|  | **FS1** | | | **FS2** | | | **Year 1** | | | **Year 2** | | | **Year 3** | | | **Year 4** | | | **Year 5** | | | | **Year 6** | | |
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| **Topic/Key Concept** | Turning tools and fasteners | Cutting tools/tubular materials | Textiles- threading | Cooking and hygiene | Structures | Textiles - sewing | Mechanisms and Mechanical Systems  Sliders and Levers | Cooking and Nutrition  Preparing Fruit | Structures  Free Standing | Mechanisms and Mechanical Systems  Wheels and Axles | Textiles  Templates and Joining Techniques | Cooking and Nutrition  Preparing Vegetables | Mechanisms and Mechanical Systems  Levers and Linkages | Cooking and Nutrition | Shell Structures | Cooking and Nutrition | Electrical Systems  Simple circuits and switches | Textiles | Frame Structures | Gears, levers and pulleys | Cooking and Nutrition | Textiles | Mechanisms and Mechanical Systems | Electrical Systems and Mechanisms | Cooking and Nutrition  . |
| **Links with other STEM subjects** |  |  |  |  |  |  | Spoken language  Maths  Physical - fine motor  Art | spoken language  Literacy-writing  Science  Fine motor skills | Maths -measure  Science  Spoken language | Maths – measure  Science – materials | Science – materials  Maths – measurement | Science - nutrition | Maths - measurement | Links to Science topic Animals including Humans | Links with Maths - measure, 2D shapes | Links to Science - human nutrition and teeth. | Links to Science - circuits. | Maths - 2D, 3D shapes and nets.  Measurement | Link to Forces - science  Measuring, angles, 3D shapes maths | Done as part of science - Forces. See science planning. | Scaling up and down, weighing - maths | Computing - use vector drawing.  Materials and their properties - science | Measurement | CS - Programming - Crumble | Weight and scaling |
| **Possible**  **Outcomes** | Tinkering | Bug houses | Medal | Gingerbread man | Make an igloo | Bookmark | class/group storybook, poster, display,  greetings card, class/group information book,  storyboard | fruit salads, fruit yogurt, fruit drinks,  fruit jelly, fruit smoothies,  fruit kebabs | various playground equipment free standing structures | Vehicles (superhero car), emergency vehicle, ferris wheel | glove puppet, finger puppet, stick puppet, simple bag, clothes for teddy or doll, fabric placemat | Salad, soup, stew, crudites and dips | Various possibilities | Healthy snack for playtime | Create a shell structure to store a small object e.g. lego figure | Create a seasonal dish. |  |  | Design and make (or make a model of) a 3D structure for a chosen purpose (eg Bird hide, tower, playground shelter) | N/A | A Persian inspired dish using some UK seasonal produce - hummus, hot stews, salads. etc | Design and make an article of clothing for a special event from an unwanted item of clothing - upcycling challenge. | Design and make a cam toy | An electrical board game | dough based product with seasonal aspect. |
| **Key Learning Focus (big Picture** |  |  |  |  |  |  | Generate ideas based on simple design criteria. Select and use tools, explaining their choices, to  cut, shape and join paper and card. | Use fruit to  design an appealing product for a particular user  based on simple design criteria. | Generate ideas based on simple design criteria.  Select new and reclaimed materials and construction kits to build their structures | Design, make and evaluate a moving object using wheels and axles for an intended user for a specific purpose. | Children will design, make and evaluate a textile (product) for an intended user for a specific purpose. Using a template and choosing the appropriate joining technique | Use vegetables to design an appealing recipe for a particular user based on simple design criteria | Design, make and evaluate a range of products with levers and linkages and pick one to create a product with levers and/or linkages for an intended audience and purpose. | Design, make and evaluate a range of savoury products to make for an intended audience for an indeed purpose. | Design andd evaluate a range of packaging to be used by a chosen group for a specific purpose. | Design, make and evaluate a seasonal dish using root vegetables for a harvest festival. | ​​To design, make and evaluate an **electrical system with a light** for an **intended** user for a **specific** purpose. | Children will design, make and evaluate a fabric holder (product) for an intended user for a specific purpose. | Design a 3D structure, understanding how to join materials, including wood. Create the structure, or a model in suitable materials. | Understand how gears, levers and pulleys make work easier | Understand the seasonality of food. Celebrate the culture of “Persia” using Persian food as an inspiration to create a dish using some UK seasonal produce. | Design and upcycle an article of clothing. Understand how fabrics can be joined and fastened and how to create flat pattern pieces for a 3D object | design and construct a rotatoing cam item for entertainment purpose. | To use electrical systems to enhance products. | Create a dough based product considering seasonality in the design |
| **National Curriculum Link** | UW-Explore how things work.  PD-Choose the right resources to carry out their own plan. • Use one-handed tools and equipment, for example, making snips in paper with scissors. | UW- Explore how things work.  PSED-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.  PD-Choose the right resources to carry out their own plan.  • Use one-handed tools and equipment, for example, making  snips in paper with scissors.  EAD- • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects. | PD- Use one-handed tools and equipment, for example, making  snips in paper with scissors  PD-Choose the right resources to carry out their own plan | PD-Develop their small motor skills so that they can use a range of  tools competently, safely and confidently  EAD- Explore, use and refine a variety of artistic effects to express their ideas and feelings.  • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills. | PD-Develop their small motor skills so that they can use a range of  tools competently, safely and confidently.  EAD-Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills | EAD-Explore, use and refine a variety of artistic effects to express their ideas and feelings.  EAD- 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.  PD-Use a range of small tools, including scissors, paintbrushes and cutlery. | TK - Explore and use mechanisms [ levers, sliders], in their products.  D - Design purposeful, functional, appealing products for themselves and other users  based on design criteria.  M - Select from and use a range of tools and equipment to perform practical tasks [for  example, cutting, shaping, joining and finishing]. | C&N - Use the basic principles of a healthy and varied diet to prepare dishes.  Understand where food comes from.  D - Design purposeful, functional, appealing products for themselves and other users  based on design criteria.  M - Select from and use a wide range of ingredients, according to their characteristics.  E - Explore and evaluate a range of existing products. | TK - Build structures, exploring how they can be made stronger, stiffer and more stable.  D - Generate, develop, model and communicate their ideas through talking, drawing,  templates, mock-ups.  M -Select from and use a range of tools and equipment to perform practical tasks [for  example, cutting, shaping, joining and finishing].  E - Evaluate their ideas and products against design criteria. | TK - Explore and use mechanisms [ wheels and axles], in their products.  D - Generate, develop, model and communicate their ideas through talking, drawing,  templates, mock-ups and, where appropriate, information and communication  technology.  M - Select from and use a range of tools and equipment to perform practical tasks (joining and finishing).  Select from and use a wide range of materials and components, according to their characteristics.  E - Evaluate their ideas and products against design criteria. | TK - Understand and use mechanical systems in their products [levers and linkages].  D - Design purposeful, functional, appealing products for themselves and other users  based on design criteria.  M - Select from and use a range of tools and equipment to perform practical tasks [for  example, cutting, shaping, joining and finishing].  E - Evaluate their ideas and products against design criteria.  Explore and evaluate a range of existing products. | C&N - Use the basic principles of a healthy and varied diet to prepare dishes.  Understand where food comes from.  D - Design purposeful, functional, appealing products for themselves and other users  based on design criteria.  M - Select from and use a wide range of ingredients, according to their characteristics. | TK - Understand and use mechanical systems in their products [for example, gears, pulleys,  cams, levers and linkages]  D - Generate, develop, model and communicate their ideas through discussion, annotated  sketches and prototypes.  M - Select from and use a wider range of tools and equipment to perform practical tasks  [for example, cutting, shaping, joining and finishing], accurately.  E - 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. | C&N - 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.  M - Select from and use a wider range of ingredients, according to their functional properties and aesthetic  qualities.  E - Investigate and analyse a range of existing products. | D - 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.  M - Select from and use a wider range of tools and equipment to perform practical tasks  [for example, cutting, shaping, joining and finishing], accurately.  E - Evaluate their ideas and products against their own design criteria and consider the  views of others to improve their work. | C&N - 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.  M -Select from and use a wider range of ingredients, according to their functional properties and aesthetic  qualities.  E - Investigate and analyse a range of existing products. | TK -Understand and use electrical systems in their products [for example, series circuits  incorporating switches, bulbs, buzzers and motors].  D - Generate, develop, model and communicate their ideas through discussion, annotated  sketches and cross-sectional diagrams.  M - 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.  Understand how key events and individuals in design and technology have helped  shape the world. | D-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.  M-Select from and use a wider range of tools and equipment to perform practical tasks  [for example, cutting, shaping, joining and finishing], accurately.  E-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. | TK -Apply their understanding of how to strengthen, stiffen and reinforce more complex  structures.  D - 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.  M -Select from and use a wider range of materials and components, including construction  materials according to their functional properties and aesthetic  qualities.  E-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. | TK -Understand and use mechanical systems in their products [for example, gears, pulleys,  cams, levers and linkages]. | C&N-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.  M -select from and use a wider range of tools and equipment to perform practical tasks  accurately.  E -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. | D -Generate, develop, model and communicate their ideas through discussion, annotated  sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and  computer-aided design.  M -Select from and use a wider range of materials and components, including textiles, according to their functional properties and aesthetic  qualities.  E -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. | TK -Understand and use mechanical systems in their products [for example, gears, pulleys,  cams, levers and linkages].  D -Generate, develop, model and communicate their ideas through discussion, annotated  sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and  computer-aided design.  M -Select from and use a wider range of tools and equipment to perform practical tasks  [for example, cutting, shaping, joining and finishing], accurately.  E -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. | TK -Understand and use mechanical systems in their products. Understand and use electrical systems in their products. Apply their understanding of computing to program, monitor and control their products.  D -Generate, develop, model and communicate their ideas through discussion, annotated  sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and  computer-aided design.  M -Select from and use a wider range of tools and equipment to perform practical tasks  accurately.  E -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. | C&N-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.  M -select from and use a wider range of tools and equipment to perform practical tasks  accurately.  E -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. |
| **Learning Outcome 1** |  |  |  |  |  |  | LF -explore a collection of books and everyday products that have moving parts  S2S - Look at a range of books  Discuss who they are for  Explore the books moving parts  Recognise the direction the slider is moving  Explain how the slider/lever works | LF - Examine a range of fruit/vegetables.  S2S - Use the senses to explore different fruit and vegetables.  Sort these into categories in groups.  Label the fruit and vegetables with known vocabulary.  Identify new technical vocabulary to describe the fruit and vegetables.  Ask and answer questions about the fruit and vegetables. | LF: Investigate and evaluate structures around the school.  S2S:  Identify structures around school.  Discuss what the structures are made out of.  Explain the purpose of the structure.  Photograph/draw the structure.  Label with technical vocab. | LF: Investigate vehicles and their purpose.  Investigative and Evaluative Activities (IEAs) where children learn from a range of existing products and find out about D&T in the wider world;  S2S:  Describe the purpose of a vehicle.  Identify the features of a vehicle. | LF: To explore and evaluate different textile products.  Investigative and Evaluative Activities (IEAs) where children learn from a range of existing products and find out about D&T in the wider world;  S2S:  Describe the purpose of the product  Identify the features of the product  Identify different joining techniques | LF: Investigate food groups and vegetables.  S2S:  -Investigate a range of food products  -Place foods on to the Eatwell plate  -Identify and describe vegetables  Investigative and Evaluative Activities (IEAs) where children learn from a range of existing products and find out about D&T in the wider world; | LF: Investigate different levers and linkages  LF: Develop a design brief within a context which is authentic and meaningful.  S2S:  investigate, analyse and evaluate books and other products which have a range of lever and linkage mechanisms.  Explored mechanisms such as flaps, sliders and levers.  To create a design criteria | LF – investigate a range of food product**s**  S2S:  -Investigate a range of food products  -Compare the contents of different lunchboxes against the Eatwell guide  -Identify food groups against the ingredients | LF - Investigate the design of existing packaging  S2S:  - review shell structures and question their suitability  - evaluate shell structure and look closely at the design for both purpose and intended audience  - generate questions to help create own design of a shell structure | LF: Find out how a variety of ingredients used in products are grown, harvested and reared.  POAP 10  S2S:  Recap the Eatwell food groups using prior knowledge  Identify the purposes of different food/food groups  Categorising how different foods are produced  Identify why we get different foods at different times of the year  Suggest how we get food which is not in season?  Explain where this food comes from. | LF: To analyse and evaluate existing designs.  S2S  Investigate different examples of battery-powered products  Disassemble products  Consider their purpose  Label key features and components  Investigate how the switch works  Investigate the materials used and how they are suited to its intended purpose | LF: Analyse and evaluate existing products.  S2S:  Discuss existing known textiles products  Consider its purpose  Discuss the target audience  Select and respond to question cards  Photograph an existing product and annotate responses to questions | L.F. Apply prior knowledge to explore frame structures.  S2S:  Use vocabulary to describe structures.  Identify frame structures.  Explore frame structures.  Record and annotate images. |  | L.F. Explore the seasonal foods of the U.K. and understand the environmental impact of not using seasonal produce.  S2S:  Understand that some foods only grow / are harvested at certain times of year.  Explore that what grows depends on climate (link to biomes.  Consider the environmental impact of not eating local, seasonal produce. | (*Pre topic)*  L.F. Introduce the challenge and begin to create a design brief.  S2S:  Understand what upcycling is  Understand what a design brief is..  Begin to collect suitable items / materials for the project.  1st Lesson  L.F.Investigate, analyse and evaluate existing products  S2S:  Explore different products made out of fabric  Develop understanding through questioning and discussion  Take the product apart  Sketch and annotate the different features of the product  Make links to previous scientific knowledge (materials) | L.F. Investigate cam systems  L.F. Develop a design brief within a context which is authentic and meaningful.  S2S:  Observe and analyse movement.  Measure distances and holes accurately.  Line up materials accurately.  Glue items in place.  Test and check. | L.F. To investigate how electrical board games work  S2S.  Identify the electrical element.  Identify how the system works – the switch type.  Annotate images using technical vocabulary.  Create circuits using a variety of switches**.** | LF: Explore different types of dough-based products  S2S:  Name a selection of different types of dough-based products  Experience dough-based products through a variety of senses - visual, scent, texture, taste.  Discuss and evaluate sensory experience.  Collate ingredients used. |
| **Learning Outcome 2** |  |  |  |  |  |  | LO - Demonstrate and explore simple levers and sliders  S2S  Consider ideas from previous lesson  Recall moving parts and how to move direction  Use directional language  Explore ways of making simple sliders  Explore ways of making simple levers | LF – Explore and taste a range of products.  S2S - Discuss ways to eat healthily.  Identify the importance of eating fruit and vegetables as part of a healthy diet.  Identify and name some healthy food.  Taste different fruits and vegetables.  Evaluate the taste of the fruit/veg. | LF: Explore different joining and finishing techniques.  S2S:  Discuss the suitability of different materials.  Explore a variety of free standing structures.  Fold paper/card in different ways.  Join using masking tape to create a free standing structure.  Evaluate it. | LF**:** Investigate wheels, axles and chassis  S2S:  Explain what a wheel, axle and chassis is.  Attach the wheels on the axles in two different ways. Create the body of a vehicle using boxes or nets | LF – To identify ways of joining materials together and evaluate the techniques used.  S2S  Investigative and Evaluative Activities (IEAs) where children learn from a range of existing products and find out about D&T in the wider world  Focused Tasks (FTs) where they are taught specific technical knowledge, designing skills  and making skills;  S2S:  Identify ways of joining material  Practise joining material  Evaluate which techniques to use. | LF: Evaluate food products  S2S:  Investigate a range of vegetable products, soups, salads, coleslaw, potato salad  -Evaluate them against class criteria  Investigative and Evaluative Activities (IEAs) where children learn from a range of existing products and find out about D&T in the wider world; | LF: Investigate and sketch models and prototypes  S2S  Discuss the purpose of the products and who you will be designing and making your product for.  Draw annotated sketches and prototypes.  Agree on a design criteria that cam be used to guide the development and evaluation of children's product  understand and used technical vocabulary  distinguish between fixed and loose pivots. | LF: evaluate a range of healthy snacks  S2S:  Evaluate products using prior knowledge of the Eatwell guide  Record results in a table  Use appropriate vocabulary to describe the characteristics of the food  -Research existing products relating to nutritional snacks | LF - Create design criteria collaboratively through discussion, focusing on the needs of the user and aesthetic purposes of the product.  S2S:  -work collaboratively to create a design brief  -draw and annotate a design to the above design brief  -review the design and identify ways to improve the design | LF: Evaluating and comparing a variety of root vegetables.  POAP 10  S2S:  Define what a root vegetable is.  Categorise root vegetables by taste and sensory characteristics (sweet, spicy etc).  Form opinions on what type of dishes these vegetables would be suitable for.  Create a graph to represent class consensus. | LF:  Investigate and make a variety of switches in a simple series circuit  S2S  Investigate a range of switches  Identify how different types of switches are useful in different types of products  Make a variety of switches by using simple classroom materials  Test their switches in a simple series circuit | LF: Investigate and adapt 2D pattern pieces to create a 3D item.  S2S:  Investigate a range of templates/patterns  Disassemble appropriate products to gain an understanding of  3-D shape, patterns and seam allowances.  Choose the most appropriate one for purpose  Create initial design ideas  Accurately record measurements of pattern pieces  Discuss and explore different fabrics suitable for purpose  Test fabrics for strength/waterproofness | L.F. Create a simple design specification.  S2S:  Children consider:- What could they design, make and evaluate?  Intended users?  Purpose of products?  Links to topics and themes?  Possible contexts?  Project title? |  | L.F.  Explore the regional foods and spices of modern, middle eastern cooking.  S2S:  Understand the location of the Middle East.  Predict local ingredients using prior knowledge (Biomes). Understand and sort the variety of food using key vocabulary. Apply vocabulary to describe taste. | F.P.T.  L.F.  Explore different stitching techniques  S2S:  Review prior knowledge of different ways to join fabrics  Develop practical skills involved in stitching by threading the needle  Explore and practice different types of stitches  Identify what a seam is and investigate ways to make one  Attempt to create a 2D mock up for a shape to join | L.F. Create questionnaires that can be used with a particular audience  S2S:  Understand the purpose of research.  Identify the target audience and consider boundaries needed.  Use questions grid to form a questionnaire to identify suitable themes.  Ask questions to a particular audience.  Collect answers in an organised manner. | L.F. To select electrical systems through apply electrical knowledge  S2S  Consider materials available and select appropriate options.  List the electrical equipment needed for computer or non-computer options.  Consider pros and cons of both options through trial of computer supported systems (crumble) and non-computer supported systems (electrical boards). | LF: Learn and demonstrate practical ways to combine ingredients  S2S:  Read recipes and understand key vocabulary.  Recognise where ingredients come from.  Understand health and hygiene rules.  Measure ingredients accurately.  Combine ingredients using the appropriate method. |
| **Learning Outcome 3** |  |  |  |  |  |  | LO Design and plan what they want to make  S2S  Decide on the purpose  Consider who the product will be for  Design a background picture  Decide on a character/object to be moved  Decide on the direction to move  Decide on whether to use a lever or slider | LF – Use simple utensils and food hygiene skills.  S2S - Know the importance of hygiene and hand washing.  Learn how to correctly wash hands.  Use a grater to grate produce.  Use a peeler to peel produce.  Use a knife to chop/slice produce.  Recognize white utensil you use to do the different skills. | LF: Design a structure.  S2S:  Generate ideas based on simple design criteria.  Develop, model and communicate ideas through talking, mock-ups and drawings | LF: Create a design for a vehicle  S2S:  Draw and label my vehicle design.  Explain my design choices. | LF - Design a product using a plan and create a paper template for your product  S2S:  Generate ideas by drawing on their own experience  Use knowledge of existing products to come up with ideas.  Create a paper template  Draw design onto paper  Cut out design  Attach together | LF: Experiment with and evaluate the most effective ways cut, grate or peel ingredients safely.  S2S:  -experiment each method on vegetables  - Evaluate and give reasons for the most effective preparation methods. | LF: Ask the children to consider the main stages in making before assembling through planning their product  S2S  Experience of basic cutting, joining and finishing techniques with paper and card.  Order the main stages of making.  Select from appropriate tools with some accuracy to cut, shape and join paper and card.  Choose appropriate finishing techniques suitable for the product they are creating  Understand and use lever and linkage mechanisms. | LF: explore different food preparation techniques  S2S:  Select and use a range of utensils  Use a range of techniques as appropriate to prepare ingredients hygienically  Discuss food preparation and food hygiene techniques | LF - Draw a net on squared paper  S2S:  Recognise names of 2D shapes.  Accurately use rulers to draw straight lines on squared maths papers.  Draw and design a net accurately on squared maths paper  Evaluate the drawing process throughout to ensure it meets the design criteria | LF: Select and use a range of appropriate utensils to prepare ingredients hygienically.  POAP 12  S2S  Identifying different utensils used in cooking and preparing food.  Identifying different utensils they already know and what function it serves.  Discuss how we would maintain hygiene and safety when using these utensils.  Identify the impact of not keeping the utensils clean. | LF: To generate design criteria that can be used to guide the development and evaluation of their products  S2S  Develop a design brief within a context that is authentic and meaningful  Identify the purpose of their product and intended user  Generate a range of ideas and identify realistic choices  Agree design criteria to support children’s plans | LF: To test different joining techniques on two pieces of fabric.  S2S  Refer back to learning from last lesson  Consider how 2-D pattern pieces could be joined together  Discuss and test out different  joining techniques on mock ups  Evaluate the success of each stitch  (Some S2S to be created while watching video tutorials/modeling to children) | L.F. Understand a variety of techniques for joining  S2S  Explore structures using construction kits.  Explore a variety of strengthening techniques  Know a variety of 3D shapes.  Build structures from paper tubes and masking tape  Learn how to use tools safely to cut and join wood.  Make joints to use as a reference later |  | L.F. Plan an item for a menu, based on the foods of Persia.  S2S  Explore a given recipe.  Annotate ingredients using prior knowledge (Last lesson).  Collaboratively, create an item using a variety of ingredients (from different categories).  Research a persian recipe using chosen ingredients. | L.F. Design and plan a final product for an intended purpose and user  S2S:  Set an authentic and meaningful design brief.  Develop a simple design specification for their product.  Create detailed and annotated drawings for their product idea  Produce a step-by-step plan, including the tools, equipment, fabrics and components needed. | L.F. Generate designs from analysing research  S2S:  Analyse data collected – recognise most liked and disliked.  Select the most appropriate theme from data.  Discuss how to incorporate themes into design.  Sketch exploded drawing | L.F. To design an electrical board game.  S2S  Identify who is ‘school community’ to them?  Create a design style – colours, themes, concepts  Select which element will be electrical.  Collate ideas in chronological order. | LF: Design a dough-based product for a selected purpose  S2S:  decide the purpose and user of the product (design brief).  Create success criteria to assess product on.  Select seasonal produce (where possible)  Adapt a recipe in groups  Scale ingredient amounts appropriately |
| **Learning Outcome 4** |  |  |  |  |  |  | LO Make their design using correct tools  S2S  Follow their design to create a background picture  Use technical and positional language  Create a character/object  Assemble the movement structure  Model the finished product | LF -Design and plan a product for a purpose.  S2S - Discuss a range of possible products.  Think about the product you wish to make.  Talk about how to plan the product.  Agree on design criteria for the product.  Develop, model and share initial ideas for your product. | LF: Create, edit and evaluate a structure.  S2S  Select and use tools, skills and techniques, explaining their choices.  Select new and reclaimed materials and construction kits to build their structures.  Use simple finishing techniques Discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria | LF: Make a vehicle based on the design.  S2S:  Make a moving vehicle based on my design.  Use a range of tools safely | LF - Produce a product following your plan.  Design, Make and Evaluate Assignment (DMEA) where children create functional  products with users and purposes in mind.  S2S  Measure, mark out, cut and shape material  Assemble, join and combine materials.  Use finishing techniques to add detail. | LF: Design a nutritious recipe  S2S:  -Identify suitable vegetables for recipe  - identify the amounts of vegetables needed  - plan how to prepare vegetables  - Identify what will create a nutritious recipe  Focused Tasks (FTs) where they are taught specific technical knowledge, designing skills  and making skills; | LF: Assemble high quality products, drawing on the knowledge, understanding and skills  S2S:  Demonstrate the correct and accurate use of measuring, marking out, cutting, joining and finishing skills and techniques.  Children should develop their knowledge and skills by replicating one or more of the teaching aids  Explored and use mechanisms such as flaps, sliders and levers.  Use appropriate tools with some accuracy to cut, shape and join paper and card.  Use finishing techniques suitable for the product they are creating | LF: design a healthy, savoury product  S2S:  Identify the purpose of the product  Develop and agree a design criteria for the product  Generate a range of ideas  -Create a final design | LF - Create a computer-aided design on Microsoft word (CAD) using annotated design sketches  S2S:  -look at annotated design identify tools that will be required to create different parts of design  -using previous skills learnt use tools appropriately to complete design step by step | LF: Plan the main stages of a recipe, listing ingredients, utensils, equipment and method.  POAP 3, 19  S2S:  Select root vegetables required.  Identify ingredients required and methods needed for preparation.  Create an instructional list with a partner/group.  Identify any health, hygiene or risks involved. | LF: To generate realistic ideas for a functional product fit for purpose.  S2S  Use annotated sketches to model their designs  Use exploded diagrams to develop and communicate their ideas  Identify the main stages of making. | LF: To follow a plan to make a fabric holder and evaluate and compare it to the original design.  S2S  Create chronological sketches of holders along the creative process  Annotate key features and consider tools needed  Follow FTs to create product in the correct sequence  Reflect on what isn’t working well and what could be improved  Refine by making suitable adjustment during the making process  Discuss if your product will fulfill its function.  Consider if it suitable for the user | L.F. Design a structure for an intended purpose.  S2S  Discuss the brief  Create a simple design specification  Create a sketch of their design.  Annotate the sketch  Create a materials list  Create step by step instructions. |  | L.F. Prepare, cook and evaluate a savoury dish.  S2S  Understand the importance of hygienic cooking.  Understand the importance of food safety.  Apply prior knowledge to use kitchen utensils and equipment.  Apply measuring skills to accurately measure.  Remember how to follow a recipe.  Evaluate, class items on the menu using prior knowledge of ingredients and combination. | L.F. Make a final product.  S2S:  Follow the plan created previously  Use appropriate stitching skills to join the fabric shapes  Ensure the design brief is followed | L.F. Construct and assemble high quality products, drawing on the knowledge, understanding and skills  S2S:  Read a step-by-step plan.  Collect equipment and tools.  Consider safety aspects.  Measure specifically.  Cut accurately.  Check in with sub-teams and work together. | L.F. To construct an electrical board game.  S2S.  Discuss a plan and allocate jobs to members of the team.  Collaborate as a team to build the different aspects of the game.  Ensure that equipment is used in a safe way  Ensure there is a circuit that works within the game using previous scientific knowledge | LF: Make a dough-based product for a specific purpose and user  S2S:  Follow recipe  Follow health and hygiene rules.  Appraise, reflect and refine throughout |
| **Learning Outcome 5** |  |  |  |  |  |  | LO Evaluate their product against their design  S2S  Assess the finished product  Consider the movement of the part  Discuss their design and compare to their finished product | LF - Create final product using DMEA.  S2S - Think about the stages in the making process.  Think about the utensils required.  Recall the processes learnt with the utensils, hygiene etc.  Create products following design criteria.  Evaluate the product throughout. | LF: Create, edit and evaluate a structure.  S2S  Select and use tools, skills and techniques, explaining their choices.  Select new and reclaimed materials and construction kits to build their structures.  Use simple finishing techniques suitable for the structure they are creating.  Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria | LF:Evaluate product against original criteria and design.  S2S:  Evaluate my vehicle and say what I like and dislike about it and how it matches my original design | LF - Perform and evaluate their product.  Design, Make and Evaluate Assignment (DMEA) where children create functional  products with users and purposes in mind.  Make simple judgments about product  Analyse success against criteria.  Suggest how their product could be improved. | LF: Make and evaluate a recipe following a prior design considering the intended purpose and user  S2S:  -Consider the main stages in making the product  -Follow a pre-prepared design  - Measure or weigh the ingredients using scales  -Select the appropriate equipment for each step  -Evaluate final product against the intended purpose and user  -Compare final product against design criteria  --Suggest how the product could be improved | LF: Evaluate the final products against the intended purpose and with the intended user  S2S:  Evaluate own products and ideas against criteria and user needs, as they design and make.  Know and use technical vocabulary relevant to the project | LF: Make a healthy savoury product following a prior design  S2S:  -Consider the main stages in making the product  -Follow a pre-prepared design  -Select the appropriate equipment for each step  LF: Evaluate my product against the intended purpose and user  S2S:  Evaluate final product against the intended purpose and user  Compare final product against design criteria  Consider others opinions  Suggest how the product could be improved | LF - Discuss how closely their finished product meets their design criteria and meets the need of the user.  S2S:  Compare finished product with original design criteria  Identify which aspects have met the criteria for their intended audience and how this has been achieved  Identify which aspects have not met the crit=eria and explain why and how this would be improved next time | LF: Create dishes using appropriate equipment to prepare and combine ingredients.  POAP 14, 12  S2S:  Discuss how we would maintain hygiene and safety when using these utensils.  Identify risks involved when using utensils.  Identify how we minimise cross-contamination within the kitchen. Select root vegetables required.  Use the appropriate chopping board for the food type.  Choose the most efficient method of cutting.  Measure the correct amount of ingredients required according to our recipe. | LF: To make, evaluate and compare the product to the original design.  S2S  Select from and use tools to cut, shape, join and finish with some accuracy  Select from electrical components suitable to their purpose  Reflect on what isn’t working well and what could be improved  Refine by making suitable adjustment during the making process  Discuss if your product will fulfil its function  Consider if it is suitable for its user | LF: To explore and choose decorative techniques to enhance the aesthetics of the product  S2S  Practise range of decorative  techniques  Sketch and annotate possible decorative ideas  Decide on the one/s which are appropriate  Add finishing techniques to final product.  Evaluate effectiveness of finishing techniques. | L.F. Make a frame structure for a specific purpose.  S2S:  Test ideas with paper straws / card etc where appropriate  Evaluate and change the design according to results  Make the structure following the design specification and step by step instructions (adapted where necessary)  Measure, mark, cut, shape and join accurately.  Use finishing and / or decorating techniques appropriate for your structure. |  | L.F. Evaluate and adapt a savoury dish  S2S:  Use previously chosen criteria to evaluate their dish.  Adapt a recipe to improve it.  Make a second version | L.F. Evaluate the overall potential of a finished product  **.**  S2S:  Compare the final product to the design specification  Critically evaluate the quality of the design  Discuss the product with others  Rate the potential of project once it is finished | L.F. Evaluate the final products against the intended purpose and with the intended user  S2S:  Model product for intended user.  Question user on initial visual thoughts.  Observe the product being used and make notes.  Question user on satisfaction.  Discuss feedback and suggest changes. | L.F. To evaluate the final product, comparing it to the original design specification.  S2C.  Identify good and bad aspects of ride  Review materials used and their effect of bad parts  Analyse how bad parts could be improve  L.F. To edit and modify product using evaluation  S2S.  Share evaluations from other teams.  Discuss and action fixes.  Discuss potential enhancements.  Action 1 or 2 enhancements that make the ride more purposeful. | LF: Evaluate products according to chosen success criteria  S2S:  Complete sensory experience (appearance, smell, texture, taste) of your own product.  Complete sensory experience of a peer's product.  Evaluate against design specification.  Reflect and refine where necessary. |
| **Essential Vocabulary Learnt** |  |  |  |  |  |  | slider, lever, pivot, slot,  bridge/guide  card, masking tape,  paper fastener, join  pull, push, up, down,  straight, curve, forwards,  backwards  design, make, evaluate,  user, purpose, ideas,  design criteria, product,  function | fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria | cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder design, make, evaluate, user, purpose, ideas, design criteria, product, function | vehicle, wheel, axle, axle holder, chassis, body, cab  assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism  names of tools, equipment and materials used  design, make, evaluate, purpose, user, criteria, functional | names of existing products, joining and finishing techniques, tools, fabrics and components  template, pattern pieces, mark out, join, decorate, finish  features, suitable, quality mock-up, design brief, design criteria, make, evaluate, user, | fruit and vegetable names, names of equipment and utensils  sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard  flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria | mechanism, lever, linkage, pivot, fixed pivot, loose pivot, slot, bridge, guide system, input movement, output movement, process, output linear, rotary, oscillating, reciprocating user, purpose, function prototype, design criteria, innovative, appealing, design brief | name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savory hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet planning, design criteria, purpose, user, annotated sketch, sensory evaluations | shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating font, lettering, text, graphics, decision, evaluating, design brief design criteria, innovative, prototype | texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet.  Appearance  Texture  Sensory evaluation Preference test Strawberry huller Processed food | Torch  Light  Bulb  Bulb holder  Wires  Crocodile clip  Push-to-make Switch  Push-to-break Switch  Toggle switch  Reflector  Case  Circuit  Conductor  Insulator  Prototype  System | Fabric, design technology, innovation, innovative, holder, user, purpose, design, evaluate, function, functional, investigate  2D, 3D, pattern, pattern pieces, template, structure, prototype, name of fabrics, strength, stiffening, compartment, seam, seam allowance, annotated sketch, label, cm, width, length, height  Stitch, running stitch, backwards running stitch, back stitch, oversew stitch, blanket stitch, seam, seam allowance, Fastenings, zip, button, needle and thread.  Chronological, evaluate, function, purpose, uses, functionality. All language  Aesthetics, decoration. | frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, modelling, compression, tension, tie, diagonal, horizontal, vertical |  | Protein  Carbohydrate  Vegetable  Fruit  Dairy  Dairy alternative  Vegetarian  Vegan  Halal  Healthy plate  proportion  Fat  Salt  Herb  Spice  Acidity  Sour  Sweet  bitter  Persia  Iranian  Fry  Boil  Bake  Unleven  (also specific names of spices and herbs - on plan) | seam, seam allowance,  wadding, reinforce, right  side, wrong side,  hem, template, pattern  pieces  name of textiles and  fastenings used, pins,  needles, thread,  pinking shears,  fastenings, iron transfer  paper  design criteria, annotate, design decisions,  functionality, innovation,  authentic, user, purpose,  evaluate, mock-up,  prototype | cam, off-centre cam, peg cam, pear shaped cam follower, axle, shaft, crank, handle, housing, framework rotation, rotary motion, annotated sketches, exploded diagrams mechanical system, input movement, process, output movement design decisions, functionality, innovation, user, purpose. |  | ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble design specification, innovative, research, evaluate, design brief |
| **Enrichment for Cultural Capital and Deep Thinking** |  |  |  |  |  |  |  |  |  |  |  |  |  | Visit from a chef or member of our own kitchen staff. | possible trip to Lady Lever Gallery |  |  |  | A structures “hunt” locally / Liverpool to include the Catholic Cathedral  Study Frerick Gibbard, architect (of the Catholic Cathedral, Liverpool) | JCB kits - STEM club | Visit from a chef (Fattoush Liverpool?)  A Feast for Eid | Visit from local fashion design dept university / colleges. |  |  |  |