2. Design and Technology progression of skills

Key skills	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	•Learning the importance of a clear design criteria. •Including individual preferences and requirements in a design. •Using a template to create a design for a puppet. •Designing packaging by-hand or on ICT software.	•Create a class design criteria. •Design a product for a specific audience with a design criteria. •Designing a healthy food item based on a food combination which works well together.	•Designing and making a template from an existing product and applying individual design criteria. •Designing a product with key features to appeal to a specific person/purpose. •Drawing and labelling a design specifying the materials needed and colours. •Designing and/or decorating a product on CAD software. •Creating a healthy and nutritious recipe using seasonal ingredients, considering the taste, texture, smell and appearance of the dish. •Problem solving by suggesting potential features on a Micro: bit and justifying ideas.	•Designing a shape with a specific aim. •Drawing a net to create a structure from. •Choosing shapes that serve a specific purpose. •Personalising a design. •Designing a product within a given budget, drawing upon previous taste testing judgements. •Designing an electrical system giving consideration to the target audience. •Creating design and success criteria.	•Designing a stable structure that is able to support weight. •Creating a frame structure with a focus on triangulation. •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. •Design an object using a 3D design software package.	•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. •Writing a recipe, explaining the key steps, method and ingredients. •Including facts and drawings from research undertaken.

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Make	•Making stable structures from card, tape and glue. •Learning how to turn 2D nets into 3D structures. •Following instructions to cut and assemble supporting structures. •Making functioning turbines and axles which are assembled into a main supporting structure. •Cutting fabric neatly with scissors. •Using joining methods to decorate a product. •Sequencing the steps taken during construction. •Chopping fruit and vegetables safely.	•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. •Slicing food safely using the bridge or claw grip. •Constructing a food product that meets a design brief. •Selecting and cutting fabrics for sewing. •Decorating a pouch using fabric glue or running stitch. •Threading a needle.	•Following design criteria to create a product. •Using a template when cutting and assembling a product. •Selecting and using the appropriate tools and equipment for cutting, joining •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.	•Measuring, marking, cutting and assembling with increasing accuracy. •Making a model based on a chosen design. •Following a 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). •Making a product with a working electrical circuit and switch.	•Making a range of different shaped beam structures. •Building a wooden 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.	•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. •Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set. •Following a recipe, including using the correct quantities of each ingredient.

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Make	•Identifying if a food is a fruit or a vegetable. •Learning where and how fruits and vegetables grow.	•Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. •Neatly pinning and cutting fabric using a template.	Constructing a range of 3D geometric shapes using nets. •Creating special and/or functional features for individual designs. •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.	•Using appropriate equipment to cut and attach materials. •Assembling a product according to the design and success criteria.	•Understanding basic wood functional properties. •Cutting and preparing vegetables safely. •Using equipment safely, including knives, hot pans and hobs. •Knowing how to avoid cross-contamination.	•Adapting a recipe based on research. •Working to a given timescale. •Working safely and hygienically with independence.

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Evaluate	•Reflecting on a finished product, explaining likes and dislikes. •Tasting and evaluating different food combinations. •Describing appearance, smell and taste. •Suggesting information to be included on packaging.	•Evaluating own designs against design criteria. •Using peer feedback to modify a final design. •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.	•Analysing and evaluating an existing product. •Evaluating an end product and thinking of other ways in which to create similar items. •Establishing and using design criteria to help test and review products. •Describing the benefits of seasonal fruits and vegetables and the impact on the environment. •Suggesting points for improvement/modification. •Evaluating own work and the work of others based on the aesthetic of the finished product and in comparison to the original design.	•Evaluating a final product based on the accuracy of workmanship on performance. •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 products. •Testing and evaluating the success of a final product.	•Adapting and improving own structures by identifying points of weakness and reinforcing them as necessary. •Suggesting points for improvements for own structures and those designed by others. •Identifying the nutritional differences between different products and recipes. •Identifying and describing healthy benefits of food groups. •Explaining key functions in my program (audible alert, visuals). •Explaining how my product would be useful including programmed features. •Understand the pros and cons of traditional and CAD modelling.	•Evaluating the work of others and receiving feedback on own work. •Applying points of improvement to their products. •Describing changes they would make/do if they were to do the project again. •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 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.