Redwood Primary School

Design and Technology Curriculum Coverage: EYFS and KEY STAGE ONE

Expected Vocabulary. NC Objectives. Intended activities. Additional knowledge for prior learning for KS2

Nursery	Curriculum Objective	Knowledge/Activity	Vocab
Cooking and Nutrition	**ONGOING THROUGH THE YEAR** **Design Technology is cross-linked throughout the curriculum. The children have access to a range of construction kits using different methods of joining within the continuous provision DT area with a wide range of materials.** **3 and 4 Year Olds** Physical Development • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors. • Use a comfortable grip with good control when holding pens and pencils. Expressive Arts and Design • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Join different materials and explore different textures. • Draw with increasing complexity and detail **Check ingredients for nuts or traces of nut.** **Food:** To be able to manipulate materials to achieve a planned effect. To be able to mix ingredients. To notice changes in ingredients when they are mixed **Activities:** • Making cakes for Autumn and Christmas parties • Making decoration and cards for Diwali and Christmas • Continuous provision 	Making, mark-making, colour, line, paint, paper, brush, pencil, chalk, crayon, collage, glue, cut, stick, draw, print, clay, pattern, thick, thin, mix, design, hygiene

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Structures – 3D modelling	**3 and 4 Year Olds** Physical Development • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors. • Use a comfortable grip with good control when holding pens and pencils. Expressive Arts and Design • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Join different materials and explore different textures. • Draw with increasing complexity and detail **3D modelling: -** Designing and making, explore, design, make, evaluate To explore how different media can be combined. To be able to construct with a purpose in mind, using a variety of resources. To be able to select appropriate tools and techniques to shape materials. To be able to talk about their work. **Activities:** • Construction kits, constructing using reclaimed materials • Using resources, tools and equipment Designing, making and evaluating • Making models of rockets, spaceships, aliens • Making models of plants and flowers 	Make, paper, card, foil, glue, stick, 3D, shape, boxes, design, draw, thick, thin, pencil,
Structures -3D modelling	**3 and 4 Year Olds** Physical Development • Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors. • Use a comfortable grip with good control when holding pens and pencils.	Making, mark-making, colour, line, paint, paper, brush, pencil, chalk, crayon,

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	Expressive Arts and Design • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Join different materials and explore different textures. • Draw with increasing complexity and detail, such as representing a face with a circle and including details. **3D -** Designing and making, explore, design, make, evaluate **:** To explore how different media can be combined. To be able to construct with a purpose in mind, using a variety of resources. To be able to select appropriate tools and techniques to shape materials. To be able to talk about their work. **Activities:** • Construction kits, constructing using reclaimed materials • Using resources, tools and equipment Designing, making and evaluating • Making models of vehicles including bikes, cars, trains and lorries • Making models of plants and flowers 		collage, glue, cut, stick, draw, print, pattern, thick, thin, 3D, design, draw, colour, look, evaluate
Foundation Stage 2	**Curriculum Objective**	**Knowledge/Activity**	**Vocab**
Textiles	**ONGOING THROUGH THE YEAR** **Design Technology is cross-linked throughout the curriculum. The children have access to a range of construction kits using different methods of joining within the continuous provision DT area with a wide range of materials.** **Expressive Arts and Design** • I will use a variety of materials to express my ideas & feelings • I will developing my skills in working with others • I will develop skills through pieces of art that link to topics. **Project -** Design wrapping paper for a present after looking at examples, decorate wrapping paper and verbally evaluate.		Paint, cut, tear, join, glue, stick, print, patter, thin, thick, texture, design, make, evaluate

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	Threading, making a leaf necklace 	
Structures	**Expressive Arts and Design** ***FS1 3D Structures box modelling*** • 3d structures • I will use different materials and techniques to make pictures/models of animals focusing on collage skills **Project -** Design a house/home for a chick/duckling. Design and make a house using junk modelling. Verbally evaluate. 	Model, design, construct, stick, join, build, fix, movement design, make, evaluate
Cooking and Nutrition	**Expressive Arts and Design** ***FS1 Food safety, hygiene making cakes*** • Different techniques and materials – choosing and combining Projects - Owl Baby faces – healthy snack ELG: Creating with Materials Children at the expected level of development will: - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; - Share their creations, explaining the process they have used; - Make use of props and materials when role playing characters in narratives and stories. **Check ingredients for nuts or traces of nut.** 	design, evaluate, safety, hygiene, cut/chop

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Year One	Curriculum Objective	Knowledge/Activity	Vocab
Mechanism Sliders and levers Moving Cards 	**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 [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 **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 [for example, levers, sliders, wheels and axles], in their products.	**Moving Cards** ***FS1 FS2 cutting skills and use of split pins.*** **Hook** Have a variety of books on the tables for the children to go and have a look. Encourage children to interact with the books to lift the flaps and move parts of the pictures gently. Make links to the stories; explain that we are going to make a moving picture. Explore the sliders and levers Model some construction kits, toys, balance scales, garlic press and scissors, etc that show levers and pivots. Draw an object labelling the moving part with an arrow and drawing leader lines with rulers for other parts of the object. How would you make your picture move? Which type of mechanism would you need so that your picture does move? Teacher to recap how to make the levers and sliders and remind children of key features for success. **Teacher modelling** Show the children the design booklet and how to use it to plan their moving picture card. Talk about the criteria that their moving picture needs to include. Teacher to show some of the children's design booklets discussing their moving picture, its features and mechanism. Which part of the picture is going to move? What mechanism is being used to create the movement? What materials and tools are going to be used? Are there any tricky parts in the design? Teacher to reinforce the correct use of tools, including joining and finishing techniques. Children to evaluate their moving pictures.	Sliders, pivots, Levers, mechanism, evaluate

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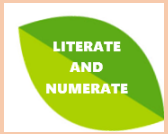
Cooking and nutrition	**Cooking and Nutrition** • Use the basic principles of a healthy and varied diet to prepare dishes. • Understand where food comes from. 	**Fruit Salad –** ***FS1 Food safety, hygiene Making cakes*** ***Fruit Kebab FS2 – mixing, chopping, spreading, hygiene*** **Hook** We have been asked to design a new salad for lunchtime to encourage a healthier diet. **Investigate** To find out the favourite fruits and vegetables in the class and present the data in a pictogram. **Explore** To examine, taste and describe a variety of fruits and vegetables. To find out how to handle and prepare a variety of fruits and vegetables. **Design** To be able to design a recipe to include fruit and/or vegetables. **Make** To be able to make **Evaluate** Evaluate the food product based on a design. – Parent Event in as 'customers' and leave a review of the children's designs.	Cut, peel, chop, wash, juice, taste, segment, spread, make, design, evaluate Safety, Balanced, Preparation, Variety, Healthy
Structures Free Standing  	**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** •	**Design and make a playground equipment –** ***FS1 & FS2 3D Structures modelling in exploring attaching/joining boxes.*** **Hook -** Nursery have asked us to design new playground equipment for them to use, show the email. Show children the booklet for this unit **Lesson 1 -** To **explore** the components, materials and features of playground equipment. *Children to explore and discuss various different playground equipment and the materials used to make it. They will choose two different pieces of equipment to draw label and describe.*	Structure, strength, support, stiffen, triangle, recycle, reuse, attach, join, design, make, evaluate Flange

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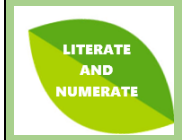
  	• Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] • Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics **Evaluate** • 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 [for example, levers, sliders, wheels and axles], in their products.	**Lesson 2 -** To be able to **explore** different ways of joining and strengthening materials to create pieces of playground equipment. *Children to explore how different playground equipment is made and the safety aspects involved with them. They will experiment with different materials to make different models of playground equipment, checking the strength and sturdiness of them.* **Lesson 3 -** To be able to **design** a piece of playground equipment. *Children will design a piece of playground equipment thinking about the materials they would need to use to build it.* ***Explain about adding strength through snipping the end of the tube and join it using glue -*** *Flange****.*** ***Stiffen, strength, support of the structure.*** **Lesson 4 & 5 -** To be able to **make** a piece of playground equipment according to a design. *Children to follow their designs to make their piece of playground equipment. They should think about how to work safely and carefully within the classroom.* *Explain about adding strength through snipping the end of the tube and join it using glue. Stiffen, strength, support of the structure.* **Lesson 6 -** To be able to **evaluate** a finished product. *Children to share and demonstrate how their piece of playground equipment works. They will then evaluate their own piece of playground equipment*	
Year Two			
Mechanism 	**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,	**Design and make a vehicle** ***Moving pictures Year 1*** *– Sliders and levers* **Research.** Look at arrange of pictures of vehicles. Find out – What were they used for? What features do they need to have? Why? Design - children to design a model vehicle. What could be used to make a vehicle? What materials could be used? How can wheels be made? How	Axle Wheel Hack saw Chassis Antennae Aerial

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  	where appropriate, information and communication technology **Make** - 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 **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 [for example, levers, sliders, wheels and axles], in their products.	can the wheels move? How will all the parts be joined together? Demonstrate wheels and axles, so that children can see how real wheels work. **Designs** to be labelled so that children know what they are going to use to make their models. **Make** – Children to begin their practical work using cardboard boxes, wheels and axles, tape, glue and other materials included in their planning work. **Evaluate** – children to evaluate their completed models using the evaluation form. Does my vehicle work? Do the wheels turn freely? Does my moon buggy look good? What could I do to improve my design? What would I do differently next time? Take photographs for evidence of practical work, alongside planning and evaluations.	Mechanism, make, design, evaluate
Textiles    		**Fabric Faces - Design and make a puppet** ***Make a leaf necklace FS2*** Lesson 1 – **Exploring** Fabric Faces Explore and evaluate a range of existing products Lesson 2 - Making Hair Explore and evaluate a range of existing products Select from and use a range of textiles according to their characteristics in the context of selecting materials to represent their own hair Lesson 3 – Joining Fabrics Select from and use a range of tools and equipment to perform practical tasks for example joining in the context of joining fabrics and materials Lesson 4 – Face Shapes and templates Select from and use a range of tools and equipment to perform practical tasks for example cutting in the context of cutting around a template to create a face shape.	Fabric, material, thread, needle, under over, through, template, make, design, evaluate

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	**Cooking and Nutrition** - Use the basic principles of a healthy and varied diet to prepare dishes. - Understand where food comes from. -	Lesson 5 **Designing** our own Fabric Face Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing and templates Lesson 6 – **Making** Our Fabric Faces Select from and use a wide range of materials including textiles according to their characteristics Select from and use a range of tools and equipment to perform practical tasks (for example cutting, shaping, joining and finishing) Lesson 7 – **Evaluate** the Fabric Face	
Cooking and Nutrition		**Dips and Dippers** ***Healthy snack FS2 – mixing, chopping, spreading, hygiene*** ***Fruit salad Year 1 – Chopping, safety*** **Check ingredients for nuts or traces of nut.** Dips and Dippers unit will teach the children about good food hygiene rules and using kitchen equipment to prepare food safely. Children will apply these skills when making and evaluating a healthy dip and dippers. The unit develops children's understanding of the Eatwell plate and explains the importance of eating a healthy and varied diet. - Evaluating and exploring Dips Explore and evaluate a range of existing products in the context of comparing different dips. To understand where foods comes from and food groups - Make a trial dip - Design - Make the dips and dippers - Evaluate	Cut, slice, chop, wrap, sweet, savoury, spicy, tangy, juicy, make, design, evaluate, local, cutting, slicing, chopping,

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Design and Technology Curriculum Coverage: Key Stage Two

Expected Vocabulary. NC Objectives. Intended activities. Additional knowledge for upper year groups

Year Three	Curriculum Objective	Knowledge/Activity	Vocab
Textiles 	When designing and making, pupils should be taught to: **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 [for example, cutting, shaping, joining and finishing], 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**	**2D shape to 3D product - Christmas Stocking** ***Threading FS2*** ***Fabric Faces Year 2*** *–Sewing* Using the internet, children research Christmas stockings and choose a few designs that they like. Children evaluate which features of the stockings they like and why? Children think about the designs they have researched and what they plan to include as part of their Christmas stocking design. Think about stitch type, colour of felt, who it is for and what design they will include on the front. Children to draw their final stocking design: Children to consider the materials and components that they will need and label their design accordingly. Show children the materials we have in school. Will the children need to bring something in from home? Children to consider what methods they will use to construct their stocking labelling the stitch type they will use Children to consider what equipment they will need. Model the skills needed to sew the Christmas stocking • Health and safety • Threading a needle, • Tying a knot, • How to do the stitch • Finishing off. Adding decoration and detail. Get children to look at their finished Stockings and answer the following questions:	felt, fabric, textile, running stitch, design, make, evaluate, needle, thread, fabric

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	- 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	• Is your finished design the same as you planned? • What is the same and what is different? • Why did you change it? • How did you find making your design? • What was tricky and what did you find easy? • What did you like doing the most? • If you made your design again what would you do differently?	
Cooking and Nutrition 	**Technical knowledge** - 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 **Cooking and Nutrition** - 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	**Healthy and varied diet** **A healthy snack – snack bar** ***Fruit salad Year 1*** ***Dips and dippers Year 2*** Children to understand principles of a healthy and varied diet, Children to understand the ways of sourcing and its nutritional value. Hook – 'Rammie' has asked Year 3 to produce a healthy snack for him **Explore** existing product and look at nutritional content/healthy plate **Design** **Make** Children to become competent in a range of cooking techniques. Children to **evaluate** their snack - Does it meet the design specifications? - Is it appealing? - What would you improve? - Peep/adult review of snack Give it a mark out of 10	Slice, spread, cut, slice, make design evaluate nutrition, healthy plate.

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Mechanism 	ingredients are grown, reared, caught and processed.	**Shadow Puppets-** ***Moving pictures Year 1*** ***Vehicles Year 2*** Children to **explore** examples of shadow puppets and how they work. Investigate joints and levers and how sticks can be used to move character limbs/mouths etc. Children to **design** their own shadow puppet with at least one moving part – using card, junk boxes/pots, art straws, split pins. **Make** When children have made their puppet, work in groups of 3-6 to write a play to perform to the class using their puppets they have made. When performances have taken place, children to **evaluate** their shadow puppet based on their original design and how well it worked. Opportunity here for a loyalty event for parents to watch the performances.	Lever, joint, angle, movement, design, make, evaluate
Year Four			

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Structures - Shell 		**Structure – Shell - A gift box CAD** ***Free Standing structures Year 1*** Children will learn how to construct strong, stiff shell structures. Using this knowledge, they will create a gift box that will contain a small Christmas gift that the children can give to a family member. **Explore** existing products, prototype using prior knowledge of structures & research **Design product using Purplemash CAD** **Make** product to design specification **Evaluation**: Why did we write a design criteria? Explain that the design criteria has been used throughout the project to evaluate their ideas and product.	shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, , scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, ribbing, lettering, text, graphics, decision, evaluating, design brief design criteria, innovative, prototype design, make, evaluate
Electrical systems simple switches and circuits 		**Simple circuit - *Link to science unit electricity Y4*** **Our Changing Technologies** Understand how key events and individuals in design and technology have helped shape the world in the context of looking at technological developments in the way we light our homes. **Electrical Systems** Exploring, understand and use electrical systems in their products (for example, series circuits, incorporating switches, and bulbs **Design**	Design, make, evaluate, switches, crocodile clips, battery, bulb, circuits

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		Generate, develop, model and communicate their ideas through annotated sketches and cross sectional in the context of sketching a design for a light. **Make** **Evaluate** Evaluate their ideas and products against design criteria and consider the views of others to improve their work in the context of evaluating a battery operated light.	
Cooking and Nutrition 		**Cooking and nutrition – Bread** ***Fruit Salad Year 1*** ***Dips and Dippers Year 2*** ***Healthy snack - Year 3*** Research the history of Warburtons/Birds Bread Evaluate and explore existing products **Check ingredients for nuts or traces of nut.** Children to **design** their own bread 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 and annotated sketches in the context of creating initial designs for a new bread product. **Making** and **Evaluating** Bread Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques in the context of making a new bread product. Select from and use a wider range of equipment to perform practical tasks accurately. Evaluate their ideas and products against their own Design Criteria.	Ingredients, weigh, mix, fold, dough, roll, bake, design, make, evaluate

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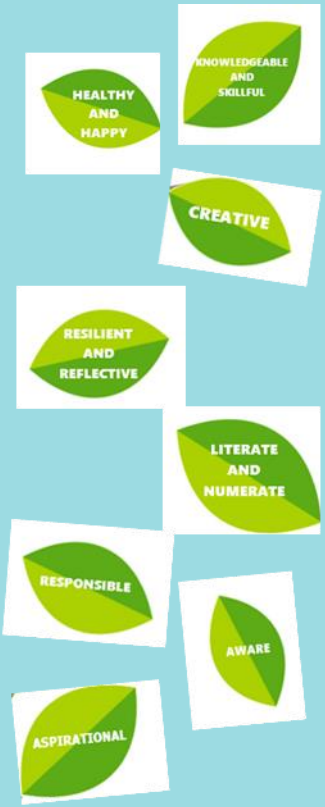
Year Five			
Double unit **Structures & Mechanisms** 	When designing and making, pupils should be taught to: **Design** - use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups - generate, 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 [for example, cutting, shaping, joining and finishing], 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	**Moving Animals** ***Free standing structure Year 1*** ***Shell structure Year 4*** ***Moving pictures Year 1*** ***Vehicle Year 2*** ***Shadow puppets Year 3*** Set the design brief: Explain who the WWF are and explain that we will be creating a collection of appealing moving mechanical animal models that will captivate people's interest First we need to build a structure to support our moving mechanical animal We are going to build a frame to house the structure. **Explore and research structures** **Explore and research mechanical movements** Watch this video: https://vimeo.com/15150430 Discuss the movement, appearance and habitat of a sea turtle and fill in on the activity sheet. Repeat for the Aedlie penguin: https://vimeo.com/60860144 Explain that they will be using a mechanical system, using cams, to make their animals move. Look at the video of mechanisms and watch the first system: https://vimeo.com/49266486 How is this wooden toy moving? How many parts does it have? How are the parts joined? Use PowerPoint to talk about cams and followers	Structures, Stiffen, strengthen, stability, Reinforce, balancing force, Newtons, resistance force, variables, moving surfaces, accuracy, precision, mechanisms, levers, pulleys, transfers, gears,

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	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 **Technical knowledge** - 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 **Cooking and Nutrition** - 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. -	Watch the rest of the video: Can you identify the cam? The follower? Where is the rotary motion used? Where is the linear motion used? Which is the exception to this? Explain that the shape of a cam can change the movement. Try to match up the cams with their names – reveal the answers. Use the powerpoint to explain how each shape of cam can change the movement. Remind the chn of the brief: to design a collection of moving, mechanical animals. **Design Structure** **Design mechanisms** Explain what design criteria (or specifications) are and their importance. What would happen if we didn't have design criteria? Use the PowerPoint to discuss how we will be making it and has we will be developing own design criteria. Then, choose one of the animals from lesson 1 to focus on and work through the design sheet as a class and model how to fill in each section. **Make structure and mechanisms** **Evaluate the structure and the mechanisms** - Review your mechanisms and structure - Does it meet the design specifications? - Is it appealing? - What would you improve? - Give it a mark out of 10	

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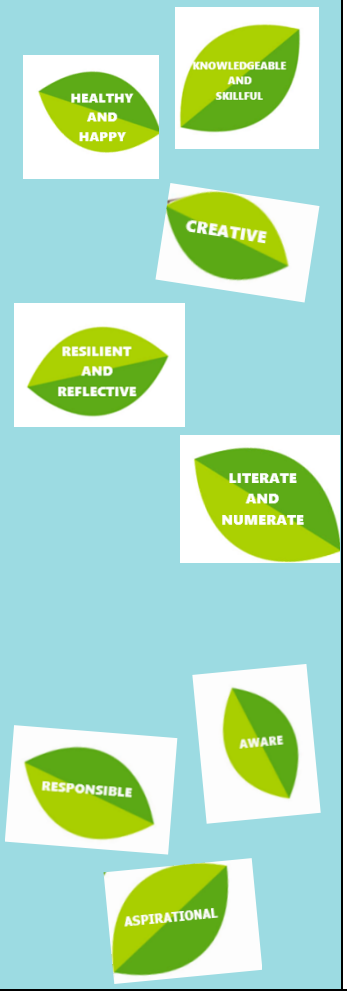
Cooking and Nutrition 		**Celebrating cultures - Global food** ***Fruit salad Year 1*** ***Dips and Dippers Year 2*** ***Healthy snack Year 3*** ***Bread Year 4*** If you were having a movie night, what food from around the world would you like? **Check ingredients for nuts or traces of nut.** **Explore and investigate** where in the world our food comes from. Look at cultures around the world and decide on which would be best for a movie night. Pizza **Design** the food product **Make** **Evaluate the food product** - Review your mechanisms and structure - Does it meet the design specifications? - Is it appealing? - What would you improve? - Peer/adult review Give it a mark out of 10	Recipe, ingredients, weight, measures, design, make, evaluate
Year 6			

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Cooking and Nutrition 	When designing and making, pupils should be taught to: **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 [for example, cutting, shaping, joining and finishing], 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	**Seasonality - To bake an alternative seasonal cookie :** ***Fruit salad Year 1*** ***Dips and Dippers Year 2*** ***Healthy snack Year 3*** ***Bread Year 4*** ***Pizza Year 5*** **Check ingredients for nuts or traces of nut.** Children to understand principles of a healthy and varied diet, Children to understand ways of recycling food through **research**. **Explore** existing products **Design Cookies** **Make cookies** Children to become competent in a range of cooking techniques. They need to prepare ingredients, use utensils, and electrical equipment appropriately. Children to **evaluate** their cookie through awareness of taste, smell and texture.	Prototype, Explore, seasonal design, make, evaluate taste, smell texture, firm, alternative Peel, chop, grate, measure, mix, fold, dough, cutter, design, make, evaluate
Complex Electrical systems 		**Fairground Rides** ***Free standing structure Year 1*** ***Shell structure CAD Year 4*** ***Mechanical toy Year 5*** ***Simple circuits Year 4*** **Explore** existing fairground rides **Investigate** using electrical motors to create rotating parts including programming the crumble component **Prototype** with a stable structure	(LED), bulb, bulb holder, battery holder, USB cable, wire, insulator, conductor, crocodile control, program, system, crumble, design specification,

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	- understand how key events and individuals in design and technology have helped shape the world **Technical knowledge** - 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 **Cooking and Nutrition** - 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.	**Design** a fairground ride with a rotating part **Make** **Evaluate** - Review your electrical circuit, programming and structure - Does it meet the design specifications? - Is it appealing? - What would you improve? - Give it a mark out of 10	user,