	Eastcote Primary Academy DT Progression Map							
	Children can…							
	N	R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Develop own ideas decide which materials to use Join different materials and explore textures.	Refine and share design ideas Begin to represent 3D ideas and 2D drawings	Say what they are making and what its purpose is. Draw a planned construction. Make a prototype slider to test the efficiency of their moving parts.	Say what they are making and who the intended user is. Use a design criteria to develop their ideas. Use templates to plan their ideas.	Explain how their design will appeal to intended users. Create a design criteria and use this to inform ideas. Annotate sketches referring to materials and reasons for their choices.	Gather information about the needs and wants of particular users. Make decisions that take into account the availability of resources (limited). Communicate ideas using annotated sketches. Make a prototype using various stitch spacings to test their efficiency.	Gather information about the needs, wants, preferences and values of particular users. Create and follow a design specification which they refer to throughout construction. Communicate ideas using annotated sketches, cross sectional and exploded diagrams. Make a prototype cam to test the efficiency of their moving parts.	Conduct research using surveys, interviews, questionnaires and web-based resources. Develop a simple design specification to guide their thinking (product research). Use Google software to design and adapt their product. Adapting and testing out different ideas.
Make Measuring	Explore different materials freely to develop their ideas	Consider solutions to design problems as they arise using	Measure by eye to cut pieces to fit.	Develop accuracy when measuring by eye to cut pieces to fit.	Use a ruler to mark components to size	Develop accuracy when making measurements. .	Develop accuracy when making measurements.	Measure with a ruler and protractor, mark out and cut materials with increasing

	about how to use them and what to make Rich, purposeful language & communication opportunities linked to measure, shape, space, joining, aesthetic	vocabulary linked to measure						accuracy
Make Cutting and shaping		Develop effective scissor grip, as well as how to use & transport safely	Know how to safely cut a slit in a piece of card pushing scissor blade into blu tac.	Develop cutting skills using thicker materials such as strong card.	Develop cutting skills using a wider range of materials such as felt.	Use a craft knife safely to cut out holes into card.	Safely use a saw to cut dowling (wooden). Use a drill to create a channel in a piece of wood.	Safely use a saw to cut plywood. Use a drill to create a small channel in a piece of wood.
Make Assemble Joining		Name and use, with guidance, a variety of joining methods for materials - nails, tape, glue, split pins	Use glue and split pins to join components.	Explore joining a range of components using tape, string and plasticine.	Consider joining techniques that are most appropriate for increasing stability and strength.	Use a running stitch to join two pieces of fabric.	Safely use a hot glue gun to join components.	Use a range of different stitches to join fabric.
Make Aesthetic,		Talk about features of their piece (of a boat, rocket) and reasons for aesthetic choices	Create a moving picture incorporating a slider and lever which shows skill in colour mixing and mark making/spreading with paint.	Using paint and considering their initial design, complete a product which is appealing to the intended user	Considering their initial design, decide how to complete a product which is appealing to the intended user	Use a range of finishing techniques: fabric pens, stitching, etc, considering the intended user	Considering their initial design, independently complete a detailed product which is appealing to the intended user	Affix embellishments using a range of stitches.

Evaluate	Modelled language & shared talk about what they like	Talk about their finished product, what they like about it and what they would do differently next time.	Talk about their finished product and what they like about it and what they could make better.	Talk about their finished product and what they like about it, how they solved any problems and how it could be improved.	Referring to their criteria, assess the strengths and areas for development regarding their finished product.	Referring to their criteria, assess the strengths, areas for development and views of others regarding their finished product.	Critically evaluate their product throughout the making process against the design specifications and whether it is fit for purpose.	Critically evaluate their product throughout the making process against the design specifications and it's fitness for purpose including the requirements of the intended user.
Cooking and Nutrition	Identify & name a range of food items when they are described Begin to make healthy food and drink choices	Identify healthy & unhealthy foods Consider sensible quantities of different food types Effect of too much sugary food on teeth Understand safe use of peelers	Know that all food comes from either plants or animals. Understand that healthy eating includes eating five portions of fruit/vegetables a day. Understand the safe use of a knife. Know to wash their hands before preparing food. Understand the technique of cutting fruits and vegetables julienne (dips) . Technical skills task - one session	Know that food is farmed, grown or caught. Can name and sort food into the five groups in the eatwell plate. Develop safe knife use through dicing skills. Understand the technique of dicing fruits (ice cream alternative). Design, make and evaluate - whole unit	Know that seasons affect the availability of food. Know that the body needs food for energy. Understand the safe use of a heat source when baking. Understand the techniques of: chopping, slicing, grating and spreading (healthy pizza). Technical skills task - one session	Develop understanding of how food is processed. Know that a healthy diet consists of balanced food groups. Understand the safe use of a heat source when baking, a grater and peeler. Understand the techniques of: grating, peeling and mixing (carrot cake) Design, make and evaluate - whole unit.	Develop their understanding of where food is grown, reared and caught. Know that recipes can be adapted to appeal to our senses (happiness in healthy eating). Understand the safe use of a heat source when frying/boiling using the hob. Understand the techniques of: chopping/dicing (Vegetable Curry). Design, make and evaluate - whole unit	Develop their understanding of regional dishes. Select healthy dishes to create a class menu. Independently and safely use a heat source when frying, boiling and baking. Independently use a range of techniques when following a recipe. Design, make and evaluate - whole unit

						Develop an understanding of the success of Jamie Oliver's impact upon school dinners: junk food, salt content, processed foods, recipes as products.		
Technical knowledge	**N**	**R**	**1**	**2**	**3**	**4**	**5**	**6**
Structures		Explore a range of materials, finding out whether they float or sink **Design, make & evaluate: boat for Mr Gumpy & animals from *Mr Gumpy's Outing*** Select reclaimed materials to form boat structure Consider material, shape, size Join	**Playground equipment - stable structures** Look at existing playground equipment (or examples of chosen project) and consider the structural design, in particular how they increase stability. **Design, make and evaluate: playground equipment** or chair for the three bears or bridge for the billy goats gruff Know how freestanding structures can be made stronger,		**Gift boxes - shell structures** Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used. **Design, make and evaluate their own: Gift boxes,** desk tidy, keep safe box, etc. How to make strong, stiff shell structures.			**Bridges (Bird houses - alternative)** Investigate devices and methods used in construction to reinforce joins and strengthen framed structures Understand how individuals in design technology have helped to shape the world - Study the work of Abraham Darby III who built the first cast iron bridge Accurately measure, mark out, cut and shape materials and components.

		materials to reflect design **Design, make & evaluate: rocket, linked to *Whatever Next!*** Use the correct technical vocabulary for the project	stiffer and more stable Assemble, join and combine materials and components Use the correct technical vocabulary for the project		Measure, mark out, cut, shape and assemble materials and components with some accuracy Use the correct technical vocabulary for the project			Accurately assemble, join and combine materials and components. Accurately apply a range of finishing techniques, including those from art and design.
Mech-anisms	**Pivots** Explore construction sets: tap - a - shape, small world cranes, diggers	**Pivots** Explore construction sets: tap - a - shape, plastic rods with split pins Use split pins to make flat objects with moving, pivoting parts (poppies, robots)	**Levers and sliders** Explore a range of existing books and products that use levers and sliders. **Design, make and evaluate a moving picture.** Know about the movement of simple mechanisms such as levers and sliders. Make a prototype of a lever and slider, using card.	**Wheels and axles** Investigate a range of wheeled toys, looking closely at the moving components. Make notes and labelled diagrams. Research the history of the wheel: https://www.dkfindout.com/uk/science/amazing-inventions/wheel/ Lean about John Dunlop who invented the first rubber tyre https://resource-bank.scholastic.co.uk/content/Inventors-John-Dunlop-29011 **Design, make and**	**Pneumatics** Understand how pneumatic systems create movement. **Design, make and evaluate a moving monster, creature or mascot**		**Cam mechanisms** Research a range of different cam mechanisms and their uses, making notes, including cross sectional and exploded drawings. Investigate Lego cams Understand the movement and function of simple mechanisms such as cams or gears. **Design, make and evaluate a moving toy.**	

				evaluate a moving vehicle. Know about the movement of simple mechanisms such as wheels and axles.				
Electrical systems						**Electrical game** Learn about the history of electricity - research Benjamin Franklin, Thomas Edison Devise a product which features an electrical circuit with components such as switches, bulbs or buzzers.		
computing					Lego Develop understanding of Lego as a product. Knowing who designed Lego and why it is so successful: material, reusable, design, construction integrity. Create a product. Programme and control their product's movement (Lego race car)		Lego Create a product. Programme and control their product's movement. Monitor and adapt their product to improve its output (Lego race car).	

textiles			Peg dolls and finger puppets Using a template, cut and join two shapes using glue. Affix sequins, buttons and ribbon with glue.	Binka bookmarks Use running stitch to decorate a bookmark of their own design.		Purse, wallet or phone holder Cut and join two shapes using a running stitch, allowing room for a seam.		Christmas decoration Cut and join two shapes and affix embellishments using a range of stitches.

	Nursery	Reception	1	2	3	4	5	6
Cooking and Nutrition		Peelers - veg Mashed potato Gingerbread Smoothies Toast Cress sandwich		Healthy alternative to ice-cream Cutting fruits and vegetables (dips).	Skill session- chopping, slicing, grating and spreading (healthy pizza).	carrot cake	Curry chopping/dicing	meal
Structures		Boats Rockets	playground equipment		Gift boxes			Bridges / bird house
Mechanisms		Moving parts with construction kits (pivots)	moving pictures (levers and sliders)	moving vehicles (wheels and axles)	Moving monsters (pneumatics)		moving toys (cams)	
Electrical systems						Electrical game		
computing					Lego race car		Lego race car and challenge to adapt and improve output	
textiles			peg dolls,	finger puppets		purse/wallet/phone holder binca		Christmas decoration

Vocabulary

N	R	YR1	YR2
Draw Make Join - glue, tape Nouns - box, pot, lid - used for model making	Design Make Bake Change - and associated adjectives Join - split pins, blu tack Materials - paper, card, plastic, wood, metal Float Sink	**Structures** **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,** **Mechanisms** **slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards** **Textiles** **joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish**	**Mechanisms** **vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used** **Food and nutrition** **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** **Textiles** **joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out (marking out and cutting two identical pieces for a finger puppet), join, decorate, finish,**

YR3	YR4	YR5	YR6
Mechanisms **components, fixing, attaching, tubing, syringe, plunger, split pin, paper fastener pneumatic system, input movement, process, output movement, control, compression, pressure, inflate, deflate, pump, seal, air-tight linear, rotary, oscillating, reciprocating user, purpose, function, prototype, design criteria, innovative, appealing, design brief, research,**	**Textiles** **fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, aesthetics, function, pattern pieces**	**Mechanisms** cam, snail cam, off-centre cam, peg cam, pear shaped cam follower, axle, shaft, crank, handle, housing, framework rotation, rotary motion, oscillating motion, reciprocating motion annotated sketches, exploded diagrams mechanical system, input movement, process, output movement design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief	**Structures** **frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional** **Food and nutrition** **ingredients, flour, wholemeal, unleavened, spice, herbs fat, oil**

evaluate, ideas, constraints, investigate **Food and nutrition** **name of products, names of equipment, utensils, techniques and ingredients 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** **Structures** **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**	**Food and nutrition** **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** **Electricity** **series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip control, program, system, input device, output device user, purpose, function, prototype, design criteria, innovative, appealing, design brief**	**Food and nutrition** name of products, names of equipment, utensils, techniques and ingredients 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 Computing Hub, program, code, loop, sensors, prediction, sequence, check, debug and refine, output,	**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,** **Textiles** **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,**

References

Design and Technology Progression Framework
DATA https://www.designtechnology.org.uk/media/1128/progression-framework-ks1-ks2.pdf