SURREY STREET PRIMARY SCHOOL

DT – Long Term Plan

Our whole-school Curriculum Development Leader for DT is Mr J White

EYFS – Year N

Topic name	Learning question/s	Main EYFS/NC focus	Objectives to be covered	Key vocabulary	Curriculum themes	Enrichments
<u>Lemur's Red Hot Chilli</u> Creating pizza toppings, shopping role play, making a bag. <u>Goldilocks</u> Creating porridge, comparing size and textures. <u>Muddy Mondays</u> Explore use of natural materials to create nests and other small world environments.	How do I prepare myself to make food/projects? What materials/tools do I need to create a project? Can I talk about my creation? e.g. what have I made? What do I like about it? How could I improve it? How could I fix it?	Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures.	To use tools and materials to express ideas. To develop key vocabulary for appropriate DT resources in EYFS.	Scissors Glue Join Stick Cut Wash Clean Tidy	Aside from Muddy Monday, all themes follow a text. These themes are not just exclusive to DT but will also cover other areas of the EYFS curriculum such as Physical Development etc.	Use of outdoor environment. Potential trip linked to the zoo – focus on minibeasts, environments. Links to wider world knowledge, e.g. food is not grown at Tesco.

<u>There was a Princess long ago</u> Using Duplo and other building materials to create castles. <u>Superworm</u> Creating worms from different materials and different size scales.						

EYFS – Year R

Topic name	Learning question/s	Main EYFS/NC focus	Objectives to be covered	Key vocabulary	Curriculum themes	Enrichments
The Very Hungry Caterpillar Creating fruit kebabs, exploring textures and taste Creating/constructing caterpillars of different lengths **Welly Wednesdays**	How can we make a fruit kebab? What do I need to make a fruit kebab? How can I make a caterpillar?	Safely use and explore a variety of materials, tools and techildreniques, exploring design and texture. Share their creation, taste and talk about the taste.	To choose tools and fruits to make my kebab. To use the tools safely. To develop key vocabulary.	Kebab Knife Different fruits e.g. Melon Apple Strawberry	Aside from Welly Wednesday, all themes follow a text. These themes are not just exclusive to DT but will also cover other areas of the EYFS curriculum such as Physical Development etc.	Experience different types of food Starting to use different tools and develop their motor skills. Use of the outdoor area.

Explore natural materials outside on a weekly basis, using these materials to create, join & use these to represent things in line with weekly planning.	What have I created? Can I explain the process? Can the process be improved?

Year 1

Topic name	Learning question/s	Main EYFS/NC focus	Objectives to be covered	Key vocabulary	Curriculum themes	Enrichments
Moving pictures - – need to identify purpose for the pictures **Designer – Waldo Hunt**	How can we make a picture move?	**Mechanisms** Sliders and levers	1:1 Generates ideas using pictures and words 1:2 Makes simple plans 1:3 Explains what they are planning to make and why 1:4 Chooses and uses tools and materials with help 1:6 Recognises the characteristics of familiar products: names products and identifies who/what they are for.	**Design** **Cut** **Join** **Sketch** **Plan** **Slider** **Pivot** **Wheel** **Lever** **Push** **Pull** **Direction** **Mechanism**	Environment - Making children aware moving parts in books and the impact they have on the reading experience. World of work- Children being made more aware of the work of an illustrator and how their job affects the overall reading experience – makes the book come to life! Mental health and well-being- Being creative makes you feel very happy and it allows you to	Introduction to films. - trip to the cinema Bring a story that they have learnt to life.

			1:7 Explains how their product and others work, identifying what they are made from. 1:8 Explains what went well with their work 1:10 Applies their knowledge of the characteristics of suitable materials, in particular how structures can be made stronger / stiffer.		express your ideas and imagination. Celebrating Diversity- Everyone's interpretation of a moving picture will be different depending on interests and imagination, which is what makes them special!	
Teddy's bear picnics - Bread rolls Designer – Paul Hollywood	What goes into a sandwich? Can you put sweet food into a sandwich? What type of bread do you know? How is bread made?	**Food** Preparing fruit and vegetables (including cooking and nutrition requirements for KS1)	1:1 Generates ideas using pictures and words 1:2 Makes simple plans 1:3 Explains what they are planning to make and why 1:4 Chooses and uses tools and materials with help 1:8 Explains what went well with their work	**Food** **Healthy** **Unhealthy** **Sweet** **Sour** **Juicy** **Fruit** **Vegetables** **Balanced diet** **Picnic**	**Environment –** children will learn about fruit/veg that is available in their surroundings **Wellbeing and mental health –** children will learn the importance of eating healthily and maintaining a healthy lifestyle **World of Work –** nutrition, kitchen assistant, **Environment and Our School -** the school garden and surrounding areas	Introduction to a variety of foods. Use of different tools. Designing for a purpose – teddy's picnic with their parents.

			1:11 Knows that all food comes from animals and plants 1:12 Can sort healthy and non-healthy foods 1:13 Can talk about / design healthy food for a purpose (packed lunch / garden party)		**Celebrating diversity -** Food around the world	
Structures - children to create a chair for Travelling Ted **Designer - Charles Rennie Mackintosh**	What can I use to make an insect home?	**Structures** Freestanding structures	1:1 Generates ideas using pictures and words 1:2 Makes simple plans 1:3 Explains what they are planning to make and why 1:4 Chooses and uses tools and materials with help 1:6 Recognises the characteristics of familiar products: names products and identifies who/what they are for.	**Design** **Make** **Evaluate** **Purpose** **Home** **Materials** **Resources** **Tools** **Assemble** **Stiffer** **Durable** **Weatherproof** **Manmade** **Natural**	Environment- Make children aware of the importance of insects and wildlife to the climate and growth of new plants etc. Focus on the use of recyclable materials World of work- designing products and making them- engineering and craftsperson careers. There are different careers involved in the different stages of designing and making products	Use of the outdoor area to look for a mini bug. Possible link to Hampton Court flower show.

			1:7 Explains how their product and others work, identifying what they are made from. 1:8 Explains what went well with their work 1:10 Applies their knowledge of the characteristics of suitable materials, in particular how structures can be made stronger / stiffer.		Mental health and well -being- It feels really good to make something- especially out of recycled materials. Creating something gives you a real sense of achievement and sense of pride, especially if you have learnt new skills along the way!	

Year 2

Topic name	Learning question/s	Main EYFS/NC focus	Objectives to be covered	Key vocabulary	Curriculum themes	Enrichments
Mechanisms Vauxhall cars Designer - Adrian Newey Chief Techildrenology Officer of the Red Bull Racing (MK)	Can I make a vehicle for carrying equipment to the school garden? What will it need? How will I make it?	**Wheels and axles**	**Knowledge:** -Uses ICT/ models/ pictures and words to develop and communicate ideas - You can use Purple mash so the children can design their vehicle -Uses knowledge of existing products to come up with their own ideas -States what they are making and why, explaining how their products will work	Mechanisms axles joining joints levers motion Up	World of work – building cars, transport drivers Our school and town – Vauxhall factory, using transport Environment - Electric cars	Trip to Stockwood Discovery centre

			-Selects appropriate tools, techildreniques and materials, explaining their choices -Uses tools and can assemble, join and combine materials and components in a variety of ways -Knows how simple components and mechanisms work -Uses mechanisms such as wheels and axles -Describes what they like/dislike about an existing product -Suggests how their products and others could be improved -Makes simple judgements about their design ideas against design criteria.	down Push Pull wheels		
Food Smoothies – could use 2nd part of Oak KS1 unit Creator - Richard Reed Innocent drinks	How can I prepare a healthy drink?	**Preparing fruit and vegetables** (including cooking and nutrition requirements for KS1)	**-Understands the importance of eating 5 a day** **-Can describe the ingredients they are using** **-States what they are making and why, explaining how their products will work** **Skills:** **-Can prepare a healthy food dish with or without heat source** **-Makes simple judgements about their design ideas against a design criteria.**	Smoothie Healthy Fruit Blend Recipe Equipment Sweet Bitter	**Environment –** children will learn about fruit that is available in their surroundings **Wellbeing and mental health –** children will learn the importance of eating healthily and maintaining a healthy lifestyle **World of Work –** nutrition, juice	Introduction to different foods. Could be an opportunity to buy the products from the staff to help them budget – simple addition work. Food can come in different forms

					bars, kitchen assistant, **Environment and Our School -** the school garden and surrounding areas **Celebrating diversity -** Fruits around the world	
Textiles Puppets Designer – Vivien Westwood	How can I design and sew my own puppet?	**Templates and joining techildreniques**	**2.2** Uses knowledge of existing products to come up with their own ideas **2.4** Selects appropriate tools, techildreniques and materials, explaining their choices **2.5** Uses tools and can assemble, join and combine materials and components in a variety of ways **2.6** Describes what they like/dislike about an existing product **2.7** Suggests how their products and others could be improved **2.8** Makes simple judgements about their design ideas against a design criteria. **2.11** Knows that textile products can be created by joining and assembling fabric shapes	**Thread** **Needle** **Sewing** **Weaving** **Puppet** **Design** **Evaluate** **Stich** **Wool** **Fabric**	Environment – sustainable materials – Can these materials be recycled or can we use recycles materials for our puppets. World of work - what jobs are available for someone who is good at sewing and weaving. Linking this to the hat factory industry that there used to be in Luton.	Could someone come from the industry? Local puppet shows companies?

YEAR 3

Topic name	Learning question/s	Main EYFS/NC focus	Objectives to be covered	Key vocabulary	Curriculum themes	Enrichments
Structures pneumatic systems Yr ¾ project on the page Focus Pneumatics Previous year 3 unit creating moving monsters. Designer – Jim Henson (Muppets)	How can I make a structure that moves? How do pneumatic system work?	**Shell structures** (including **CAD**)	3:1Designs are fit for purpose and their ideas are realistic 3:2 Plans using labelled sketches, words 3-3 Select materials and components suitable for the task 3:4 Measures, marks out, cuts and shapes materials with some accuracy 3:5 Uses their design criteria to evaluate their completed products 3:8 Uses mechanical systems such as levers and pneumatic systems to create movement	Mechanisms axles joining joints Push Pull Pneumatic System	World of work and ambition Engineering **Environment and Our School –** Luton has a big engineering industry. Our catchment school is an engineering school.	Introduction to hydrolics. Trip to see different machines – science museum etc. How things work. Great stem opportunity.
Food Healthy packed lunch	How do you make a healthy lunch?	**Healthy and varied diet** (including cooking and	3:1Designs are fit for purpose and their ideas are realistic	Healthy Unhealthy	**Environment –** children will learn about fruit/veg	Possible trip to buy their own food.

Designer – Gary Rhodes	Where do food come from? What food goes into a dip?	nutrition requirements for KS2)	3:2 Plans using labelled sketches, words 3:5 Uses their design criteria to evaluate their completed products 3:9 Understands a healthy balanced diet 3:10 Understands a healthy balanced diet	Food groups Diary Meat Vegetables Carbohydrates Blend Bitter Sweet	that is available in their surroundings **Wellbeing and mental health –** children will learn the importance of eating healthily and maintaining a healthy lifestyle **World of Work –** nutrition, kitchen assistant, **Environment and Our School -** the school garden and surrounding areas **Celebrating diversity -** Food around the world	Invite a nutritionist/cook in to talk to the children
Textiles Designer – Walter Wright (Hat designer from Luton)	How do you securely join material together? How do you make a structure stiff?	**2D shape to 3D product**	3:1Designs are fit for purpose and their ideas are realistic 3:2 Plans using labelled sketches, words 3:5 Uses their design criteria to evaluate their completed products 3:6	**textile** **sewing** **thread needle** **target group** **product** **Material** **Structure** **CAD**	**World of Work – fashion designer** **Celebrating diversity –** different designs and inspirations/target markets	Make links with Chiltern or University of Bedfordshire.

			Knows how to make strong, stiff shell structures			

Year 4

Topic name	Learning question/s	Main EYFS/NC focus	Objectives to be covered	Key vocabulary	Curriculum themes	Enrichments
Mechanical Systems Pop-up mechanisms (involves cams) Designer – George Stephenson.	How do you create a moving structure? How do cams work?	Levers and linkages	Reflects on their designs as they develop and identifies what can be improved Evaluates appearance and function against original criteria. Identifies whether materials can be recycled or reused Assembles, joins and combines materials and components with some accuracy Applies a range of finishing techildreniques Communicates ideas using words, labelled sketches and models, showing an awareness of potential problems Produces step by step plans	Mechanisms axles joining joints levers motion Up down Push Pull Cams Structure Movements	World of work and ambition Engineering **Environment and Our School –** Luton has a big engineering industry. Our catchment school is an engineering school.	Looking at toys

Electrical Systems (including **programming** and **control** – this would *Timetabling factor- science* Designer – James Dyson	What is programming? When do we use programming?	Simple circuits and switches	Reflects on their designs as they develop and identifies what can be improved Makes design choices based on the available resources- saying who or what it is for Uses simple electrical circuits to create functional products Evaluates appearance and function against original criteria. Assembles, joins and combines materials and components with some accuracy Applies a range of finishing techildreniques Communicates ideas using words, labelled sketches and models, showing an awareness of potential problems Produces step by step plans	Electricity Current Programming Coding	**World of work and ambition** Engineering, electrician **Environment and Our School –** Luton has a big engineering industry. Our catchment school is an engineering school.	Bring in an electrician. Hands on activity Taking electronical products apart.
Food **Designer – Delia Smith**	Why is it important of having a balanced meal?	Healthy eating (including cooking and nutrition requirements for KS2)	Communicates ideas using words, labelled sketches and models, showing an awareness of potential problems	Healthy Unhealthy Food groups	**Environment –** children will learn about fruit/veg that is available in their surroundings	Link to the garden - could they use the things in the garden for their soups.

	How do you create soup? What are the different types of soup?		Knows how to prepare a balanced meal using different food groups Knows that food is grown, reared and caught in the UK, Europe and the wider world Explains how to be both hygenic and safe when using and preparing food. Produces step by step plans	Diary Meat Vegetables Carbohydrates Blend Bitter Sweet Seasoning	**Wellbeing and mental health –** children will learn the importance of eating healthily and maintaining a healthy lifestyle **World of Work –** nutrition, kitchen assistant, **Environment and Our School -** the school garden and surrounding areas **Celebrating diversity -** Food around the world	

Year 5

Topic name	Learning question/s	Main EYFS/NC focus	Objectives to be covered	Key vocabulary	Curriculum themes	Enrichments
Mechanical Systems Pulleys or gears **Moon buggies** -CAD https://www.tinkercad.com/login	How do gears and pulleys work?		Knows how mechanical systems, such as gears and pulleys, create movement Knows how to reinforce a 3D structure	Mechanisms axles joining joints	World of work and ambition Engineering **Environment and Our School –** Luton has a	Trip to a toy museum

Children to design a moon buggy using cad and then they could make their designs. Link to Yr 5 topics Designers – AIRBUS – space (Stevenage.)			Comments on how much a product costs or how innovative the design is Demonstrates resourcefulness when facing problems assembling, joining and shaping Generates ideas drawing on research, using written ideas, models, mock ups and templates	levers motion Up down Push Pull Cams Structure Movements Gears Pulleys	big engineering industry. Our catchment school is an engineering school.	
Pizzas Designer – Jamie Oliver	What go on to a pizza? Are Pizzas healthy or not? What is CAD?	Celebrating culture (including cooking and nutrition requirements for KS2)	Demonstrates safe and hygienic practices when preparing food. Knows that seasons affect the food available at different times of the year Designs a recipe combining a range of ingredients	Healthy Unhealthy Food groups Diary Meat Vegetables Carbohydrates	Our school and town Mental health and wellbeing World of work and ambition	Pizza express workshop?

				Blend Bitter Sweet Dough CAD		
Electrical Systems Monitoring and Control **Designer -** Tim Berners-Lee	How to use electrical systems safely? Why are we so dependent on electricity?	More complex switches and circuits (including **programming**, **monitoring** and **control**)	Evaluates how effectively they have used information sources to inform judgements when designing and making Explains their choice of materials and creates a resource list Carries out research and identifies a target group/ individual for their product	Electricity Current Programming Coding Monitor	World of work and ambition Engineering, electrician **Environment and Our School –** Luton has a big engineering industry. Our catchment school is an engineering school.	Lego work shop – See JW we did it in Yr 3. But they have one with programming.

Year 6

Topic name	Learning question/s	Main EYFS/NC focus	Objectives to be covered	Key vocabulary	Curriculum themes	Enrichments
Textiles Children to use old clothes and upcycle them into something	**How can I design and make a product by upcycling textiles?**	Combining different fabric shapes (including CAD)	Carries out research using surveys, interviews, questionnaires and web-based resources	**textile** **sewing** **thread needle** **target group** **product**	**Celebrating diversity –** different designs and	Links with University of Bedfordshire

new – maybe make a hat to fit with the curriculum theme. Designer – Laura Ashley			and relate this to their target group. Generates ideas drawing on research using written models, mock-ups and templates. Makes design decisions based on time, resources and cost. Uses textiles to create a 3D product joining a range of fabric shapes (sewing).	upcycling	inspirations/target markets **Wellbeing and mental health –** benefits of sewing as a hobby **World of work and ambition –** links to careers and opportunities linked to sewing **Environment –** upcycling and its benefits	The hat industry in Luton
Structures shelters – WWII inspired - CAD Isambard Kingdom Brunel English civil engineer	How do you create a structure to protect a human?	Frame structures –	6:1 Carries out research, using surveys, interviews, questionnaires and web based resources and relate this to their target individual/ group 6:2 Generates ideas drawing on research using written, models, mock ups and templates	Stiff Durable Structure Rigid Waterproof Shelter		RAF Museum trip links to WW2 Camping Kingswood

			6:4 Formulates step by step plans as a guide to making-including a list of tools and equipment needed 6:5 Works with a range of tools, materials, equipment, components (electrical/ computer) and processes and shows, that they understand their characteristics 6:6 Shows they understand the form and function of familiar products 6:7 Can say how sustainable the products are and any impacts the products have beyond their intended purpose. 6:8 Evaluates how they have used information sources to inform judgements when designing and making			
Food Rationing.	How can I create a menu	Celebrating culture and	**Knowledge:**	hygiene taste	**Wellbeing and mental health**-	RAF Museum trip links to WW2

• Children could make the Bedfordshire clanger/vegetable pasty using rationing foods. Designer - Jean Christophe Novel (Lives in Tea Green)	and meal using a limited choice of foods?	seasonality (including cooking and nutrition requirements for KS2)	Knows that different food and drink contain different substances- nutrients, water and fibre Creates a menu and knows that recipes can be adapted to change the appearance, taste and texture **Skills:** Makes design decisions based on time, resources and cost (designing meals with limited ingredients)	texture ingredients appearance nutrients/nutritious/nutrition fibre preparation rationing meal flavours menu affordable savoury sweet substances	cooking is a nice hobby which children can enjoy during lockdown. Share discussions on what cooking we can all try at home and encourage children to bring in photos. **World of work and ambition** – children may want to be chefs in the future **Environment** – not wasting food – recap from history topic how during rationing no food was wasted.	