St Monica's Catholic Primary School

Philosophy

Every child is a unique gift from God, with his or her own unique gifts.

Our Catholic school, inspired by the teaching of Jesus Christ, will always endeavour to meet the needs of every child within our school.

At St. Monica's, we strive to ensure that all children and staff are offered the opportunity to develop to their full potential in individual, educational, moral, intellectual and spiritual needs.

Our Mission Statement is "Let Trust, Respect and Love live here."

What we teach and what your children learn in DT

Please see below a summary of our plans (organised by Year Group and Term) for teaching and learning in DT in our school.

If you want further information on the curriculum, including how it is differentiated for children within classes who are at different stages of learning including your child, please contact your child's teacher of email the school on stmonicas@st-monicas.co.uk

Our Intent, Implementation and Impact statement for DT

Intent:

Design and technology gives children the opportunity to develop knowledge, skills and understanding of design, innovation and building. This helps nurture their creativity and problem solving skills as they attempt to build and construct a range of varying products.

Children learn to use a range of techniques which include, sewing, electronics, food technology and construction using mechanisms, in order to create a quality product. Children are encouraged, right from the Early Years, to experiment with and investigate, ways of building and strengthening using various different materials.

We aim to, wherever possible, to link DT work to other disciplines such as Science, Computing, Mathematics, Engineering, and foundation subjects such as Art and History. The children are also given opportunities to reflect upon and evaluate their designs against a set of criteria.

Implementation:

DT units begin with a pre-assessment of current knowledge and vocabulary. Key vocabulary is identified for each unit taught as in the key vocabulary for each topic as above. These are explicitly taught during the learning sequence and teachers and pupils continually assess the understanding of these. Along with our progressive knowledge curriculum, DT skills are consolidated and built upon through each unit and year group. Key areas of learning are revisited at the start of each unit within the pre-assessments, making clear links made to previous learning. This allows for pupils to consolidate their knowledge and thus gain a broad and deep understanding of their given topic. Our DT plans state progressive knowledge and skills to ensure a full coverage. Our plans are differentiated beyond the core knowledge listed to provide for the learning needs of all learners and to ensure all learners, including SEND, Pupil Premium and high attainers, are challenged, including through cross curricular links. Classroom working walls reflect the learning journey of the class, highlighting key knowledge, skill development and target vocabulary. At the end of a unit, post-learning assessments provide an opportunity for pupils to demonstrate what they have learnt across their given topic and reflect upon and consolidate their learning. These also provide formative assessment for future learning in addition to the informal assessment which has taken place throughout the topics to close gaps, including with regard to previous learning.

When designing and making, the children are taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose and aimed at particular individuals or groups.
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams.

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, mechanisms such as cams, pulleys and pneumatics, textiles, electronics and ingredients, according to their functional properties and aesthetic qualities.

Evaluate

- 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.

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- understand and use mechanical systems in their products, such as wheels and axels. CAMs, pulleys, hydraulic and pneumatic systems.
- understand and use electrical systems in their products.
- apply their understanding of computing to program, monitor and control their products.

Key skills and key knowledge for DT have been mapped across the school to ensure progression between year groups. This also ensures that there is a context for the children's work in DT; that they learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study.

Impact:

Children will be able to:

- draw on their creative, technical and practical skills needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- build and apply a repertoire of knowledge, understanding and skills in order to research, design and make high-quality prototypes and products for a wide range of users and critique, evaluate and test their ideas and products against design criteria and evaluate the work of others.
- Select from and use a wider range of materials and components (including construction materials, and mechanisms such as wheels and axels, CAMs, Pulleys, hydraulic and Pneumatic systems textiles and ingredients) according to their function and looks.

Children of all abilities and backgrounds achieve well in DT as measured throughout topics, including assessment as above and end of topic judgments, including about gaps in knowledge and skills filled. Children are prepared to access the DT curriculum (and related topics in other subjects) at secondary school and beyond.

Y	Topic	Topic Knowledge and Skills	Objectives and Tasks	Vocabulary
1	Dragon Nests	Knowledge: • To know how to plan for a given criterion • To design a product to meet a particular purpose. • To know how to communicate their ideas • To know the names and properties of different materials. Skills: • Follow a plan to make a product • Evaluate a product based on an outcome • Make effective changes based on evaluations • Cut, bend, fold and stick	• Talk about the structure and need for nests • Talk about and identify properties of materials • Plan a nest for a dragon's nest • Follow plans to make nest designs • Test products- does your nest keep an egg safe? • Evaluate nests- did they meet the needs of the criteria? What changes need to be made?	Fragile, secure, material, hard, soft, safe, plan, make, evaluate, test, design, cut, bend, scrunch, fold, stick
	Emergency Vehicles	Knowledge: • To know how to plan for a given criterion • To design a product to meet a particular purpose. • To know how to communicate their ideas • To know the names and properties of different materials. • To know the way wheels and axels work. Skills: • Follow a plan to make a product • Cutting, shaping, joining & finishing • Evaluate existing and own products. • Explore and use mechanisms- wheels and axels	• Look at existing emergency vehicles and identify their features • Design and emergency vehicle- explain what emergency they would respond to and what features they are including? • Identify and materials and tools needed to create their emergency vehicle • Making vehicles- using moving axis and wheels • Evaluate their vehicle	Emergency vehicle, features, plan, make, evaluate, axis, wheels, materials, joining, finishing

	Pizza Making	<u>Knowledge:</u> • To know what a varied and healthy diet looks like. • To know where food comes from. • To know how to evaluate existing and own products • To communicate plans • To identify and select ingredients <u>Skills:</u> • Follow a plan to make a product • Mix, cute, slice, grate, chop • Evaluate	• Identify ingredients used in pizzas and where they come from • Taste and evaluate different ingredients • Plan pizza making- including ingredients needed • Create a list of ingredients & tools needed • Make pizzas • Taste and evaluate pizzas	Ingredients, tools- oven, oven tray, bowl, spoon, oven, make, cook, taste, evaluate
Y	**Topic**	**Topic Knowledge and Skills**	**Objectives and Tasks**	**Vocabulary**
2	Making Chocolate - Choccywoccydoo dah	<u>Knowledge:</u> • Know how to develop, plan and communicate ideas. • Know how to design products for a purpose based on design criteria. • Know the process of evaluating products and processes. • Understand and know where food comes from. <u>Skills:</u> <u>Food:</u> • Measure or weigh using measuring cups or electronic scales. <u>Design, make, evaluate and improve:</u> • Make products, refining the design as work progresses.	• Talk about how chocolate is made. • Design my own chocolate. • Make a chocolate that I have designed. • Evaluate my work (the chocolate in the chocolate wrapper combined). • Design a Santa Trap. • Make a Santa Trap	chocolate, algorithms, instructions, details, wrapper, design, moulds, set, fridge, measure, weigh, evaluate, wrapper, label, capture, junk modelling.
	Sensational Salads	<u>Knowledge:</u> • Know how to design products for a purpose based on design criteria.	• Identify fruits and vegetables – where food comes from – growing our own. Find out the favourite fruits and vegetables in the class and present the data in a pictogram. • Taste test fruits and vegetables *Link with*	fruit, vegetable, salad, smoothie, above ground, underground, growing,

		• Know how to use a range of tools, equipment, materials, and components to make quality products. • Know the process of evaluating products and processes. <u>Skills:</u> <u>Food:</u> • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. <u>Design, make, evaluate and improve:</u> • Make products, refining the design as work progresses	*Science – Healthy Humans – Week 2* - use their senses to describe the different features of fruits and vegetables • Handle and prepare fruit and vegetables - discuss and think about food preparation. Practise using different tools safely and using the appropriate language associated with food preparation, including safety and hygiene in relation to food. • Design a recipe. • Follow recipes to make a fruit salad/smoothie - make a food product based on a design. • Evaluate the product. • Caught or Grown? - To understand that some food is grown and some food is caught.	hygiene, balanced, variety, diet, healthy, recipe, instructions, tools, clean chopping boards, peelers, bowls, graters, safe knives, greengrocer, fishmonger
		<u>Knowledge:</u> • Know how to develop, plan and communicate ideas. • Know how to design products for a purpose based on a design criterion. • Know how to use a range of tools, equipment, materials, and components to make quality products. • Know the process of evaluating products and processes. • Know how to use mechanisms (e.g. Levers, wheels and axles) <u>Skills:</u> <u>Materials:</u> • Measure and mark out to the nearest cm.	• Design a toy car using levers and axles in design - children will be given criteria and must plan to meet those. • Make toy car from design –create toy car using wheels, axles and junk modelling. • Evaluate toy car - test their car and evaluate. • Design fairground ride - either a ferris wheel, swings or merry go round. • Choose materials and resources. • Make fairground ride *link with Disney Dreams – The History of Disney lesson on the History of Amusements and Theme Park Rides'* • Design a puppet • Make a puppet using felt and running	design, car, axle, wheel, joining, technique, planning, model, criteria, create, adapt, change, evaluate, annotate, test, recreate, fairground ride, movement, motion, round, tools, materials, joining, sewing,

		• Demonstrate a range of joining techniques (such as gluing, hinges, combining materials to strengthen) <u>Textiles:</u> • Join textiles using running stitch • Colour and decorate textiles using a number of techniques <u>Design, make, evaluate and improve:</u> • Make products, refining the design as work progresses. • Use software to design.	stitch.	running, stich, needle, thread, line, straight, repeat, knot, lever
Y	**Topic**	**Topic Knowledge and Skills**	**Objectives and Tasks**	**Vocabulary**
3	Yabba Dabba Doo: Stone Age Necklace *(Link to History topic- Stone Age)*	<u>Knowledge:</u> • Design - Know how to use research to develop designs and understand how to communicate their ideas on a design sheet and through discussion • Make - Know how to use clay tools and materials correctly and select them appropriately. • Evaluate – Research existing products, evaluate their own ideas and products against their design and consider the views of others to improve their work <u>Skills:</u> • To use research to support their design process • To draw and explain their necklace design • To mould and manipulate clay to match their design plan • To use tools and equipment safely and with control • To look carefully at their finished product and make comparison to their plan • To listen to the thoughts of others	• Research Stone Age necklaces, including online and in books to find out: Which necklaces have been found? What are they made of? Which shapes can you see? Why did they wear them? • Design a necklace - draw and write sentences to answer questions about their necklace design. To be encouraged to use a simple design using clay tools with some control to carve and engrave. • Make a Stone Age style necklace following own design using clay - to cut, mould, shape, carve and engrave the clay to create their necklace design. • Evaluate the necklace - using the opinions of others in their group, including as to whether product matched design.	research, inspiration, necklace, shape, material draw, sketch, label, clay, carve, engrave, pattern, markings, plan, design, clay, carve, engrave, pattern, markings, technique, same, different, changes, reasons, improve, like, dislike, evaluate.

		• To give their thoughts and opinions of the work of others in a constructive way		
	Designing and Making a Boat	<u>Knowledge:</u> • Design - Know how to use research to develop designs and understand how to communicate their ideas on a design sheet and through discussion • Make - Know how to cut, shape, colour and join materials effectively and select them appropriately • Evaluate – Research existing products, evaluate their own ideas and products against their design and consider the views of others to improve their work <u>Skills:</u> • To use research to support their design process • To draw and explain their design • To cut, shape, colour and join materials to match their design plan • To use tools and equipment safely and with control • To look carefully at their finished product and make comparison to their plan • To listen to the thoughts of others • To give their thoughts and opinions of the work of others in a constructive way	• Research about different types of boats, including different types and styles of boats, what are the functions of a boat (why are they used?), What are they made of? Which shapes/designs/colours are used? What makes a 'great' boat? • Find materials that float - make a knowledge based decision on which material to use to make their boat, research which materials are good at floating. Children will explore cardboard, paper, plastic, metal and find which materials float. • Design a boat - design and label features and list the materials needed to complete the build, answering question prompts about the purpose of the boat. • Make a boat following own design, including cutting and joining card to create their simple boat design to include the key features and designs • Evaluate the boat, including testing whether it floats. Write an evaluation of the boat, using some prompt questions and analysing critically what was good about their design and what could be modified.	research, inspiration, boat, yacht, rowing boat, narrow boat, cruise ship, colour, shape, material, design investigate, predict, float, forces (up-thrust, balance, resistance) buoyancy. draw, sketch, label, materials, features, purpose, style plan, design, paper, card, colour, cut, shape, curve, join, attach, same, different, changes, modify, adapt, reasons, improve, like, dislike, evaluate, successful, unsuccessful

	Marble Run	Knowledge: • Design - Know how to use research to develop designs and understand how to communicate their ideas on a design sheet and through discussion • Make - Know how to cut, shape, colour and join materials effectively and select them appropriately. • Evaluate – Research existing products, evaluate their own ideas and products against their design and consider the views of others to improve their work Skills: • To use research to support their design process • To draw and explain their marble run design • To cut, shape, colour and join materials to match their design plan • To use tools and equipment safely and with control • To look carefully at their finished product and make comparison to their plan • To listen to the thoughts of others • To give their thoughts and opinions of the work of others in a constructive way	• Research marble runs, including finding out which marble runs can you buy? What are they made of? Which shapes/designs/colours can you see? What makes a great/fun marble run? What else have you found out about marble runs? • Design a marble run - draw and write sentences to answer questions about their marble run design. To be encouraged to use a simple design to include these features: a change in direction, a drop, a resting point at the end and a base. • Make a marble run following own design, including cutting, colouring and joining paper and card to create their simple marble run design to include the key design features • Evaluate marble run - - using the opinions of others in their group, including as to whether product matched design.	research, inspiration, marble run, colour, shape, material, design draw, sketch, label, paper, card, glue, tape, scissors, fold, join, a change in direction, a drop, a resting point at the end, base, plan, cut, shape, curve, join, attach, drop, change of direction, same, different, changes, reasons, improve, like, dislike, evaluate.
Y	**Topic**	**Topic Knowledge and Skills**	**Objectives and Tasks**	**Vocabulary**
4	Major Mayans *(link – History – Maya)*	Knowledge: • Know how to use research to develop designs that are fit for purpose and to meet a target audience. • Understand how to communicate their ideas in a range of ways (sketch, diagrams, prototypes,	• Research what a healthy diet is, what the Mayans ate and how their food was grown. • Taste food samples, including learning how they were grown/made. • Design a Mayan dish, include writing a	diet, healthy diet, balance, origin, sample, dish, design, assemble, utensils, appropriate,

		discussions) • Understand how key events and individuals have shaped the world. • Understand ingredients - where they come from and how it is grown/made • Understand a healthy diet • Know how to prepare and cook a variety of savoury dishes using a range of cooking techniques <u>Skills:</u> • To prepare ingredients hygienically using appropriate utensils • To measure ingredients to the nearest gram • To assemble and cook ingredients (controlling the temp of the hob if cooking)	recipe and illustrating. • Prepare a Mayan dish, using appropriate utensils and measure ingredients accurately. • Assemble their dish in an appealing way. • Evaluate and improve their dish, using their evaluation to improve their original recipe. • Prepare their improved recipe and evaluate again.	recipe, ingredients, measure, prepare, improve, like, dislike, evaluate appealing, healthy diet Improve, like, dislike, evaluate, experience, techniques.
	The New World *(link – Geography – The New World)*	<u>Knowledge:</u> • Know how to use research to develop designs that are fit for purpose and to meet a target audience. • Understand how to communicate their ideas in a range of ways (sketch, diagrams, prototypes, discussions) • Know how to analyse products (both existing and their own) <u>Skills:</u> • Design and build a product for an explorer to use on an adventure to the New World. • Select the most appropriate techniques to decorate textiles • Strengthen materials using suitable techniques	• Research ideas for design e.g. kit that explorers use when they go on adventures. • Use knowledge of what an explorer would do on an adventure and the products they already have to create a list of design ideas. • Design a product for an explorer to use on an adventure to the New World, including giving explanations for why this is a product that an explorer will need. • Research materials that would be appropriate for the design, testing ore different materials. They test strength, texture, flexibility.	research, product, inspiration, design, ideas, draw, sketch, accurate, label, circuit, simple circuit, material, textile, shape, join, function make, product, structure, model, measure, improve, like, dislike, evaluate experience,

			• Modified- Complete this as a group. TA to guide children through the materials. Children make notes on each material then decide on the best ones for their product. • Core/ Extended- Select the most appropriate techniques to decorate textiles. • Children explore different ways to strengthen a material and make notes on the different techniques they will use in their design. • • Add the materials that they think are appropriate for their product onto their design. • • Key Vocabulary • Material, textile, shape, join, function • • Week 4 • I can make my design (a prototype). • • Children use their design to make their product o. • • Modified- Work with TA to create their product as a group.	techniques.

			• Core/ Extended- Use their design. If they need to change anything, they should write it down so they can use this in their evaluation. • • Key Vocabulary • Make, product, structure, model, join, material, measuring, • • Week 5 • I can evaluate my design. • • Children use notes from Week 5 to evaluate their design. • Label things they liked and things they would like to improve about their dish. • Modified- Prompt questions to help with their evaluation. • Children use their evaluation to improve their original design. • • Key Vocabulary • Improve, like, dislike, evaluate • • Week 6 • I can improve and present my design. • • Children use their evaluation to improve and complete their design.	

			• Present their product to groups. • Modified- Present their designs as a whole group. • Core- present their ideas explaining what they did. • Extended- give reasons for their choices. • • Key Vocabulary • Measuring, material, improve, appealing, like, dislike, experience, techniques •	

	Tudor Money Pouch *(link – History - Tudors)*	<u>Knowledge:</u> • Know how to use research to develop designs that are fit for purpose and to meet a target audience. • Understand how to communicate their ideas in a range of ways (sketch, diagrams, prototypes, discussions). • Know how to use a wide range of tools and materials correctly and select them appropriately • Know how to analyse products (both existing and their own) <u>Skills:</u> <u>Textiles:</u> • Select the most appropriate techniques to decorate textiles Design, make, evaluate and improve: • Design with purpose by identifying opportunities to design • Make products by working efficiently	• Research designs of Tudor money pouches - use knowledge of what it might be made of and look like to create a list of design ideas. • Design a Tudor Money Pouch - search through the available materials and decide how to use these materials to create a Tudor money pouch that fits what they researched previously. • Create, design and annotate how the pouch is in line with Tudor style. • Cut out material and stitch it together, chalking along template, cutting it out, threading needle and stitching • Use neat stitching, including along a hem neatly and measuring for regularity. • Create a functioning drawstring. • Evaluate design, including labelling diagram of what would improve, and use evaluation to develop original design.	research, product, pouch, material, style, decoration, design, ideas, draw, sketch, accurate, label, textile, shape, join, thread, opening, stitch, make, product, measuring, hem, regular, stitch, drawstring, measure, accurate, braid, hole, improve, like, dislike, evaluate.
Y	**Topic**	**Topic Knowledge and Skills**	**Objectives and Tasks**	**Vocabulary**
5	Sewing	<u>Knowledge:</u> • Understand how to communicate their ideas in a range of ways (sketch, diagrams, prototypes, discussions) • Know how to use a wide range of tools and materials correctly and select them appropriately • Know how to analyse products (both existing and their own) <u>Skills:</u>	• Investigate and analyse different types of cushions - focus on function, materials and who would the cushion appeal to and why. Comment on positive and negative features of the cushion. • Explore different ways to join fabric using sewing skills - develop their running stitch and back stitch as over stitch to join two pieces of fabric together.	product, cushions, functional, aesthetic, features, analyse, purpose, stitches, hidden, visible, running

		<u>Materials:</u> • Cut materials with precision and refine the finish with appropriate tools (eg sanding wood) <u>Textiles:</u> • Create objects (such as cushions) that employ a seam allowance • Join textiles with a combination of stitching techniques (eg. Back stitch for seams and running stitch to attach cushions) <u>Design, make, evaluate and improve:</u> • Design with the user in mind, motivated by the service a product will offer. • Ensure products have a high quality finish, using art skills where appropriate.	• Explore different ways to decorate fabric using sewing skills - practise three decorative sewing techniques: 1) sewing a button 2) embroidering a shape onto fabric 3) applique. • Design a cushion cover - comment on the user, purpose and main stitch. Also to list the equipment and materials needed. Plan step by step instructions to create their cover. • Make a cushion cover following designs independently. • Evaluate a cushion cover, answering questions about their finished product.	stitch, back stitch, over stitch, zigzag stitch, aesthetic, bows, buttons, ribbons, applique, combination design, user, purpose, equipment, materials, order, annotate materials, thread, equipment, appropriate, variety, choice, quality, improve, skills
	Mexican Food (*link Geography Mexico)*	<u>Knowledge:</u> • Understand ingredients – where it comes from and how it is grown/made • Understand a healthy diet • Know how to prepare and cook a variety of savoury dishes using a range of cooking techniques <u>Skills</u> <u>Food:</u> • Understand the importance of correct storage and handling of ingredients (knowledge of micro-organisms)	• Research Mexican food. • Design a menu for a Day of the Dead festival. • Include traditional Mexican food. - discuss whether this would be part of a healthy diet. What makes a healthy diet? • Prepare food for the Day of the Dead lunch. Children will have:- • researched some of the traditional foods of Mexico	traditional, salsa, quasidillas, burritos, guacamole, chilli, recipe healthy diet, carbohydrates, protein, fats, balanced, flavours chopping, frying, cooking,

		• Demonstrate a range of baking and cooking techniques <u>Design, make, evaluate and improve:</u> • Design with the user in mind, motivated by the service a product will offer.	• designed a menu for the festival • know how to prepare some of the foods • have experienced making and tasting the foods • will have formed an opinion about the food	blending, baking, tasting
	Jeepers Creakers (link Literacy – book Creakers)	<u>Knowledge:</u> • Know how to use research to develop designs that are fit for purpose and to meet a target audience. • Understand how to communicate their ideas in a range of ways (sketch, diagrams, prototypes, discussions) • Know how to analyse products (both existing and their own) • Know how to apply their electrical/mechanical understanding into their products <u>Skills:</u> <u>Materials:</u> • Cut materials with precision and refine the finish with appropriate tools (e.g. sanding wood) <u>Construction:</u> • Develop a range of practical skills to create products (e.g. Cutting, drilling and screwing, nailing, gluing, filling and sanding) <u>Mechanics:</u> • Convert rotary motion to linear <u>Design, make, evaluate and improve:</u> • Make products through stages of prototypes, making refinements. • Ensure products have a high quality finish, using art skills where appropriate.	Design a Creaker trap - using ideas from the text. two designs drawn and labelled with an evaluation of which might work best and why. Make a model of the Creaker trap – using junk materials and knex/lego etc make the model in a shoe box. Evaluate and improve model Creaker trap – what could be improved and how? Children will have: • produced a labelled design and chosen their final drawing • planned how to make the model • made the model using junk materials and construction equipment • evaluated their designs and made suggestions for improvements	design, label, research, investigate, plan, develop pulley, rotation, linear movement. evaluate, improve, prototype.

	Viking Longboats *(link History)*	Knowledge: • Know how to use research to develop designs that are fit for purpose and to meet a target audience. • Understand how to communicate their ideas in a range of ways (sketch, diagrams, prototypes, discussions) • Know how to use a wide range of tools and materials correctly and select them appropriately • Know how to analyse products (both existing and their own) • Understand how key events and individuals have shaped the world <u>Skills</u> Materials: • Cut materials with precision and refine the finish with appropriate tools (e.g. sanding wood) <u>Construction:</u> • Develop a range of practical skills to create products (e.g. Cutting, drilling and screwing, nailing, gluing, filling and sanding) <u>Design, make, evaluate and improve:</u> • Design with the user in mind, motivated by the service a product will offer. • Make products through stages of prototypes, making refinements. • Ensure products have a high quality finish, using art skills where appropriate.	Research Viking Longboats - focusing on their shape, different parts and how they are designed. Plan in groups their own Viking Longboat. Which materials are they going to use? How are they going to join it together? How will theirs be unique? Make a Viking Longboat - Children to be provided with joining equipment, saws, glue guns to construct their longboat. Children to work from plans. Test and evaluate a product - The children are to test their boat - either in school pond or in paddling pool. Do they float? Children to evaluate their boat design, including how successful it is at floating. Children will have: • Researched longboats and design one as part of a team. • Created a longboat using different materials. • Used different cutting and joining tools. • Tested buoyancy. • Evaluated the effectiveness of the design and made suggestions for improvements.	construction, joins, materials, purpose, plan, design, team work, buoyancy, evaluate, design.
Y	**Topic**	**Topic Knowledge and Skills**	**Objectives and Tasks**	**Vocabulary**
6	Design and Make Slippers	<u>Knowledge:</u> Know how to use research to develop designs that are fit for purpose and to meet a target audience.	• Investigate materials - research slipper examples, label the materials used in a slipper and explain the purpose in the design. Explain how they would adapt the	Core- Children will understand the different materials that

		• Understand how to communicate their ideas in a range of ways (sketch, diagrams, prototypes, discussions) • Know how to use a wide range of tools and materials correctly and select them appropriately • Know how to analyse products (both existing and their own) <u>Skills:</u> <u>Materials:</u> • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape. <u>Textiles:</u> • Use the qualities or materials to create suitable visual and tactile effects in the decoration of textiles (e.g. Soft decoration for a cushion). <u>Design, make, evaluate and improve:</u> • Design with the user in mind, motivated by the service a product will offer (not just profit) • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.	materials and initial design to suit three different audiences. • Design paper patterns - look at an example slipper and draw a sketch of the different parts that make up that slipper. Up-scale their sketches and make accurate patterns using their own foot size as a measurement. Consider the seam allowance and explain why we use patterns. • Develop a range of sewing and decorative techniques - complete a range of sewing challenges following a sewing demonstration of techniques. • Design a pair of slippers for a particular purpose and audience - complete a planning format, describing their slipper's purpose, audience, labelled diagram of design, labelled slipper pattern, materials needed and tools needed. Children will draw out the steps needed to make their design • Make slippers - read through the steps of their plan and then work independently to construct their slippers. Consider steps to take when met with a mistake or challenge and seek support when struggling • Evaluate the finished product - describe how they could have improved each area, including areas that were successful.	can be used to construct, slippers, purpose, structure, audience, adapt, materials, patterns, seam allowance, accurate textiles, techniques, evaluate critically, appearance, function, specifications.
	MKOK - Children to design their own estate.	<u>Knowledge</u> • Know how to use research to develop designs that are fit for purpose and to meet a target audience.	• Research MK Estates - research MK estates - (houses, shops, local centre, Church). Which different types of these buildings and designs are there? Which do	land use, local area, resources, construction,

		• Understand how to communicate their ideas in a range of ways (sketch, diagrams, prototypes, discussions) • Know how to use a wide range of tools and materials correctly and select them appropriately • Know how to analyse products (both existing and their own) <u>Skills:</u> <u>Materials:</u> • Cut materials with precision and refine the finish with appropriate tools (e.g. sanding wood) <u>Construction:</u> • Develop a range of practical skills to create products (e.g. cutting, drilling and screwing, nailing, gluing, filling and sanding) <u>Design, make, evaluate and improve:</u> • Design with the user in mind, motivated by the service a product will offer. • Make products through stages of prototypes, making refinements. • Ensure products have a high quality finish, using art skills where appropriate.	you like, which do you want to include in your designs? • Plan a building - divide the children into pairs and allocate different buildings for them to create. Design and plan a building for their estate. • Construct their own building for an MK estate - construct their building for their estate from the resources they have provided. To be put into display for their own MK estate. Children will have: • looked at designs for houses, shops, churches. • Planned a design for their own building. • Constructed and resourced their building.	plan, design, joins, resources, construction, plan, design, joins, evaluation.