Woodside Academy Progression Map for D&T

Intent:

Our DT curriculum will develop imaginative thinking in children to enable them to talk about what they like and dislike when designing and making. It will enable children to talk about how things work, and to draw and model their ideas. Throughout this curriculum children will be encouraged to select appropriate tools and techniques for making a product, whilst following safe procedures.

AUT TERM	EYFS	KS1		KS2			
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Skills	• Designing a soup recipe as a class. • Designing soup packaging. • Chopping plasticine safely. • Chopping vegetables with support. • Tasting the soup and giving opinions. • Describing some of the following when tasting food: look, feel, smell and taste. • Choosing their favourite packaging design and explaining why.	• 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. • Adapting mechanisms, when: they do not work as they should, to fit their vehicle design and to improve how they work after testing their vehicle. • Testing wheel and axle mechanisms, identifying what stops the wheels from turning, and	• Designing a pouch. • Selecting and cutting fabrics for sewing. • Decorating a pouch. • Threading a needle. • Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. • Neatly cutting fabric using a template. • Troubleshooting scenarios posed by teacher. • Evaluating the quality of the stitching on others' work.	• Carry out research based on a given topic to develop a range of initial ideas. • Generate a final design for the electric poster with consideration to the client's needs and design criteria. • Design an electric poster that fits the requirements of a given brief. • Plan the positioning of the bulb (circuit component) and its purpose. • Create a final design for the electric poster.	• Designing a torch, giving consideration to the target audience and creating both design and success criteria. • Making a torch with a working electrical circuit and switch. • Using appropriate equipment to cut and attach materials. • Assembling a torch according to the design and success criteria • Evaluating electrical products. • Testing and evaluating the success of a final product.	• Identifying factors that could be changed on existing products and explaining how these would alter the form and function of the product. • Developing design criteria based on findings from investigating existing products. • Developing design criteria that clarifies the target user. • Altering a product's form and function by tinkering with its configuration. • Making a functional series	• Writing a recipe, explaining the key steps, method and ingredients. • Following a recipe, including using the correct quantities of each ingredient. • Adapting a recipe based on research. • Working to a given timescale. • Working safely and hygienically with independence. • Evaluating a recipe, considering: taste, smell, texture and origin of the food group. • Taste testing and scoring final products.

		recognising that a wheel needs an axle in order to move.	• 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.	• Mount the poster onto corrugated card to improve its strength and allow it to withstand the weight of the circuit on the rear. • Measure and mark materials out using a template or ruler. • Fit an electrical component (bulb). • Learning to give and accept constructive criticism on own work and the work of others. • Testing the success of initial ideas against the design criteria and justifying opinions. • Revisiting the requirements of the client to review developing design ideas and check that they fulfil their needs.		circuit, incorporating a motor. • Constructing a product with consideration for the design criteria. • Breaking down the construction process into steps so that others can make the product. • Carry out a product analysis to look at the purpose of a product along with its strengths and weaknesses. • Determining which parts of a product affect its function and which parts affect its form. • Peer evaluating a set of instructions to build a product.	• Suggesting and writing up points of improvements when scoring others' dishes, and when evaluating their own throughout the planning, preparation and cooking process. • Evaluating health and safety in production to minimise cross contamination.

Knowledge	I know that soup is ingredients (usually vegetables and liquid) blended together. I know that vegetables are grown. I can recognise and name some common vegetables. I know that different vegetables taste different. I know that eating vegetables is good for us. I can talk about why different packages might be used for different foods.	I know that wheels need to be round to rotate and move. I understand that for a wheel to move it must be attached to a rotating axle. I know that an axle moves within an axle holder which is fixed to the vehicle or toy. I know that the frame of a vehicle (chassis) needs to be balanced. I can name some real-life items that use wheels.	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 a knot after sewing the final stitch.	I understand that an electrical system is a group of parts (components) that work together to transport electricity around a circuit. I understand some common features of an electric product. I can give examples of common electric products. I understand that an electric product uses an electrical system to work. I know the name and appearance of a bulb, battery, battery holder and crocodile wire to build simple circuits. I understand the importance and purpose of information design. I understand how material choices can improve a product to serve its purpose.	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 a switch can be used to complete and break an electrical circuit. I know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens.	I know that series circuits only have one direction for the electricity to flow. I know when there is a break in a series circuit, all components turn off. I know that an electric motor converts electrical energy into rotational movement, causing the motor's axle to spin. I know a motorised product is one which uses a motor to function. I know that product analysis is critiquing the strengths and weaknesses of a product. I know that 'configuration' means how the parts of a product are arranged.	I know that 'flavour' is how a food or drink tastes. 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).

SPR TERM	EYFS	KS1		KS2			
	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Skills	• Making verbal plans and material choices. • Developing a junk model. • Improving fine motor/scissor skills with a variety of materials. • Joining different materials in a variety of ways (temporary and permanent). • Describing their junk model, and how they intend to put it together • Giving a verbal evaluation of their own and others' junk models with adult support. • Checking to see if their model matches their plan. • Think about what they would do differently if they were to do it again. • Describing their favourite and least favourite part of their model.	. • Using a template to create a design for a puppet. • Cutting fabric neatly with scissors. • Using joining methods to decorate a puppet. • Sequencing steps for construction. • Reflecting on a finished product, explaining likes and dislikes.	• Designing a healthy wrap based on a food combination which works well together. • Slicing food safely using the bridge or claw grip. • Constructing a wrap that meets a design brief. • Taste testing food combinations and final products. • Describing the information that should be included on a label. • Evaluating which grip was most effective	• Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish. • 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. • 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.	• Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. • Generate, develop, model and communicate their ideas through discussion, annotated sketches. • Investigate and analyse a range of products. • Evaluate ideas and products against their own design criteria and consider the views of others to improve their work.	• 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. • 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. • Identifying the nutritional differences between different products and recipes. • Identifying and describing healthy	• Designing a playground featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs. • Building a range of play apparatus structures drawing upon new and prior knowledge of structures. • Measuring, marking and cutting wood to create a range of structures. • Using a range of materials to reinforce and add decoration to structures. • Improving a design plan based on peer evaluation. • Testing and adapting a design to improve it as it is developed.

						benefits of food groups.	• Identifying what makes a successful structure.
Knowledge	I know there are a range to different materials that can be used to make a model and that they are all slightly different. I can make simple suggestions to fix my junk model.	I know that 'joining technique' means connecting two pieces of material together. I know that there are various temporary methods of joining fabric by using staples, glue or pins and these can be used for different purposes. I understand that a template is used to cut out the same shape multiple times. I know that drawing a design idea is useful to see how an idea will look.	I know that 'diet' means the food and drink that a person or animal usually eats. I know what makes a balanced diet and that the five main food groups are: carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar. I understand that I should eat a range of different foods from each food group, and roughly how much of each food group. I know that 'ingredients' means the items in a mixture or recipe.	I know that vegetables and fruit grow in certain seasons. I know that cooking instructions are known as a 'recipe'. I know that imported food is food which has been brought into the country and exported food is food which has been sent to another country. I know that eating seasonal foods can have a positive impact on the environment. I know that similar coloured fruits and vegetables often have similar nutritional benefits. I know that the appearance of food	I can design a puppet. I can draw the design and make adaptations (separate arms) I can colour and attach moving arms to the puppets. I can evaluate my puppe	I know that recipes can be adapted to suit nutritional needs and dietary requirements. I know that I can use a nutritional calculator to see how healthy a food option is. I understand that 'cross-contamination' means. I know that coloured chopping boards can prevent cross-contamination. I know that nutritional information is found on food packaging.	I know that structures can be strengthened by manipulating materials and shapes. I understand what a 'footprint plan' is. I understand that in the real world, design, can impact users in positive and negative ways. I know that a prototype is a cheap model to test a design idea.

				is as important as taste.			
SUM TERM	**EYFS**	**KS1**		**KS2**			
	Reception	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Skills	• Discussing what a good design needs. • Designing a simple pattern with paper. • Designing a bookmark. • Choosing from available materials. • Developing fine motor/cutting skills with scissors. • Exploring fine motor/threading and weaving (under, over technique) with a variety of materials. • Using a prepared needle and wool to practise threading. • Reflecting on a finished product and comparing to their design.	• Designing smoothie carton packaging by-hand. • Chopping fruit and vegetables safely to make a smoothie. • Juicing fruits safely to make a smoothie. • Tasting and evaluating different food combinations. • Describing appearance, smell and taste. • Suggesting information to be included on packaging. • Comparing their own smoothie with someone else's.	• Selecting a suitable linkage system to produce the desired motion. • Designing a wheel • Selecting materials according to their characteristics. • Following a design brief. • Evaluating different designs. • Testing and adapting a design.	• Designing a castle with key features to appeal to a specific person/purpose. • Drawing and labelling a castle design using 2D shapes, labelling: - the 3D shapes that will create the features - materials needed and colours. • Constructing a range of 3D geometric shapes using nets. • Creating special features for individual designs. • Making facades from a range of recycled materials • Evaluating own work and the work of others based on the aesthetic of the finished product and compare it to the original design. • Suggesting points for modification of	• Designing a biscuit within a given budget, drawing upon previous taste testing judgements. • Following a baking recipe, including the preparation of ingredients. • Cooking safely, following basic hygiene rules. • Adapting a recipe to meet the requirements of a target audience. • 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.	• Designing a stuffed toy, considering the main component shapes required and creating an appropriate template. • Considering the proportions of individual components. • Creating a 3D stuffed toy from a 2D design. • Measuring, marking and cutting fabric accurately and independently . • Creating strong and secure blanket stitches when joining fabric. • Threading needles independently. • Using appliqué to attach pieces of fabric decoration. • Applying blanket stitch so the spaces between the	• Designing a steady hand game- identifying and naming the components required. • Drawing a design from three different perspectives. • Generating ideas through sketching and discussion. • Modelling ideas through prototypes. • Understanding the purpose of products, including what is meant by 'fit for purpose' and 'form over function' • Constructing a stable base for a game. • Accurately cutting, folding and assembling a net. • Decorating the base of the game to a high quality finish. • Making and testing a circuit and

				the individual designs.		stitches are even and regular. • Testing and evaluating an end product and giving point for further improvements.	incorporating it into a base. • Testing own and others finished games, identifying what went well and making suggestions for improvement. • Gathering images and information about existing children's toys. • Analysing a selection of existing children's toys.
Knowledge	I know that a design is a way of planning our idea before we start. I know that threading is putting one material through an object.	I know that a blender is a machine which mixes ingredients together into a smooth liquid. I know that a fruit has seeds. I know that fruits grow on trees or vines and know that vegetables can grow either above or below ground. I know that vegetables is any edible part of a plant.	I know that different materials have different properties and are therefore suitable for different uses. I can name some features of a Ferris wheel. I know that it is important to test my design as I go along so that I can solve any problems that may occur.	I understand that wide and flat based objects are more stable. I understand the importance of strength and stiffness in structures. I can name some features of a castle and their purpose. I know that a façade is the front of a structure. I know that a paper net is a flat 2D shape that can	I know that the amount of an ingredient in a recipe is known as the 'quantity.' I know that safety and hygiene are important when cooking. I know some of the following cooking techniques: sieving, measuring, stirring, cutting out and shaping. I understand the importance of budgeting while	I know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. I understand that it is easier to finish simpler designs to a high standard. I know that soft toys are often made by creating appendages separately and then attaching them to the main body. I can use small, neat stitches which are pulled taut are important to ensure	I know that batteries contain acid, which can be dangerous if they leak. I can name the components in a basic series circuit. 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 a product

				become a 3D shape once assembled. I know that a design specification is a list of success criteria for a product.	planning ingredients. I know that products often have a target audience.	that the soft toy is strong and holds the stuffing securely.	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 can talk about the diagram perspectives 'top view', 'side view' and 'back'.

IMPACT

EYFS	KS1		KS2			
Reception	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Reception children can safely use and explore a variety of materials, tools and techniques and can experiment with colour, design, texture, form and function. They can share their creations, explaining the	Children will be able to design a product to meet an agreed design criteria. Children will be able to select resources from a range offered and use cutting and joining techniques to create their product. Children can begin to	Children will be able to use a range of cutting and joining techniques. Children will be able to make simple plans, and design according to a criteria. Children will also be able describe components of a healthy diet.	Children should know how shapes and structures can be used to make effective products. They should be able to select appropriate materials for their final pieces of work. Children should have a clear understanding	Children would know a variety techniques to join different materials. They would be able to select appropriate material fit for the purpose. Children will be able to investigate and evaluate a range of existing products.	Children will be able to draw upon previous knowledge of electrical systems. They will have a good understanding of different food cutting skills and holds in order to design and make their own. They will be able to suggest	Children have an embedded knowledge of different materials and their suitability for different products or purposes. Children can confidently use the tools and equipment provided to create a product

process they have used.	suggest changes to their design which are not just aesthetic.		of characteristics and properties of food ingredients. Children can evaluate their final product and suggest improvements to their designs.	They can evaluate their final product and suggest improvements to their designs.	modifications to their own work and work of others.	safely. Children have a very good understanding of the purpose and target market of a product. Children will be able to design and make a healthy balanced meal.