DT: EYFS

Birth – 3 Year Olds	3 – 4 Year Olds	Reception
Children explore different materials and tools. • Children explore materials with different properties. Children manipulate and play with different materials. • Provide appropriate tools and joining methods for the materials offered. Children use their imagination as they consider what they can do with different materials. Children make simple models which express their ideas.	Children select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them. Children choose the right resources to carry out their own plan, e.g., choosing a spade to enlarge a small hole they dug with a trowel. Children use one handed tools and equipment, e.g., scissors. Children use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about the differences between materials and changes they notice, e.g., floating and sinking, melting, etc. • Children talk about what they see. • Offer opportunities to explore scale. Children explore how things work, e.g., wind-up toys, pulleys, cogs, etc. Children make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Children develop their own ideas and then decide which materials to use to express them. Children join different materials and explore different textures.	I can develop my small motor skills so that I can use a range of tools competently, safely and confidently, e.g., scissors I can create collaboratively sharing ideas, resources and skills. I can refine my ideas and begin to represent them. I can think about and discuss what I want to make. I can discuss problems and how they might be solved as they arise. I can use different techniques for joining materials, e.g., adhesive tape and different sorts of glue. I can use a range of materials and tools with care and precision.

DT: Year 1

Designing	Making / Construction	Evaluating	Technical Knowledge	Food Technology
Design - purposeful, functional, appealing products for themselves and other users based on design criteria. *Design - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.*	*Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].* *Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.*	*Explore and evaluate a range of existing products.* *Evaluate their ideas and products against design criteria.*	*Build structures, exploring how they can be made stronger, stiffer and more stable.* *Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.*	*Use the basic principles of a healthy and varied diet to prepare dishes.* *Understand where food comes from.*
I can include individual preferences and requirements in a design. • I can think of ideas on my own. Challenge: I can explain why a plan is important. **I can design a product, which moves.** • I can draw background pictures and moving parts. • I can say whether I will use a side-to-side slider or an up-and-down slider.	**I can make a stable structure from card, tape and glue.** **I can follow instructions to cut and assemble a supporting structure.** Challenge: I understand what stable means and can ensure my structure has this property **I can make a product, which moves.** • I can draw and cut my moving parts. • I can make sliders for my moving parts. • I can join my parts to create a moving picture.	**I can evaluate my design, by saying what went well and not so well in the model I have made.** • I can test whether my structure is strong and stable. • I can test whether my axel turns freely in the wind/when blown on. **I can test and evaluate my finished product.** • I can test whether my product moves as planned, and if not, explain how and why it can be fixed. • I can talk about my work and consider what I have learnt.	***Structures – Freestanding*** **I know that that the shape of materials can be changed to improve the strength and stiffness of structures.** • I understand that structures are used for different purposes. **I know that axles are used in structures and mechanisms to make parts turn in a circle** Challenge: I know that the three main parts of a windmill are called the turbine, axel and structure ***Mechanisms – Sliders and levers*** **I can explore making mechanisms.** • I understand that sliders are mechanisms. • I know sliders can make things move. • I can use the words: up, down, left, right, vertical and horizontal to describe movement.	**I can identify if a food is a fruit or a vegetable.** Challenge: I know how to determine if something is a fruit. **I can identify where plants grow and which parts we eat.** **I can compare fruit and vegetables, describing appearance, smell and taste.** **I can make a choice as to what smoothie I will make and why.** **Let's get practical!** • I can wash my hands • I can prepare fruit and vegetables. • I can use a knife to cut safely. • I can use a fork to secure foods. • I can use a blender safely. **I can taste and evaluate my product, saying what I like and don't like.** Challenge: I can design suitable packaging for my product.

DT: Year 2

Designing	Making / Construction	Evaluating	Technical Knowledge	Food Technology
Design - purposeful, functional, appealing products for themselves and other users based on design criteria. *Design - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.*	*Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.*	*Explore and evaluate a range of existing products.* *Evaluate their ideas and products against design criteria.*	*Build structures, exploring how they can be made stronger, stiffer and more stable.* *Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.*	*Use the basic principles of a healthy and varied diet to prepare dishes.* *Understand where food comes from.*
To explore and design a product. • I can describe my design using pictures, diagrams models and words.	**I know that different materials have different properties and are therefore suitable for different uses.** Challenge: I can measure materials to use in a model or structure. **I can sew a running stitch, with evenly spaced, neat, even stitches.** • I can use a running stitch to join two pieces of fabric. Challenge: I can sew a needle independently.	**I can test my design and solve any problems that occur.** • I can consider how to improve my model. **I can explain what went well with my work.** • I can explain what I would improve if I did the project again.	***Mechanisms – Wheels and axles*** **I can make a strong stable structure.** • I can explore which shapes are the strongest. • I can strengthen materials by joining, folding and rolling. **I can use wheels and axels to make a model move.** • I can select suitable linkage systems to produce the desired motions. ***Textiles – Templates and joining techniques*** • I can neatly pin and cut fabric using a template. • I can cut textiles. • I know that a thimble can protect my fingers. • I can tie a knot with support after my final stitch.	**I can explain what makes a balanced diet.** • I know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'. • I can name the five main food groups: carbohydrates, fruits and vegetables, protein, dairy and foods high in fats and sugar. • I know that I should eat a range of different foods and roughly how much of each food group. Challenge: I can show where to find nutritional information on packaging. **I can taste test food combinations.** • I can describe the taste, texture, and smell of fruits and vegetables. **I can design a healthy product based on food combinations that work well together.** *Let's get practical!* • I can slice food safely using a bridge or claw grip. • I can follow food hygiene rules. **I can evaluate my final product, suggesting small improvements that could be made.**

DT: Year 3

Designing	Making / Construction	Evaluating	Technical Knowledge	Food Technology
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, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.*	*Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.* *Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.*	*Investigate and analyse a range of existing products.* *Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.* *Understand how key events and individuals in design and technology have helped shape the world.*	*Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.* *Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].* *Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].* *Apply their understanding of computing to program, monitor and control their products.*	*Understand and apply the principles of a healthy and varied diet.* *Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.* *Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.*
I can design a product with key features to appeal to a specific person/purpose. • I can label key features and materials. Challenge: I can explain why my product may be appealing to the end user. **I can design and create a template and applying individual design ideas.**	**I can construct a product that meets the requirements of a brief.** **I can select the most appropriate tools and techniques for a given task.** Challenge: I can give a reason for choosing a certain tool for a job. **I can work accurately to measure, make cuts and make holes.** **I can sew using cross-stitch and applique.** **I can complete design ideas by stuffing and sewing the edges.** • I can explain why some products are turned inside out after the sewing.	**I can evaluate my own work based on the aesthetics of the finished product and in comparison to the original design.** • I can suggest points for modification to improve my work.	***Structures – Shell structures*** **To recognise how multiple shapes (2D and 3D) are combined to form a strong and stable structure.** **I can construct a range of 3D geometric shapes using nets.** • I know that a paper net is flat 2D shape that becomes 3D when assembled. • I can create a stable structure using a wide flat base. • I can use a range of techniques to improve the strength and stiffness of a structure. Challenge: I can explain why I have joined a material in a specific way. ***Textiles – 2D shape to 3D product*** • I can decorate a fabric using cross stitch and applique. • I can use a range of stitches to join fabric. • I can tie a knot independently after my final stitch. • I can leave space for a seam when decorating. • I can suggest ways that my product is similar to other items.	**I can explain how climate affects food growth.** • I know that not all fruits and vegetables can be grown in the UK. • I know that imported food is food which has been brought into the country. • I know that exported food is food which has been sent to another country. Challenge: I can explain the negative impact that imported food can have on the environment. **I know that fruit and vegetables are grown in certain seasons.** **I can create a recipe that is healthy and nutritious using seasonal vegetables.** *Let's get practical!* • I can follow the instructions within a recipe. • I can prepare a kitchen to cook in. • I can prepare myself to start cooking. • I know the basic rules of food contamination. • I can use a knife safely and independently. **I can create and use design criteria to help test and review dishes.** • I can suggest points for improvement.

DT: Year 4

Designing	Making / Construction	Evaluating	Technical Knowledge	Food Technology
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, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.*	*Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.* *Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.*	*Investigate and analyse a range of existing products.* *Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.* *Understand how key events and individuals in design and technology have helped shape the world.*	*Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.* *Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].* *Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].* *Apply their understanding of computing to program, monitor and control their products.*	*Understand and apply the principles of a healthy and varied diet.* *Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.* *Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.*
I can design a product, considering the target audience of a product. **I can create design and success criteria.** **I can communicate ideas in a range of ways, including sketches and drawings which are annotated.**	**I can select tools to use for a particular task.** • I can show a good level of expertise when using a range of tools and equipment. **I can recognise which material is likely to give the best outcome according to their functional properties and aesthetic qualities.** Challenge: I can explain why a certain material will give the best outcome. **I can measure accurately and carefully when building a product.** **I can use a range of joining and finishing techniques.** • I can apply my understanding of how to strengthen, stiffen and reinforce a structure. **I can use IT, where appropriate, to personalise my product.**	**I can test and evaluate a range of existing products both for their purpose and appearance.** Challenge: I can consider the target audience of the product and their likes/dislikes. **I can evaluate and suggest improvements for my design.** **I can test evaluate and suggests improvements for my product.** • I can use my success criteria to check if my design has been successful. • I can show how my design has been successful and fit for purpose.	***Electrical Systems – Simple circuits and switches*** • I can identify electrical products. • I know what electrical conductors and insulators are. • I can build a simple circuit. • I know that a battery contains stored electricity and can be used to power products. Challenge: I can justify why I have used certain components in my electrical system. ***Mechanical Systems – Levers and Linkages*** • I know that all moving things have kinetic energy. • I can consider the effect that air resistance will have on my product. • I can draw a net to create a clear structure, cutting and assembling with increasing accuracy. Challenge: I can consider the effect of shape and the accuracy of workmanship on performance.	**I can taste test products, evaluating their taste, smell, texture and appearance.** *Let's get practical!* **I can follow a baking recipe.** • I can cook safely following food hygiene rules. • I can use digital scales with support accurately to weigh ingredients. Challenge: I can use digital scales independently. • I know the following techniques: sieving, creaming, rubbing method and cooling. • I can whisk foods using a hand whisk • I can use two spoons to transfer ingredients with minimal spillage **I can follow and adapt a baking recipe** • I can compare and evaluate a range of biscuit prototypes **I can design a biscuit within a given budget, drawing upon previous taste testing.** • I can design a product that is appealing • I can create branding for a product **I can follow and create a product that meets a design brief.** Challenge: I can say whether a product meets my design brief and why.

DT: Year 5

Designing	Making / Construction	Evaluating	Technical Knowledge	Food Technology
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, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.*	*Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.* *Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.*	*Investigate and analyse a range of existing products.* *Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.* *Understand how key events and individuals in design and technology have helped shape the world.*	*Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.* *Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].* *Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].* *Apply their understanding of computing to program, monitor and control their products.*	*Understand and apply the principles of a healthy and varied diet.* *Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.* *Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.*
I can design a product to fulfil a design brief. • I can suggest appropriate design criteria. • I can design a product thinking carefully about the target audience. **I can explain why selecting appropriate materials is an important part of the design process.**	**I can use a range of tools and equipment competently.** • I can follow health and safety rules. Challenge: I can use a range of tools with precision and independence. **I can measure and mark out accurately on wood.** **I can assemble components accurately to make a stable frame** **I can use an exploded diagram to assemble a product.**	**I can evaluate the appearance and functionality of a product against original design criteria.** • I can explain how the final design meets the design criteria and brief, including any improvements that could be made. • I know that good quality products should be neat, accurate and securely assembled. Challenge: I can justify changes I make during the making process.	***Textiles – Combining different fabric shapes*** • I can make a paper template. **I can cut fabric neatly and accurately, in accordance with a design.** • I can pin and mark out the outline of a template on fabric. **I can use blanket stitch to join two pieces of fabric.** **I can create and add decorations to fabric.** • I can attach pieces using applique. • I can use different decorative stitches. **I can stuff my toy carefully repairing any holes or gaps.** ***Mechanical Systems – Pulleys and gears*** • I know that an automata is a hand-powered mechanical toy that uses cams, followers and axels to create motion. **I can explore the relationship between cam profiles and follower movement, to inform design decisions.** • I can explain what cross sectional diagrams are and why they are useful. **I can explore how to reinforce a structure.** • I can identify points of weakness, reinforcing them when necessary.	**I understand where food comes from.** • I can say where meat comes from. • I can explain how some meat is reared and processed. • I can explain some of the ethical issues around farming. **I can identify the nutritional differences between different products and recipes.** • I can explain what is mean by the term 'healthy'. • I can suggest ways in which a recipe can be made healthier. Challenge: I can use research to suggest healthy substitutions and additions to a recipe. **I can adapt a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients.** • I can write an amended method for a recipe. Challenge: I can design appealing packaging to reflect the values of a product. **I can follow a step-by-step method carefully to make a recipe.** *Let's get practical!* • I can use kitchen equipment safely e.g. knives, hot pans and hobs. • I can use a garlic press. • I can avoid cross contamination. • I know how to chop an onion. • I can grate a variety of foods.

DT: Year 6

Designing	Making / Construction	Evaluating	Technical Knowledge	Food Technology
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, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.*	*Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.* *Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.*	*Investigate and analyse a range of existing products.* *Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.* *Understand how key events and individuals in design and technology have helped shape the world.*	*Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.* *Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].* *Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].* *Apply their understanding of computing to program, monitor and control their products.*	*Understand and apply the principles of a healthy and varied diet.* *Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.* *Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.*
I can research and analyse a range of products. • I can use market research to inform my ideas. **I can design a product, deciding on clear design criteria.** • I can draw my design from three different angles. • I can annotate my designs.	**I can select which tool to use for a specific practical task.** • I can use a tool correctly and safely. Challenge: I can justify why a specific tool would be most efficient and practical. **I can construct a product and decorate it to ensure a high-quality finish.** **I can assemble fabric using a strong running stitch.** • I can make sure my stitches are small, neat and follow the edge. • I can tie strong knots to secure the thread in place.	**I can test a product, making changes to my finished design.** **I can test and evaluate designed products, identifying what went well and making suggestions for improvements.** • I can decide if different resources would have improved my product. **I can evaluate my ideas and products against design ideas.**	***Structures – Frame structures*** **I can build a range of structures.** • I can measure, mark, cut and shape wood to create a range of structures. • I can explain that structures can be strengthened by manipulating materials and shapes. • I can use a range of materials to reinforce and add decoration to my structures. **I can create a surrounding landscape.** • I can attach structures to a base, reinforcing the join where necessary. • I can create landscape features using a range of materials. ***Electrical Systems – More complex switches and circuits*** • I can identify and name components in a steady hand game. • I can name the components in a basic series circuit, including a buzzer.	**I can research and design a three-course meal.** • I can list ingredients needed for a recipe. • I can read a method and make a list of the equipment I will need. Challenge: I know that countries have 'national dishes' which are recipes associated with that country. **I can write a recipe, explaining the key steps, methods and ingredients.** Challenge: I can use ingredients from different food groups, considering healthy choices and budget. **I know what happens to certain food before it appears on the supermarket shelf e.g. Farm to Fork.** **I can follow a recipe using the correct quantities of each ingredient.** **I can evaluate and score a recipe, considering: taste, smell, texture and origin of the food group.** • I can suggest and write up points for improvement. *Let's get practical!* • I can evaluate health and safety in production to minimise cross contamination. • I can cut higher resistant foods using the claw grip. • I can use both analogue and digital scales independently and accurately.