Year Group	Reception	Year 1	Year 2	Year 3	Year 4
Topic	Dinosaurs Traditional Tales	London	London	Disappearing Rainforests	Disappearing Rainforests
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**	**Textiles:** **Felt Puppets: London Zoo animal** **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.**	**Textiles:** **Felt Puppets: London Zoo animal** **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.**	**Structure: Photoframe** **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. **Know to make drawings with labels when designing.** **When planning, explain their choice of materials and components including function and aesthetics.**	**Structure: Photoframe** **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. **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. (Needles)** **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. (sewing)** 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	**Pancakes** **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.

DT - Key Skills and Knowledge Progression (Year B – Spring Term)

Thomas Johnson Lower School : Dream - Discover - Flourish

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	Making **pancakes** for Shrove Tuesday - **measure, whisk, mix, pour.** Explore how the thickness of the batter results in a different texture of pancake. Research boat designs - what materials do they use and why? (photos/videos). Construct a **boat** for "the Gingerbread Man" using **junk modelling** materials. Test and evaluate each other's boats. Making **gingerbread** men biscuits - **measure, mix, knead, roll, cut.**,	**Textiles:** **Felt Puppets: London Zoo animal** Research and investigate how different puppet animals look and work.. Design and annotate drawing of own zoo animal Explore pattern / template use Practise stitches to refine skill. Cut pattern from felt Sew and fix features using needle and thread Evaluate	**Textiles:** **Felt Puppets: London Zoo animal** Research and investigate how different puppet animals look and work.. Design and annotate drawing of own zoo animal Explore pattern / template use Practise stitches to refine skill. Cut pattern from felt Sew and fix features using needle and thread Evaluate	**Structure: Photoframe** Use research to develop product, exploring types of joints, stands and photo retention. Design and annotate sketches. Prototype ideas Construct using materials such as; plastics, wood, cardboards and paper - children to investigate materials best fit for purpose Safe use of tools such as; junior hacksaws,scissors, measuring devices e.g. rulers templates. hole punches, paper clips etc. Evaluate	**Structure: Photoframe** Use research to develop product, exploring types of joints, stands and photo retention. Design and annotate sketches. Prototype ideas Construct using materials such as; plastics, wood, cardboards and paper - children to investigate materials best fit for purpose Safe use of tools such as; junior hacksaws,scissors, measuring devices e.g. rulers templates. hole punches, paper clips etc. Evaluate