Unlocking Every Child's Potential as a Unique Child of God

Year 1 DT Curriculum

Pupils will be taught:

Design
- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make
- select from and use a range of tools and equipment to perform practical tasks
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate
- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical Knowledge
- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms, in their products.

Cooking & Nutrition
- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

Term 1 - Toy Story	Term 2 – Pirate Adventure	Term 3- Enchanted Woodland
PUPPET MAKING • Join fabrics together using pins, staples or glue. • Design a puppet and use a template. • Join their two puppets' faces together as one. • Decorate a puppet to match their design https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/textiles-puppets/ https://www.tts-group.co.uk/pre-punched-felt-puppet-shapes-60pk/1005316.html?cgid=Primary-D--T-Textiles	HEATHLY SMOOTHIE https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/fruit-and-vegetables/ • Designing smoothie carton packaging by-hand or on ICT software. • Chopping fruit and vegetables safely to make a smoothie. • Identifying if a food is a fruit or a vegetable. • Learning where and how fruits and vegetables grow. • Tasting and evaluating different food combinations. • Describing appearance, smell and taste. • Suggesting information to be included on packaging.	WINDMILL • Identify some features that would appeal to the client (a mouse) and create a suitable design. • Explain how their design appeals to the mouse. • Make stable structures, which will eventually support the turbine, out of card, tape and glue. • Make functioning turbines and axles that are assembled into the main supporting structure. • Say what is good about their windmill and what they could do better. https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/ks1-y1-design-and-technology-constructing-windmills/
Key Vocab: decorate, design, fabric Glue, model, hand puppet, safety pin, staple, stencil, template	**Key Vocab:** fruit, vegetable, Seed, leaf, root, stem, smoothie, healthy, carton, design, flavour, peel, slice	**Key Vocab:** Axle, bridge, design, design criteria, model, net, packaging, structure, template, unstable, stable, strong, weak
Curriculum Enhancement:	**Curriculum Enhancement:**	**Curriculum Enhancement:** DT linked to History and local visit
Essential Knowledge: • To know that 'joining technique' means connecting two pieces of material 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 materials can be used for different purposes. • To understand that a template (or fabric pattern) is used to cut out the same shape multiple times. • To know that drawing a design idea is useful to see how an idea will look. •	Essential Knowledge: • To understand the difference between fruits and vegetables. • To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber). • To know that a blender is a machine which mixes ingredients together into a smooth liquid. • To know that a fruit has seeds and a vegetable does not. • To know that fruits grow on trees or vines. • To know that vegetables can grow either above or below ground • To know that vegetables can come from different parts of the plant.	Essential Knowledge: • To understand that the shape of materials can be changed to improve the strength and stiffness of structures. • To understand that cylinders are a strong type of structure (and, therefore, they are the main shape used for windmills and lighthouses). • To understand that axles 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 has been made and put together.

Year 2 DT Curriculum

Term 1 - Memory Box	Term 2 – Adventures of Paddington Bear	Term 3- Roots and Shoots
MOVING PICTURES https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/mechanisms-making-a-moving-story-book/ • Identify whether a mechanism is a side-to-side slider or an up-and-down slider and determine what movement the mechanism will make. • Clearly label drawings to show which parts of their design will move and in which direction. • Make a picture, which meets the design criteria, with parts that move purposefully as planned. • Evaluate the main strengths and weaknesses of their design and suggest alterations. •	CHAIR FOR PADDINGTON https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/structures-baby-bears-chair/ • Identify man-made and natural structures. • Identify stable and unstable structural shapes. • Contribute to discussions. • Identify features that make a chair stable. • Work independently to make a stable structure, following a demonstration. • Explain how their ideas would be suitable for Paddington Bear. • Produce a model that supports a teddy, using the appropriate materials and construction techniques. • Explain how they made their model strong, stiff and stable.	HEALTHY WRAP https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/food-a-balanced-diet/ • Name the main food groups and identify foods that belong to each group. • Describe the taste, texture and smell of a given food. • Think of four different wrap ideas, considering flavour combinations. • Construct a wrap that meets the design brief and their plan.
Key Vocab: design, design criteria, wheel, Ferris wheel, Pods, axle, axle holder, frame, mechanism	**Key Vocab:** design criteria, man-made, natural, properties, structure, stable, shape, model, test	**Key Vocab:** balanced diet, Balance, carbohydrate, dairy, fruit, ingredients, oils, sugar, protein, vegetable, design criteria
Curriculum Enhancement:	**Curriculum Enhancement:** One off craft activity – create Tudor house and set fire (parents invited)	**Curriculum Enhancement:** Possible parent taste test event
Essential Knowledge: SKILLS • Explaining how to adapt mechanisms, using bridges or guides to control the movement. • Designing a moving story book for a given audience. • Following a design to create moving models that use levers and sliders. • Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. • Reviewing the success of a product by testing it with its intended audience. KNOWLEDGE • To know that a mechanism is the parts of an object that move together. • To know that a slider mechanism moves 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. •	Essential Knowledge: SKILLS • 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 their own structures. • Identifying the weakest part of a structure • Evaluating the strength, stiffness and stability of their own structure. KNOWLEDGE • 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.	**Essential Knowledge:** SKILLS • 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. • 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. 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 where to find the nutritional information on packaging. • 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 materials can be manipulated to improve strength and stiffness. • To know that a structure is something which has been formed or made from parts. • To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move. • To know that a 'strong' structure is one which does not break easily. • To know that a 'stiff' structure or material is one which does not bend easily.	• To know that nutrients are substances in food that all living things need to make energy, grow and develop. • To know that 'ingredients' means the items in a mixture or recipe. • To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy. • To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'.

Year 3 DT Curriculum

Pupils should be taught:

Design

- 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

Make

- select from and use a wider range of tools and equipment to perform practical tasks accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- 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

Technological Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products
- understand and use electrical systems in their products
- apply their understanding of computing to programme, monitor and control their products.

Cooking & Nutrition

- understand and apply the principles of a healthy and varied diet
- cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet
- become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes

understand the source, seasonality and characteristics of a broad range of ingredients

Term 1 - Where's Wally?	Term 2 – Funny Bones	Term 3- Walk like an Egyptian
PENCIL CASES https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/textiles-pouches/ • Work independently to produce a functioning pencil case. • Design a suitable shaped pouch • Sew a running stitch with regular-sized stitches and understand that both ends must be knotted. • Prepare and cut fabric to make a pouch from a template. • Use a running stitch to join the two pieces of fabric together. • Decorate their pouch using the materials provided. •	STONEAGE BUGGY https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/mechanical-systems-making-a-slingshot-car/ • Work independently to produce an accurate, functioning car chassis. • Design a shape that is suitable for the project. • Attempt to reduce air resistance through the design of the shape. • Produce panels that will fit the chassis and can be assembled effectively using the tabs they have designed. • Construct car bodies effectively. • Conduct a trial accurately and draw conclusions and improvements from the results.	BREAD MAKING https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/food-adapting-a-recipe/ • Follow a recipe, with some support. • Describe some of the features of a bread based on taste, smell, texture and appearance. • Adapt a recipe by adding extra ingredients to it. • Plan a bread recipe within a budget.
Key Vocab: decorate, fabric, fabric glue, knot, needle, needle threader, running stitch, sew, template, thread	**Key Vocab:** chassis, energy Kinetic, mechanism, air resistance, design, structure, graphics, research, model, template,	Key Vocab: Design criteria, Research, texture, innovative, aesthetic, measure, cross-contamination, diet, processed, packaging
Curriculum Enhancement:	**Curriculum Enhancement:** Car races	**Curriculum Enhancement:** Parent taste test event
Essential Knowledge: SKILLS • Designing a pouch. • Selecting and cutting fabrics for sewing • Decorating a pouch using fabric glue or running stitch.	**Essential Knowledge:** SKILLS • Designing a shape that reduces air resistance. • Drawing a net to create a structure from.	Essential Knowledge: SKILLS • Designing a bread within a given budget, drawing upon previous taste testing. • Following a baking recipe. • Cooking safely, following basic hygiene rules. • Adapting a recipe.

• Threading a needle. • Sewing running stitch, with evenly spaced, neat, even stitches to join fabric. • Neatly pinning and cutting fabric using a template. • Troubleshooting scenarios posed by 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. •	• Choosing shapes that increase or decrease speed as a result of air resistance. • Personalising a design. • Measuring, marking, cutting and assembling with increasing accuracy. • Making a model based on a chosen design. • Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance. KNOWLEDGE • To understand that all moving things have kinetic energy. • To understand that kinetic energy is the energy that something (object/person) has by being in motion. • To know that air resistance is the level of drag on an object as it is forced through the air. • To understand that the shape of a moving object will affect how it moves due to air resistance.	• 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. • Suggesting modifications KNOWLEDGE • To know that the amount of an ingredient in a recipe is known as the 'quantity'. • To know that it is important to use oven gloves when removing hot food from an oven. • To know the following cooking techniques: sieving, creaming, rubbing method, cooling. • To understand the importance of budgeting while planning ingredients for bread.

Year 4 DT Curriculum

Pupils should be taught:

Design

- 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

Make

- select from and use a wider range of tools and equipment to perform practical tasks accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- 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

Technological Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products
- understand and use electrical systems in their products
- apply their understanding of computing to programme, monitor and control their products.

Cooking & Nutrition

- understand and apply the principles of a healthy and varied diet
- cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet
- become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes

understand the source, seasonality and characteristics of a broad range of ingredients

Term 1 - Who let the God's out?	Term 2 – Raiders and Invaders	Term 3- Coasts
MOVING MYTHICAL MONSTER https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/mechanical-systems-pneumatic-toys/ • Draw accurate diagrams with correct labels, arrows and explanations. • Correctly identify definitions for key terms. • Identify five appropriate design criteria. • Communicate two ideas using thumbnail sketches. • Communicate and develop one idea using an exploded diagram. • Select appropriate equipment and materials to build a working pneumatic system. • Assemble their pneumatic system within the housing to create the desired motion. • Create a finished pneumatic toy that fulfills the design brief.	DIARY COVER https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/textiles-fastenings/ • Identify the features, benefits and disadvantages of a range of fastening types. • Write design criteria and design a sleeve that satisfies the criteria. • Make a template for their book sleeve. • Assemble their case using any stitch they are comfortable with.	LIGHTHOUSE https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/electrical-systems-torches/ • Identify electrical products and explain why they are useful. • Help to make a working switch. • Identify the features of a torch/lighthouse and how it works. • Describe what makes a lighthouse successful. • Create suitable designs that fit the success criteria and their own design criteria. • Create a functioning lighthouse with a switch according to their design criteria.
Key Vocab: mechanism, lever Pivot, linkage system, pneumatic system, input, output, component, thumbnail sketch, research, adapt, properties, reinforce, motion	Key Vocab: criteria, fastening, mock – up, fabric, fix, stitch, template	Key Vocab: battery, bulb, buzzer, conductor, circuit, circuit diagram, electricity, insulator, series circuit, switch, component, design, design, criteria, diagram, evaluation, LED, model, shape, target audience, input, recyclable, theme, aesthetics, assemble, equipment, ingredients, packaging, properties.
Curriculum Enhancement: Now press play – Ancient Greece	Curriculum Enhancement:	Curriculum Enhancement:
Essential Knowledge: SKILLS: • Designing a toy that uses a pneumatic system	Essential Knowledge: SKILLS: • Writing design criteria for a product, articulating decisions made.	Essential Knowledge: SKILLS: • Designing a torch, giving consideration to the target audience and creating

• Developing design criteria from a design brief • Generating ideas using thumbnail sketches and exploded diagrams. • Learning that different types of drawings are used in design to explain ideas clearly. • Creating a pneumatic system to create a desired motion. • Building secure housing for a pneumatic system. • Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy. • Selecting materials due to their functional and aesthetic characteristics. • Manipulating materials to create different effects by cutting, creasing, folding and weaving. • Using the views of others to improve designs. • Testing and modifying the outcome, suggesting improvements. • Understanding the purpose of exploded-diagrams through the eyes of a designer and their client. KNOWLEDGE: To understand how pneumatic systems work. To understand that pneumatic systems can be used as part of a mechanism. To know that pneumatic systems operate by drawing in, releasing and compressing air.	• Designing a personalised book sleeve. • Making and testing a paper template with accuracy and in keeping with the design criteria. • Measuring, marking and cutting fabric using a paper template. • Selecting a stitch style to join fabric. • Sewing neatly using small regular stitches. • Incorporating a fastening to a design. • Testing and evaluating an end product against the original design criteria. KNOWLEDGE • To know that a fastening is something that holds two pieces of material together. • To know that different fastening types are useful for different purposes. • To know that creating a mock-up (prototype) of their design is useful for checking ideas and proportions.	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. Key knowledge • To understand that electrical conductors are materials which electricity can pass through. • To understand that electrical insulators are materials which electricity cannot pass through. • To know that a battery contains stored electricity that can be used to power products. • To know that an electrical circuit must be complete for electricity to flow. • To know that a switch can be used to complete and break an electrical circuit.

Year 5 DT Curriculum

Pupils should be taught:

Design

- 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

Make

- select from and use a wider range of tools and equipment to perform practical tasks accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- 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

Technological Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products
- understand and use electrical systems in their products
- apply their understanding of computing to programme, monitor and control their products.

Cooking & Nutrition

- understand and apply the principles of a healthy and varied diet
- cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet
- become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]

understand the source, seasonality and characteristics of a broad range of ingredients

Term 1 – WWII	Term 2 – Incredible Earth	Term 3- Being Human
BRIDGES https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/structure-bridges/ • Identify stronger and weaker shapes. • Recognise that supporting shapes can help increase the strength of a bridge, allowing it to hold more weight. • Identify beam, arch and truss bridges and describe their differences. • Use triangles to create simple truss bridges that support a load (weight). • Cut beams to the correct size, using a cutting mat. • Smooth down any rough cut edges with sandpaper. • Follow each stage of the truss bridge creation as instructed by their teacher. • Complete a bridge, with varying ranges of accuracy and finish, supported by the teacher. • Identify some areas for improvement, reinforcing their bridges as necessary.	DRAWSTRING BAG https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/textiles-waistcoats/ • Consider a range of factors in their design criteria and use this to create a bag design. • Use a template to mark and cut out a design. • Use a running stitch to join fabric to make a functional bag. • Attach a secure fastening, as well as decorative objects. • Evaluate their final product	**HEALTHY BOLOGNAISE** **https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/food-what-could-be-healthier/** • Understand how beef gets from the farm to our plates. • Present a subject as a poster with clear information in an easy to read format. • Contribute ideas as to what a 'healthy meal' means. • Notice the nutritional differences between different products and recipes. • Recognise nutritional differences between two similar recipes and give some justification as to why this is. • Work as a team to amend a bolognese recipe with healthy adaptations. • Follow a recipe to produce a healthy bolognese sauce. • Design packaging that promotes the ingredients of the bolognese
Key Vocab: beam bridge, arch bridge, truss bridge, strength, technique, corrugation, lamination, stiffness, rigid, factors, stability, visual appeal, aesthetics, joints, mark out, hardwood, ,softwood wood file/rasp, sandpaper/glasspaper, bench hook/vice, tenon saw/coping saw, assemble, material properties, reinforce, wood sourcing, evaluate, ,quality of finish accuracy	Key Vocab: annotate, Decorate, design criteria, fabric, target customer, waistcoat, waterproof	Key Vocab: beef, Reared, processed, ethical, diet, ingredients, supermarket, farm, balanced

Curriculum Enhancement: Bridge testing competition	Curriculum Enhancement:	Curriculum Enhancement: Cook at AES – use food tech rooms?
Essential Knowledge: SKILLS • Designing a stable structure that is able to support weight. • Creating a frame structure with focus on triangulation. • Making a range of different shaped beam bridges. • Using triangles to create truss bridges that span a given distance and support a load. • Building a wooden bridge structure. • Independently measuring and marking wood accurately. • Selecting appropriate tools and equipment for particular tasks. • Using the correct techniques to saw safely. • Identifying where a structure needs reinforcement and using card corners for support. • Explaining why selecting appropriate materials is an important part of the design process. • Understanding basic wood functional properties. • Adapting and improving own bridge structure by identifying points of weakness and reinforcing them as necessary. • Suggesting points for improvements for own bridges and those designed by others. KNOWLEDGE • To understand some different ways to reinforce structures. • To understand how triangles can be used to reinforce bridges. • To know that properties are words that describe the form and function of materials. • To understand why material selection is important based on their properties. • To understand the material (functional and aesthetic) properties of wood	Essential Knowledge: SKILLS • Designing a bag in accordance with a specification and design criteria to fit a specific theme. • Annotating designs. • Using a template when pinning panels onto fabric. • Marking and cutting fabric accurately, in accordance with a design. • Sewing a strong running stitch, making small, neat stitches and following the edge. • Tying strong knots. • Decorating a bag – attaching objects using thread and adding a secure fastening. • Learning different decorative stitches. • Sewing accurately with even regularity of stitches. • Evaluating work continually as it is created. KNOWLEDGE • To understand that it is important to design bags with the client/target customer in mind. • To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric. • To understand the importance of consistently sized stitches.	Essential Knowledge: SKILLS • 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. • Cutting and preparing recipes 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 benefits of food groups. KNOWLEDGE • To understand where meat comes from – learning that beef is from cattle and how beef is reared and processed, including key welfare issues. • To know that I can adapt a recipe to make it healthier by substituting ingredients. • To know that I can use a nutritional calculator to see how healthy a food option is. • To understand that 'cross-contamination' means that bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects.

Year 6 DT Curriculum

Pupils should be taught:

Design

- 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

Make

- select from and use a wider range of tools and equipment to perform practical tasks accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- 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

Technological Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products
- understand and use electrical systems in their products
- apply their understanding of computing to programme, monitor and control their products.

Cooking & Nutrition

- understand and apply the principles of a healthy and varied diet
- cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet
- become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]
- understand the source, seasonality and characteristics of a broad range of ingredients

Term 1 – Magic and Mayhem	Term 2 - Romans	Term 3 - China
MAGIC GAMES https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/electrical-systems-steady-hand-game/ • Explain simply what is meant by 'form' (the shape of a product) and 'function' (how a product works). • State what they like or dislike about an existing children's toy and why. • Learn about skills developed through play and apply this knowledge in a survey of one or more children's toys. • Identify the components of a steady hand game. • Design a steady hand game of their own according to their design criteria, using four different perspective drawings. • Create a secure base for their game, with neat edges, that relates to their design. • Make and test a functioning circuit and assemble it within a case	**POP UP BOOK** **https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-5/mechanical-systems-making-a-pop-up-book/** • Produce a suitable plan for each page of their book. • Produce the structure of the book. • Assemble the components necessary for all their structures/mechanisms. • Hide the mechanical elements with more layers using spacers where needed. • Use a range of mechanisms and structures to illustrate their story and make it interactive for the users. • Use appropriate materials and captions to illustrate the story.	CHINESE SPRING ROLL https://www.kapowprimary.com/subjects/design-technology/upper-key-stage-2/year-6/food-come-dine-with-me/ • Find a suitable recipe. • Record the relevant ingredients and equipment needed. • Follow a recipe, including using the correct quantities of each ingredient. • Write a recipe, explaining the process taken. • Explain where certain key foods come from before they appear on the supermarket shelf
Key Vocab: assemble, Battery battery pack ,benefit, ,bulb, bulb holder, buzzer, circuit, circuit symbol, component, conductor, copper, design, design criteria, evaluation, fine motor skills, fit for purpose form, ,function, gross motor skills, insulator, LED, user	Key Vocab: design, Input, motion , mechanism, ,criteria, research, reinforce, model	Key Vocab: equipment, flavours, ingredients, method, research, Recipe, cookbook, cross-contamination, farm to fork, preparation,
Curriculum Enhancement: Use game in Christmas Fete	Curriculum Enhancement: Read books to younger class	Curriculum Enhancement: Parent taste test event? Cook at AES
Essential Knowledge: SKILLS	Essential Knowledge: SKILLS	Essential Knowledge: SKILLS

• 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 their 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 • To know that 'form' means the shape and appearance of an object. • To know the difference between 'form' and 'function'. • To understand that 'fit for purpose' means that a product works how it should and is easy to use. • To know that 'form over purpose' means that a product looks good but does not work very well. • To know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind. • To understand the diagram perspectives 'top view', 'side view' and 'back'.	• Designing a pop-up book which uses a mixture of structures and mechanisms. • Naming each mechanism, input and output accurately. • Storyboarding ideas for a book. • Following a design brief to make a pop up book, neatly and with focus on accuracy. • Making mechanisms and/or structures using sliders, pivots and folds to produce movement. • Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result. • Evaluating the work of others and receiving feedback on own work. • Suggesting points for improvement KNOWLEDGE • To know that mechanisms control movement. • To understand that mechanisms can be used to change one kind of motion into another. • To understand how to use sliders, pivots and folds to create paper-based mechanisms. • To know that a design brief is a description of what I am going to design and make. • To know that designers often want to hide mechanisms to make a product more aesthetically pleasing.	• 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. KNOWLEDGE • To know that 'flavour' is how a food or drink tastes. • To know that many countries have 'national dishes' which are recipes associated with that country. • To know that 'processed food' means food that has been put through multiple changes in a factory. • To understand that it is important to wash fruit and vegetables before eating to remove any dirt and insecticides. • To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork)