











Long Term Planning –Design and Technology

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery Context	Harvest- Oatmeal cups	Colour and Sparkle Making divas			Farm Animals/Transport Junk modelling a farm	Minibeasts- Mini beast habitats
Technical Knowledge	Food and nutrition	Materials			Structures	
Food	Oatmeal cups WK 7					
Skills	Mixing Folding Melting	Fixing Joining Moulding			Sticking Cutting	
Materials and Tools	Oats Baking powder Salt Cinnamon Milk Egg Banana Apple	Clay Water Clay boards Clay tools Paint Sequins			Boxes Glue Paint Paint brushed Loose materials	
Expectations						
Reception Context	Magic of Me- Healthy pizza		People who Help Us Road Crossing Sign		Watch it Grow! Fruit Kebabs	Super Heroes Musical Instrument
Technical Knowledge	Food and nutrition		Materials		Food and nutrition FAIRTRADE LINK	Materials
Food	Healthy pizza WK 7				Fruit Kebab WK 5	
Skills						
Materials and Tools	Pitta bread Passata Pizza Toppings Cheese Knife Spoons		Cardboard Scissors Glue Tape Paint Felt tip pens		Skewers Various fruits Knives	Plastic cups Tissue Paper Rubber bands Materials Glue Scissors
Expectations						
Goldilocks Words					Living things Grow Food Seed Healthy Fruit Vegetables	Fixing Joining Assembling Constructing
Year 1 Context	School Building		Toys Puppet		Animals Animal Habitat	

Technical Knowledge	Structures LEGO LINK		Materials		Structures	
Food	(Writing) Instructions Cheese roll WK 4					
Skills	Identify appropriate materials Cutting, shaping and joining		Select and assemble materials Cutting, shaping Using pattern pieces and joining textiles		Assemble, join and combine materials Apply finishing techniques	
Materials and Tools						
Expectations						
Goldilocks Words	Stable Purpose Test Secure		Assemble Aesthetic Functional Texture Practical Component Appeaking		Purpose Shelter Components Features Innovate	
Year 2 Context		Railways Train		Buildings London structure		Where food comes from Root vegetable salad
Technical Knowledge		Mechanism Wheels and Axles LEGO LINK		Structures London Bridge		FAIRTRADE LINK
Food						Root vegetable salad WK 2
Skills		Create an annotated sketch Explore and use wheels and axels		Strengthen, stiffen and reinforce to withstand a load		Select and use salad ingredients Chop, slice, grate and peel
Materials and Tools		Wheels Axels Scissors Tape Glue Paint		Cardboard Corrugated plastic Scissors Glue Tape Split pins Other chosen materials		Root vegetables Cutting tools Chopping boards Grater Bowls
Expectations						
Goldilocks Words		Mechanism Fixed axle		Sturdy Strengthen		food groups, Slice, Grate

		Moving axle Friction Dowel		Support Reinforce Stable Layering		Savoury balanced diet
Year 3 Context		Castles	Romans			Food- Ingredients from Farms Savoury Bread
Technical Knowledge		Mechanisms Linkages Castle wall with moving flag LEGO LINK	Structures Shield			
Food						Savoury Bread WK 2
Skills		Create an annotated sketch Use levers and linkages to create movement	Cut, shape and finish Strengthen, stiffen and reinforce			Measure, mix, knead, proof and bake savoury bread
Materials and Tools		Cardboard Split pins Scissors Cello tape	Corrugated plastic Split pins Scissors Glue/tape Paint			Strong white bread flour Sachet fast action yeast Caster sugar Salt Warm water
Expectations						
Goldilocks Words		Oscillating Components Pivot Lever Linkage Annotate	Stiffen Dimensional Marking Prototype Slat			Nutrients Harvested Processed Knead Bake Fermentation
Year 4 Context		Building Round house		Buildings	Electricity	
Technical Knowledge		Structures		Mechanism – Pulley - Working Well LEGO LINK	Electrical Systems Torch – Light/Switch	
Food						
Skills		Strengthen, stiffen and reinforce		Create an annotated sketch Use pulleys to create movement	Cross-sectional diagram of design Create a series circuit and bulb	
Materials and Tools		Pulleys, string, cardboard, gears		plastic bottle(range of sizes), string, cardboard, yoghurt pots, cotton reels, art straws	paper, thin card, cardboard, foil, coins, tape, glue gun, paper clips, wire, bulb, batteries, split pins	

Expectations						
Goldilocks Words	Skara Brae, observations, design, stable, product	Shell structure Stability Robust Assemble Suitability		Oak Water well, Mechanism Pulley system Fluidly Design criteria	Components Electrical energy Durability Product Cross section	
Year 5		Aeroplane	Mexico/ Healthy Diet Mexican salad		Space	
Technical Knowledge		Structures- LEGO LINK	FAIRTRADE LINK		Mechanisms – gears Moving astronaut	
Food			Savoury salad WK 4			
Skills		Design ideas drawn to scale Cutting, shaping, joining and finishing Functional properties and aesthetic qualities	Chop, slice, peel, zest, shred, de-seed to prepare a salad		Use CAMS to create movement Functional properties	
Materials and Tools		Balsa wood, saws, glue, plans, rulers.	Variety of ingredients (as identified in children's designs) Microwave, Mixing bowls, wooden spoons, foil		stiff sheet materials, corrugated plastic, prepared cams wooden wheels, doweling, cardboard boxes or wooden frames ,PVA glue, masking tape .tools and equipment - bench hooks, saws, hand drill, G-cramp, round file, single-hole punch, paper drill, metal safety ruler, craft knife, cutting mats and glue gun	
Expectations						
Goldilocks Words		Aesthetic qualities Functional Finishing Scale Tension Streamline	Preferences Seasonal Critique		Linear Rotary, Linear Functional properties Follower	
Year 6		Indus Valley Boats		Electricity		Mapping
Technical Knowledge		Structure Flat Raft Boat		Solar Power Fan Sustainable Energy		Computing Programming Controlling

						LEGO LINK
Food				Fairtrade week? Smoothie/fruit cups? WK		
Skills		Design ideas drawn to scale. Create a computer aided design		Exploded diagram of solar powered fan		Program, monitor and control products
Materials and Tools		Balsa wood Squared paper Pencils Rulers Protractors				15cm x 15cm laminated coloured squares 15cm x 15cm card squares (to create obstacles) 15cm x 15cm card squares (to create start and finish squares) Range of materials for texture Staplers PVA glue Sticky tape Floor-robots
Expectations						
Goldilocks Words		Flat-bottomed boat CAFQUES Customer Aesthetic Function Quality Usability Ergonomics Sustainability		Renewable energy Solar energy Wind energy Geothermal Hydropower Ocean energy Sustainable energy Non-sustainable energy Greenhouse gases Solar powered fan		Input device Output device Theme Joining method Permanent fixing Semi-permanent fixing

Teaching and Learning Process for Each Unit				
1. Explore	2. Experiment	3. Plan	4. Create	5. Evaluate