DT

Progression of Skills

Reception

Unit of work	Design	Make	Evaluate
Structures- Junk modelling	• Making verbal plans and material choices. • Developing a junk model	· Improving fine motor/scissor skills with a variety of materials. · Joining materials in a variety of ways (temporary and permanent). · Joining different materials together. · 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. · Considering what they would do differently if they were to do it again. · Describing their favourite and least favourite part of their model. .
Cooking and nutrition- Soup	· 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.
Textiles- Bookmarks	· 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

DT

Progression of Skills

Year 1

Unit of work	Design	Make	Evaluate
Cooking and nutrition- Smoothies	• Designing smoothie carton packaging by-hand. • Learning where and how fruits and vegetables grow.	• Chopping fruit and vegetables safely to make a smoothie. • Juicing fruits safely to make a smoothie. • Identifying if a food is a fruit.	• 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.
Textiles: Puppets	• 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.
Structures- Constructing a windmill	• Learning the importance of a clear design criteria. • Including individual preferences and requirements in a design. •	• Making stable structures from card. • Following instructions to cut and assemble the supporting structure of a windmill. • Making functioning turbines and axles which are assembled into a main supporting structure. • Finding the middle of an object. • Puncturing holes. • Adding weight to structures. • Creating supporting structures. • Cutting evenly and carefully	• Evaluating a windmill according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't. • Suggest points for improvements

DT

Progression of Skills

Year 2

Unit of work	Design	Make	Evaluate
Structures- Baby bear's chair	• Generating and communicating ideas using sketching and modelling. • Learning about different types of structures, found in the natural world and in everyday objects.	• 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.	• Exploring the features of structures. • Comparing the stability of different shapes. • Testing the strength of own structures. • Identifying the weakest part of a structure. • Evaluating the strength, stiffness and stability of own structure.
Cooking and nutrition- healthy wrap	• Designing three wrap ideas.	• 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. • Spreading soft foods to make a wrap. • Identifying the five food groups. • Learning about balanced diet.	• Describing appearance, smell and taste. • Taste and evaluating different food combinations. • Describing the information that should be included on a label.
Mechanisms -Fairground wheels	•● 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 generating ideas. ● Knowing that the design criteria help when thinking of ideas. ● Using labels to explain parts of a design, label materials, etc. ● Using labels to explain parts of a design, label materials, etc. ● Knowing that drawings can help explain how something works. ● Knowing that a label explains part of a drawing.	● Choosing materials, ingredients or components from a wider range of materials, ingredients or components. ● Explaining their choices based on the properties of materials and components. ● Knowing some properties of materials like hard, soft, flexible, waterproof, strong etc. ● 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: triangle, pyramid, square, cube, circle, sphere. ● Considering balance in their finishing, like evenly spaced decoration.	● 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 make something better. ● Knowing that their suggestions can improve someone else's work.

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Progression of Skills

Year 3

Unit of work	Design	Make	Evaluate
Textiles- Egyptian collars	• · Designing and making a template from an existing cushion and applying individual design criteria.	· Following design criteria to create a cushion or Egyptian collar. · Selecting and cutting fabrics with ease using fabric scissors. · Threading needles with greater independence. · Tying knots with greater independence. · Sewing cross stitch to join fabric. · Decorating fabric using appliqué. · Completing design ideas with stuffing and sewing the edges (Cushions) or embellishing the collars based on design ideas (Egyptian collars).	· Evaluating an end product and thinking of other ways in which to create similar items.
Mechanical systems- Pneumatic toys	• Creating simple design criteria that outline basic functionality and appeal to individual users or target audiences. • Taking part in structured idea blasting sessions. • Coming up with more ideas and considering the feasibility of their ideas in the classroom. • Developing drawing and sketching skills with a focus on clarity and simplicity. • Developing designs by adding detail and justifications about materials, tools, methods. • Beginning to recognise the benefit of a range of diagram types or prototypes to communicate ideas. (eg. sketches, cross-sectional diagram, thumbnail sketches and exploded diagrams).	• Selecting equipment required for a series of tasks based on the plan. Explain why each piece is suitable for each stage. • Suggesting simple safety rules based on their understanding of tool dangers. • Participating in discussions about classroom safety procedures. • Cutting out more complex shapes accurately. • Handle different sizes and types of scissors with confidence. • Using PVA glue to join corrugated card and light wood (e.g. balsa wood). • Choosing shapes to suit the function of a product. • Painting or colouring precisely to improve the finish. • Making facades from a range of materials. • Sealing edges with tape to cover gaps in joins.	• Analysing why specific products, designers or inventors are successful. • Evaluating their designs by comparing them against design criteria and considering feedback from peers to suggest improvements. • Explaining why they think certain aspects of a peer's design are effective or why they suggested specific improvements. • Reflecting on feedback to decide if and how it could be used to improve future iterations.
Structures- Constructing castles	· 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. · Designing and/or decorating a castle tower on CAD software.	· 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 in comparison to the original design. · Suggesting points for modification of the individual designs.

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Progression of Skills

Year 4			
Unit of work	Design	Make	Evaluate
Electrical systems- Torches	• · Designing a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas	· 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.
Digital World: Mindful moments timer	· Writing design criteria for a programmed timer (Micro:bit). · Exploring different mindfulness strategies. · Applying the results of my research to further inform my design criteria. · Developing a prototype case for my mindful moment timer. · Using and manipulating shapes and clipart by using computer-aided design (CAD), to produce a logo. · Following a list of design requirements.	· Developing a prototype case for my mindful moment timer. · Creating 3D structures using modelling materials. · Programming a micro:bit in the Microsoft micro:bit editor, to time a set number of seconds/minutes upon button press.	· Investigating and analysing a range of timers by identifying and comparing their advantages and disadvantages. · Evaluating my Micro:bit program against points on my design criteria and amending them to include any changes I made. · Documenting and evaluating my project. · Understanding what a logo is and why they are important in the world of design and business. · Testing my program for bugs (errors in the code). · Finding and fixing the bugs (debug) in my code. · Using an exhibition to gather feedback. · Gathering feedback from the user to make suggested improvements to a product.
Cooking and nutrition- Adapting a recipe	• Designing a biscuit within a given budget. · Conducting market research.	· Following a baking recipe. · Understanding safety and hygiene rules. · Adapting a recipe.	· Evaluating an adapted recipe. · Evaluating and comparing a range of products. · Suggesting modifications.

DT

Progression of Skills

Year 5

Unit of work	Design	Make	Evaluate
Textiles- Waistcoats	• · Designing a waistcoat in accordance to a specification linked to set of design criteria. • · Annotating designs, to explain their decisions	· Using a template when cutting fabric to ensure they achieve the correct shape. · Using pins effectively to secure a template to fabric without creases or bulges. · Marking and cutting fabric accurately, in accordance with their design. · Sewing a strong running stitch, making small, neat stitches and following the edge. · Tying strong knots. · Decorating a waistcoat, attaching features (such as appliqué) using thread. · Finishing the waistcoat with a secure fastening (such as buttons). · Learning different decorative stitches. · Sewing accurately with evenly spaced, neat stitches.	· Reflecting on their work continually throughout the design, make and evaluate process.
Mechanical systems- Gears and Pulleys	• Noticing wider-reaching problems or needs in the community. • Identifying a wide range of needs and potential barriers through market research. • Writing more complex problem statements that consider multiple factors and constraints. • Creating more complex design criteria that require considering detailed user needs, environmental impact, materials and cost. • Coming up with a broader range of ideas and deeper innovation, requiring pupils to think critically about their ideas' practicality and originality. • Beginning to use more complex annotated sketches, such as cross-sectional and exploded diagrams and pattern pieces in design. • Using a series of prototypes to refine and improve their designs.	• Consistently apply safety instructions. • Select appropriate scissors to handle delicate cutting tasks and challenging materials. • Cutting patterns and drawings accurately. • In supervised groups, using hot glue guns safely. • Recognising that hot glue is useful for joining materials that need a strong bond that sets quickly. • Choosing PVA glue over hot glue for its safety when joining materials in less intensive projects.	• Reflecting on the usability, aesthetics, innovation and sustainability of products and discussing how design choices impact these aspects. • Assessing their designs against a more complex set of design criteria that includes functionality, aesthetics, user experience, sustainability and cost. • Considering alternative materials, tools or techniques that could enhance the product. • Providing feedback that is helpful, specific, and encouraging. • Incorporating feedback from peers or users improve their product further, explaining the changes they made and the impact they had
Digital world- Monitoring devices	· Researching (books, internet) for a particular (user's) animal's needs. · Developing design criteria based on research. · Generating multiple housing ideas using building bricks. · Understanding what a virtual model is and the pros and cons of traditional and CAD modelling. · Placing and manoeuvring 3D objects, using CAD. · Changing the properties of, or combining one or more 3D objects, using CAD.	· Understanding the functional and aesthetic properties of plastics. · Programming to monitor the ambient temperature and coding an (audible or visual) alert when the temperature rises above or falls below a specified range.	· Stating an event or fact from the last 100 years of plastic history. · Explaining how plastic is affecting planet Earth and suggesting ways to make more sustainable choices. · Explaining key functions in my program (audible alert, visuals). · Explaining how my product would be useful for an animal carer including programmed features.

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Progression of Skills

Year 6

Unit of work	Design	Make	Evaluate
Cooking and nutrition- Come dine with me	• · Writing a recipe, explaining the key steps, method and ingredients. • · Including facts and drawings from research undertaken.	· 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. · Suggesting and writing up points of improvements in productions. · Evaluating health and safety in production to minimise cross contamination.
Digital world- Navigating the world.	· 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 my navigation tool. · Developing a product idea through annotated sketches. · Placing and manoeuvring 3D objects, using CAD. · Changing the properties of, or combining one or more 3D objects, using CAD.	· Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo). · Explaining material choices and why they were chosen as part of a product concept. · Programming an N,E, S, W cardinal compass.	· Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. · Developing an awareness of sustainable design. · Identifying key industries that utilise 3D CAD modelling and explaining why. · 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 my navigation tool to the client as part of a product concept pitch. · Demonstrating a functional program as part of a product concept pitch.
Electrical systems- Steady hand game	• 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 (toys), 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. · Incorporating a circuit 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.