

Year Group	Reception	Year 1	Year 2	Year 3	Year 4
Topic	Transport Pirates/Under the Sea	Explore the World	Explore the World	We'll Meet Again	We'll Meet Again
Skills:					
Design: Developing, planning and communicating ideas	Explain what they are making and which materials they are using. Select materials from a limited range that will meet a simple design criteria e.g. shiny. Select and name the tools needed to work the materials e.g. scissors for paper. Explore ideas by rearranging materials. Describe simple models or drawings of ideas and intentions. Discuss their work as it progresses	<u>Winding mechanisms: Well/crane</u> Begin to draw on their own experience to help generate ideas and research conducted on criteria. Begin to understand the development of existing products: What they are for, how they work, materials used. Start to suggest ideas and explain what they are going to do. Understand how to identify a target group for what they intend to design and make based on a design criteria. Begin to develop their ideas through talk and drawings. Make templates and mock-ups of their ideas in card and paper or using ICT.	<u>Winding mechanisms: Well/crane</u> Start to generate ideas by drawing on their own and other people's experiences. Begin to develop their design ideas through discussion, observation, drawing and modelling. Identify a purpose for what they intend to design and make. Understand how to identify a target group for what they intend to design and make based on a design criteria. Develop their ideas through talk and drawings and label parts. Make templates and mock-ups of their ideas in card and paper or using ICT.	<u>Electrical/control : Torch lighting for a bomb shelter</u> With growing confidence generate ideas for an item, considering its purpose and the user/s. Start to order the main stages of making a product. Identify a purpose and establish criteria for a successful product. Understand how well products have been designed, made, what materials have been used and the construction technique. Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. (David Misell, inventor of the torch) Know to make drawings with labels when designing. When planning, explain their choice of materials and components including function and aesthetics.	<u>Electrical/control : Torch for a bomb shelter</u> Start to generate ideas, considering the purposes for which they are designing-link with Mathematics and Science. Confidently make labelled drawings from different views showing specific features. Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail. Identify the strengths and areas for development in their ideas and products. When planning, consider the views of others, including intended users, to improve their work. Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. (David Misell, inventor of the torch) When planning, explain their choice of materials and components according to function and aesthetic.
Make: Working with tools, equipment, materials and components to make quality products	Begin to create their design using basic techniques. Start to build structures, joining components together. Look at simple hinges, wheels and axles. Use technical vocabulary when appropriate. Begin to use scissors to cut straight and curved edges and hole punches to punch holes. Explore using/ holding basic tools such as a saw or hammer. Use adhesives to join material.	Begin to make their design using appropriate techniques. Begin to 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. With help measure, mark out, cut and shape a range of materials. Explore using tools e.g. scissors and a hole punch safely. Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape.	Begin to select tools and materials; use correct vocabulary to name and describe them. (Needles) Build structures, exploring how they can be made stronger, stiffer and more stable. With help measure, cut and score with some accuracy. Learn to use hand tools safely and appropriately. Start to assemble, join and combine materials in order to make a product. Start to choose and use appropriate finishing techniques based on own ideas.	Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components. Explain their choice of tools and equipment in relation to the skills and techniques they will be using. Start to understand that mechanical and electrical systems have an input, process and output. Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement. Measure, mark out, cut, score and assemble components with more accuracy.	Select a wider range of tools and techniques for making their product safely. Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques. Start to join and combine materials and components accurately in temporary and permanent ways. Know how mechanical systems such as cams or pulleys or gears create movement. Understand how to reinforce and strengthen a 3D framework. Begin to use finishing techniques to strengthen and improve the

		Begin to use simple finishing techniques to improve the appearance of their product.		Start to work safely and accurately with a range of simple tools. Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work.	appearance of their product using a range of equipment including ICT.
Evaluate: Evaluating processes and products	Say what they like and do not like about items they have made and attempt to say why. Begin to talk about their designs as they develop and identify good and bad points. Start to talk about changes made during the making process. Discuss how closely their finished products meet their design criteria.	Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). When looking at existing products explain what they like and dislike about products and why. Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.	Evaluate their work against their design criteria. Look at a range of existing products, explain what they like and dislike about products and why. Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. With confidence talk about their ideas, saying what they like and dislike about them.	Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose. Begin to disassemble and evaluate familiar products and consider the views of others to improve them. Evaluate the key designs of individuals in design and technology has helped shape the world.	Evaluate their products carrying out appropriate tests. Start to evaluate their work both during and at the end of the assignment. Be able to disassemble and evaluate familiar products and consider the views of others to improve them. Evaluate the key designs of individuals in design and technology has helped shape the world.
Food and Nutrition	Fish cakes Begin to develop a food vocabulary using taste, smell, texture and feel. Explore familiar food products e.g. eggs, milk, flour. Stir, spread, knead and shape a range of food and ingredients. Begin to work safely and hygienically. Start to think about the need for a variety of foods in a diet.	Begin to understand that all food comes from plants or animals. Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught. Start to understand how to name and sort foods into the five groups in 'The Eat well plate' Begin to understand that everyone should eat at least five portions of fruit and vegetables every day. Know how to prepare simple dishes safely and hygienically, without using a heat source. Know how to use techniques such as cutting, peeling and grating.	Understand that all food comes from plants or animals. Know that food has to be farmed, grown elsewhere (e.g. home) or caught. Understand how to name and sort foods into the five groups in 'The Eat well plate' Know that everyone should eat at least five portions of fruit and vegetables every day. Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source. Demonstrate how to use techniques such as cutting, peeling and grating.	Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Start to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate' Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.	Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate' Know that to be active and healthy, food and drink are needed to provide energy for the body.

Knowledge	Reception	Year 1	Year 2	Year 3	Year 4
DT1: Develop the creative, technical & practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world (ie: know how something works). DT2: Build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. (ie: make something which works) DT3: Critique, evaluate and test their ideas and products and the work of others. DT4: Understand and apply the principles of nutrition and learn how to cook	Research a range of vehicles and their key features and purposes. Construct a vehicle using junk modelling and collage materials, using a range of tools - sellotape dispenser, scissors, glue stick. Evaluate and discuss each other's vehicles. Rice Krispie traffic light cakes - measure, mix, spoon. Use Mobilo to construct/build different types of transport (Continuous Provision). Research pirates and what their hats look like. Design and make a pirate hat using black sugar paper, decorate using chalk. Evaluate each other's pirate hats. Making and cooking fish cakes - peeling, cutting, chopping, mashing, moulding. Make a split pin pirate- cutting and joining using split pins.	Winding mechanisms: Well/crane Research different types of well/crane. Investigate crane toy and mechanism- learn vocab of pulley, winding handle and understand how axles work in this context.. Design a well or crane and annotate drawing Construct a stable structure including a winding handle Evaluate	Winding mechanisms: Well/crane Research different types of well/crane. Investigate crane toy and mechanism- learn vocab of pulley, winding handle and understand how axles work in this context.. Design a well or crane and annotate drawing Construct a stable structure including a winding handle Evaluate	Electrical/control : lighting for a bomb shelter Use research of bomb shelters and electrical circuits to develop a product. Design a torch/lighting controlled by a light sensor. Annotate sketches and prototype ideas Construct using; plastics, cardboards and paper - children to investigate materials best fit for purpose Safe use of tools such as; scissors, measuring devices e.g. rulers templates, hole punches, paper clips etc Evaluates etc. Evaluate	Electrical/control : lighting for a bomb shelter Use research of bomb shelters and electrical circuits to develop a product. Design a torch/lighting controlled by a light sensor. Annotate sketches and prototype ideas Construct using; plastics, cardboards and paper - children to investigate materials best fit for purpose Safe use of tools such as; scissors, measuring devices e.g. rulers templates, hole punches, paper clips etc Evaluate