques safely.		I know that shapes and structures with wide, flat bases or legs are the most stable. I understand that the shape of a structure affects its strength. I know that materials can be manipulated to improve strength and stiffness. I know that a structure is something which has been formed or made from parts	I know that materials can be manipulated to improve strength and stiffness. I know that a structure is something which has been formed or made from parts. I know that a 'stable' structure is one which is firmly fixed and unlikely to change o understand the importance of strength and stiffness in structures.	I know that the term aesthetics is how a product looks and will affect the desirability of a product. I know that a product's function means its purpose. I understand that the target audience means the person or group of people a product is designed for. I know that architects consider light, shadow and patterns when designing.	I understand some different ways to reinforce structures. I understand how triangles can be used to reinforce bridges. I know that properties are words that describe the form and function of materials. I understand why material selection is important based on their properties. I know that structures can be strengthened by manipulating materials and shapes. I understand the difference between arch, beam, truss and suspension bridges.	I know that structures can be strengthened by manipulating materials and shapes. I understand what a 'footprint plan' is. I know that a prototype is a more cost efficient model to test a new design idea.

Making Mechanisms	I can begin to use resources such as split pins to make my designs change in shape.	I know that a mechanism is the parts of an object that move together. I know that a slider mechanism moves an object from side to side. I know that a slider mechanism has a slider, slots, guides and an object. To know that bridges and guides are bits of card that purposefully restrict the movement of the slider.	I know that different materials have different properties and are therefore suitable for different uses	I know how a pneumatic systems work I understand that pneumatic systems can be used as part of a mechanism I know how pneumatic systems operate by drawing in, releasing and compressing air	I know that all moving things have kinetic energy. I know that kinetic energy is the energy that something (object/person) has by being in motion. I know that air resistance is the level of drag on an object as it is forced through the air. I understand that the shape of a moving object will affect how it moves due to air resistance.	I know that mechanisms control movement. I understand that mechanisms that can be used to change one kind of motion into another. I understand how to use sliders, pivots and folds to create paper-based mechanisms.	
Making electrical systems						I understand that electrical conductors are materials which electricity can pass through. I understand that electrical insulators are materials which electricity cannot pass through. I know that a battery contains stored electricity that can be used to power products. I know that an electrical circuit must be complete for electricity to flow.	I know that batteries contain acid, which can be dangerous if they leak. I know the names of the components in a basic series circuit including a buzzer. I know that 'form' means the shape and appearance of an object. I know the difference between 'form' and 'function'. I understand that 'fit for purpose' means that

						I know that a switch can be used to complete and break an electrical circuit	a product works how it should and is easy to use. I know that form over purpose means that a product looks good but does not work very well. I know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind. I understand the diagram perspectives 'top view', 'side view' and 'back'