

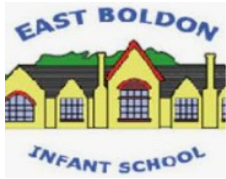
DT Curriculum Skills Progression

	EYFS	Year 1	Year 2	Year 3
Structures	<u>SKILLS</u> <u>JUNK MODELLING/</u> DESIGN - Making verbal plan and material choices - Developing a junk model MAKE - Improving fine motor/scissor skills in a variety of ways. - Joining materials in a variety of ways (temporary or permanent) - Joining different materials together. - Describing their junk model and how they intend to put it together. EVALUATE - Giving a verbal evaluation of their own and others' junk models with adult support. - Checking to see if their model matches their plan. - Considering what they would do differently if they were to do it again. - Describing their favourite part of their model. <u>KNOWLEDGE</u> TECHINICAL - To know there are a range to different materials that can be used to make a model and that they are all slightly different, - Making simple suggestions to fix their junk modelling	<u>SKILLS</u> <u>WINDMILL</u> DESIGN - Learning the importance of a clear design criteria - Including individual preferences and requirement in a design. MAKE - Making stable structures from card - Following instructions to cut and assemble the supporting structures of a windmill. - Making functioning turbines and axels which are assembled into a main supporting structures - Fixing the middle of an object. - Puncturing holes. - Adding weight to structures - Creating supporting structures - Cutting evenly and carefully. EVALUATE - Evaluating a windmill according to the design criteria, texting whether the structure - Suggest points for improvements. <u>KNOWLEDGE</u> TECHNICAL - To understand that cylinders are a string type of structure (e.g. them main shape used for windmills and lighthouses. - To understand that axels are used in structures and mechanisms to make parts turn in a circle. - To begin to understand that different structures are used for different purposes. - To know that a structure is something that can be made and put together. - To know that sails or blades of a windmill are moved by the wind. - To know that a structure is something built for a reason. - To know that stable structures do not topple. - To know that adding weight to the base of a structure can make it more stable.	<u>SKILLS</u> <u>BABY BEAR'S CHAIR</u> DESIGN - Generating and communicating ideas using sketching and modelling - Learning about different types of structures found in the natural world and in everyday objects. MAKE - Making a structure according to design criteria - Creating joints and structures from paper/card and tape - Building a strong and stiff structure by folding paper. EVALUATE - Exploring the features of structures - Comparing the stability of different shapes - Testing the strength of own structures - Identifying the weakest part of the structure - Evaluating the strength, stiffness and stability of own structure. <u>KNOWLEDGE</u> TECHNICAL - To know that shapes and structures with wide, flat bases or legs are the most stable. - To understand that the shape of a structure affects its strength. - To know that materials can be manipulated to improve strength and stiffness - To know that a 'strong' structure is one which is firmly fixed and unlikely to change or move. - To know that a 'stiff' structure or material is a one which does not bend easily.	DESIGN - Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. • - Use annotated sketches, prototypes, final product sketches and pattern pieces; communication technology, such as web-based recipes, to develop and communicate ideas. MAKE - Plan the main stages of making. • - Select from and use a range of appropriate utensils, tools and equipment with some accuracy related to their product. - Select from and use finishing techniques suitable for the product they are creating. EVALUATE - Investigate a range of 3-D textile products, ingredients and lever and linkage products relevant to their project. - Test their product against the original design criteria and with the intended user. - Evaluate the ongoing work and the final product with reference to the design criteria and the views of others <u>KNOWLEDGE</u> TECHNICAL •Develop and use knowledge of how to construct strong, stiff shell structures. - Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. - Know and use technical vocabulary relevant to the project.



DT Curriculum Skills Progression

	Year 1	Year 1	Year 2	Year 2
Mechanisms/Mechanical Systems	<u>SKILLS</u> <u>WHEELS AND AXLES</u> DESIGN - Designing a vehicle that includes wheels, axles and axle holders that when combined, will allow the wheels to move. - Creating clearly labelled drawings to illustrate movement. MAKE - Adapting mechanisms when: * They do not work as they should * To fit their vehicle design * To improve how they work after testing their vehicle. EVALUATE - Testing wheel and axle mechanisms, identifying what stops the wheels from turning and recognising that a wheel needs an axle in order to move. <u>KNOWLEDGE</u> TECHNICAL - To know that wheels needs 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.	<u>SKILLS</u> <u>MAKING A MOVING STORY-BOOK</u> DESIGN - Explaining how to adapt mechanisms, using bridges or guides to control the movement. - Designing a moving story book for a given audience MAKE - Following a design to create moving models that use levers and sliders. EVALUATE - Testing a finished product, seeing whether it moves as planned and if not, explaining how it can be fixed. - Reviewing the success of a product by testing it with its intended audience. <u>KNOWLEDGE</u> TECHNICAL - To know that a mechanism is the parts of an object from side to side. - To 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.	<u>SKILLS</u> <u>FAIRGROUND WHEEL</u> DESIGN - Conducting simple surveys or discussions to gather opinions on what others need or like in a design. - Knowing that a survey is used to find out what people like. - Using a simple design brief that outlines the intended use, target user and key features of the product to create simple design criteria. - Knowing that a design brief helps to decide what to make. - Knowing that design criteria are the steps for making a product successful. - Creating ideas with design criteria in mind. - Referring to specific parts of existing products when thinking of ideas. - Knowing that the design criteria help when thinking of ideas. - Using labels to explain parts of design, label materials etc - Knowing that drawings can help explain how something works. - Knowing that a label explains part of a drawing. MAKE - Choosing materials ingredients or components from a wider range of materials, ingredients or components. - Explain their choices based on the properties of materials and components. - Knowing some properties of materials like hard, soft, flexible, waterproof, strong. - Following and recalling simple safety instructions. - Knowing that some tools are sharp like scissors and knives - Choosing known geometric shapes when making - Beginning to shape objects to improve how they work. - Knowing the names of some geometric shapes: triangles, pyramid, square, cube, circle, sphere - Considering balance in their finishing, like evenly spaced decoration. EVALUATE - Discussing a range of existing products and saying what they like and dislike about them - Evaluating existing products against design criteria - Evaluating their ideas and creations against simple design criteria - Knowing that design criteria help to decide if their product is a success - Suggesting improvements to their peers' designs and products. - Knowing that improve means to do something better. - Knowing that their suggestions can improve someone else's work <u>KNOWLEDGE</u> TECHNICAL - To know everyday objects have mechanisms - To know many things that move have parts inside to help them work. - To know mechanisms usually limit unwanted movement - To know everyday objects utilise wheels and axels. - To know wheels must be able to turn to work effectively. - To know axels allow wheels to turn without falling off.	<u>SKILLS</u> <u>MAKING A MOVING MOVING MONSTER</u> DESIGN - Creating a class design criteria for a moving monster. - Designing a moving monster for a specific audience in accordance with a design criteria. MAKE - Make linkages using card for levers and split pins for pivots. - Experimenting with linkages adjusting the widths, lengths and thickness of card used. - Cutting and assembling components neatly. EVALUATE - Evaluating own designs against design criteria - Using peer feedback to modify a final design. EVALUATE - Evaluating own designs against design criteria. - Using peer feedback to modify a final design. <u>KNOWLEDGE</u> TECHNICAL - 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 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 f a series of levers.



DT Curriculum Skills Progression

	EYFS	Year 1	Year 2	Year 3
Cooking and Nutrition	SOUP DESIGN - Design a soup recipe as a class - Design soup packaging MAKE - Chopping plasticine safely - Chopping vegetables with support EVALUATE - Tasting the soup and giving opinions - Describing some of the following when tasting food: look, smell and taste - Choosing their favourite packaging design and why KNOWLEDGE - To know that soup is ingredients (usually vegetables and liquid) blended together. - To know that vegetables are grown - To recognise and name some common vegetables. - To know that different vegetables taste different. - To know that eating vegetables is good for us. - To discuss why different packages might be used for different foods.	SMOOTHIES DESIGN - Designing a smoothie carton packaging by hand. MAKE - Chopping fruit and vegetables safely to make a smoothie. - Juicing fruits safely to make a smoothie. EVALUATE - 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. KNOWLEDGE - To know that a blender is a machine which mixes ingredients together into a smooth paste. - To know that a blender is a machine which mixes ingredients together into a smooth liquid. - To know that a fruit has seeds - To know that fruits grow on trees or vines. - To know that vegetables can grow either above or below the ground - To know that vegetables is any edible part of a plant (e.g roots: potato, leave;; lettuce, fruit: cucumber	BALANCED DIET DESIGN - Designing three wrap ideas based on a food combination which work well together MAKE - Chopping foods safely to make a wrap - Constructing a wrap that meets a design brief - Grating foods to make a wrap - Snipping smaller foods instead of cutting. EVALUATE - Describe taste, texture and smell of fruit and vegetables. - Taste testing food combinations and final products. - Describing the information that should be included on the label. - Evaluating food by giving it a score KNOWLEDGE - 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 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 ingredients means the items in a mixture or recipe.	DESIGN - Design their own tart recipe using seasonal ingredients MAKE - Know how to use appropriate equipment and utensils to prepare and combine food. - Develop understanding of how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. - Measure ingredients using ml and g EVALUATE - Evaluate their own products against the design criteria - Consider the views of others to suggest improvements to their work. - Discuss the benefits of using seasonal fruits and vegetables KNOWLEDGE - Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. - Know that food ingredients can be fresh, pre-cooked and processed - Explain the benefits of seasonal food and that not all fruit and vegetables can be grown in the UK - Understand the basic rules of food hygiene and safety. - Follow the instructions within a recipe.

	EYFS	Year 1	Year 2	Year 3
Textiles	BOOKMARKS DESIGN - Discussing what a good design needs - Designing a simple pattern with paper - Designing a bookmark - Choosing from available materials MAKE - Developing fine motor/cutting skills with scissors. - Exploring fine motor/threading and weaving (under and over technique) with a variety of materials. - Using a prepared needle and wool to practise threading EVALUATE - Reflecting on a finished product and comparing to their design KNOWLEDGE - To know that a design is a way of planning our idea before we start. - To know that threading is putting one material through an object.	PUPPETS DESIGN - Using a template to create a design for a puppet MAKE - Cutting fabric neatly with scissors - Using joining methods to decorate a puppet - Sequencing steps for construction EVALUATE - Reflecting on a finished product, explaining likes and dislikes. KNOWLEDGE - To know that joining technique means connecting two pieces of materials 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	POUCHES DESIGN - Designing a pouch. MAKE - Selecting a cutting fabrics for sewing. - Threading a needle - Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. - Neatly pinning and cutting fabric using a template. EVALUATE - Troubleshooting scenarios posed by the 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. KNOWLEDGE - 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.	DESIGN - Design cut and shape a template - Recognise different qualities and types of fabric MAKE - Use cross stitch as a decorative feature - Measure and attach ribbon - Decorate using a variety of techniques such as beads, buttons and pinking. EVALUATE - Investigate a range of 3-D textile products, - Test their product against the original design criteria and with the intended user. - Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. KNOWLEDGE - Know how to strengthen, stiffen and reinforce existing fabrics. - Understand how to securely join two pieces of fabric together. - Understand the need for patterns and seam allowances. - Know and use technical vocabulary relevant to the project.