Categorising Knowledge DT

	Cooking and nutrition	Structures	Textiles	Mechanisms/Mechanical Systems	Electrical Systems/ Digital World	Curriculum connections (Including Books)
EYFS	T3-1 - Making fruit kebabs – I know how to keep myself healthy Understanding the importance of healthy foods	3 themed Pop up cards T1-3 – I can create a pop-up card Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, form, function, texture T3-1 space rocket - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, form, function, texture	T3-1 making crowns Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, form, function, texture T3-2 pirate ship Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, form, function, texture Share creations, explain processes used	T1-1 Skeletons Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, form, function, texture		
Year 1	**A balanced diet** Explore what makes a balanced diet and taste test combinations of different food groups before designingand making a wrap.	**Baby Bear's chair** Experiment with different shapes and manipulate materials to explore and evaluate a range of structural properties. They apply this knowledge to their own design, make and test task		**Making a car** - To explore and evaluate a range of existing products. - To design purposeful, functional, appealing products for themselves and other users based on design criteria. - Select from and use a wide range of materials and components including construction materials, textiles and ingredients, according to their characteristics. - Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing). - To explore and use mechanisms (for example, levers, sliders, wheels and axles) in their products. - To evaluate their ideas and products against design criteria. (Next year want to add an oracy activity creating an advert to sell their toy/product) **Vehicles, parts, moving, wheels, differences, similarities, chassis, axles, body. design, criteria. glue,**		

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				pegs, rods, tubing, materials. realistic, logos, evaluate, good, improve.		
Year 2	**Cooking – Xmas biscuits**	**Homes- Great fire of London** - Explore and evaluate a range of existing products by: Understanding that we live in many different types of homes, the names of different buildings and the main features - Observing carefully and draw simple shapes - Recognising and name basic mathematical shapes in the context of houses and homes - Select appropriate tools, materials and techniques to make a product. - Measure, mark out and cut a range of materials. - Assemble and join materials. Using their own experiences when developing ideas - Clarifying their ideas through discussion - Communicating their ideas through drawing and labelling. - Making suggestions as to how to proceed. - Assembling, joining and combining 2D and 3D materials into a model - Using basic tools safely - Evaluating products they have made, commenting on the main features **home, house, detached, semi-detached, bungalow, flats, terrace, storey, stairs, windows, doors, hinges, materials, construction,** Designing houses for a family in Kampong Ayer – creating a structure that is strong, sturdy and waterproof (house on stilts?) Link to materials work in science. Look at materials, joining etc.	**Fabric Bunting** - Judge existing products on a simple scale. - use a graphics programme to create a simple design - Work with support to cut out a fabric shape - Start to demonstrate how to create a basic stitch - Decorate a piece of fabric - Design purposeful, functional, appealing products for themselves and other users based on design criteria. - Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. - Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. - Explore and evaluate a range of existing products - Evaluate their ideas and products against design criteria	**Moving pictures** - Explore and evaluate a range of existing products in the context of exploring existing moving books - Explore and use mechanisms (for example sliders), in their products in the context of using a slider to make a picture move - Explore and use mechanisms (for example levers) in their products in the context of using a lever to make a picture move. - Design purposeful, functional and appealing products for themselves and other users based on design criteria in the context of designing an appealing moving picture. - Generate, develop, model and communicate their ideas through talking, drawing, templates and mock-ups in the context of drawing an annotated sketch to show their ideas about a moving picture. - Explore and use mechanisms (for example levers, sliders, wheels and axles) in their products in the context of making a moving picture. - Evaluate their ideas against design criteria in the context of evaluating a moving picture.		Three Billy Goats Gruff The Gingerbread Man Little Red Riding Hood Jack and the Beanstalk Building a Home – Polly Faber The Three Little Wolves and the Big Bad Pig – Eugene Trivizas Let's Build a House – Mick Manning
Year 3	**Adapting a recipe - Bread** Adapt a recipe by adding or altering the ingredients and then work in groups to createa final design that falls withina set budget and design brief.	**Pavilions (Shelters)** Be introduced to pavilion architecture, pupils experiment with frame structures before designing their own landscape and pavilion, using a wider range of materials and constructiontechniques.		**Pneumatic toys** Examine pneumatic systems using syringes and balloons then apply their understanding of mechanical systems to create their own pneumatic toys.		
Year 4	**Bread – Autumn 2** *Why do key people, events and current products affect future products?*	**Kites – Summer 2** ***How does structure affect how a kite flies?***			**Torches – Spring Term (2)** *Why do key people, events and current products affect how we light our homes?*	

	- To understand how key events and individuals in design and technology have helped to shape the world in the context of the history behind Warburtons. - To investigate and analyse a range of existing products in the context of different breads made by Warburtons. *How are designs selected?* -To use research and develop design criteria to inform the design of an innovative, functional, appealing, new type of bread, aimed at particular individuals or groups - To select from and use a wider range of tools and equipment to shape salt dough. *How can I use a design criteria to plan my bread?* - To use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. -To generate, develop, model and communicate my ideas through discussion and annotated sketches when creating designs for a new bread product. *Why are processes important in making bread?* - To prepare and cook a savoury/sweet new bread product using a range of cooking techniques. - To select from and us a wider range of equipment to perform practical tasks accurately. - To evaluate my ideas and products against my own design criteria. Key vocabulary: pioneer, design, brand, industry, product, market research, texture, appearance, flavour. Product, market research, design criteria, shape, knot. Design criteria, original. ingredients, yeast, knead, bread, dough, rise.	- To select from and use a wider range of tools and equipment to measure and cut the body of a kite. - To apply our understanding of how to strengthen, stiffen and reinforce the structure of a kite. - To evaluate my kite. **structure, frame, strength, stiffen, bridle, line, tail, design criteria, test, evaluate**			To understand how key events and individuals in design and technology have helped to shape the world in the context of looking at technological developments in the way we light our homes. *What are the benefits of different circuit types and switches?* -To understand and use electrical systems in our products (for example, series circuits, incorporating switches and bulbs) in the context of understanding how a series and parallel circuit can be used to light a bulb and how switches can be made and used in circuits. *How can I use a design criteria to plan my battery operated light?* - To use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups in the context of developing design criteria for a light. - To generate, develop, model and communicate my ideas through annotated sketches and cross sectional diagrams in the context of sketching a design for a light. *Why is it important to be an innovator as a designer?* - To select from and use a wider range of materials and components according to their functional and aesthetic properties to make the main structure of a light. - To evaluate my ideas and products against design criteria and consider the views of others to improve my work. **STEM, science, design and technology. Engineering, mathematics, chronological events, individuals, changing, inventors. mains, battery, operated, energy, electricity, conductor, insulator, connect, series, fault, parallel, circuit, components, symbol, electrical systems, design brief path, current, switch, turn switch, micro switch, connect. select, materials, components, switch, make, functional, aesthetic, finished, quality, assemble, evaluate, specification, design criteria.**	
Year 5	**Food tech – Mexican Food.** Link to converting between units in maths	What does an inclusive playground need?		**Mechanical models (Autumn)** - Use research and develop design criteria to inform the design of		Mechanical models – design brief is for them

	Research and design a healthy meal, using what would be available to a Mexican farmer. Understand what makes a balanced diet including macro- and micro- nutrients Understand the importance of safe and healthy food preparation techniques Cook the different components, assemble, and garnish a Mexican-inspired meal	LO: Plan a detailed design, considering the needs of a range of users and appropriate materials LO: design and make a high-quality prototype LO: critique, evaluate and test their ideas and products and the work of others **Materials, design brief, support, inclusive, not-to-scale/scale model, prototype**		innovative, functional appealing products that are fit for purpose, aimed at particular individuals or groups in the context of researching Greek myths that will be used in their mechanical models. - Select from and use a wider range of materials and components, including construction materials according to their functional properties and aesthetic qualities in the context of selecting materials to make a simple cam mechanism. I can select materials according to their functional properties. Understand and use mechanical systems in their products (for example cams) in the context of understanding how changing the shape of the cam changes the movement of the follower. - I can make a simple mechanism to help me understand cams. **Cams, automata, Appearance Design brief, Follower**		to be displayed in a museum to attract children to an exhibit about Ancient Greece. Link to Trojan Horse history study.
Year 6		**Autumn Term 2** **Electric Cars** **Lesson 4 – 6 building car** Technical knowledge NC - apply their understanding of how to strengthen, stiffen and reinforce more complex structures	**Autumn Term 1** **Fashion design** To design a waistcoat To mark and cut fabric according to a design To assemble a t-shirt To decorate your t-shirt **National Curriculum Design –** develop a design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups **-** generate, develop, model and communicate their ideas through discussion,	**Autumn Term 2** **Electric Cars** **Lesson 4 – 6 building car** **Using pulleys to support of movement of car** Technical knowledge NC - understand and use mechanical systems in their products	**Autumn Term 2** **Electric Cars** **Lesson 1-** To what extent would you be likely to buy an electric car as your family car and why? Design NC- use research and develop a design criteria to inform the design of innovative, functional, appealing products that are fit for purpose aimed at particular individuals and groups -Evaluate/investigate and analyse a range of existing products ***Lesson 2*** **-** Why is it important for designers to make accurate measurements? **Lesson 3 -** What might car designers consider when creating the body of the car? Investigate 3D nets Design NC – Develop a prototype for the car design. **Lesson 4 – 6 building car** **Build an electrical circuit**	**Geography** **sustainability** **Science Electricity**

			annotated sketches and pattern pieces **Make -** select from and use a wider range of tools and equipment to perform practical tasks accurately - select from and use a wider range of materials and components, including construction materials, textiles, according to their functional properties and aesthetic qualities. **Evaluate -** evaluate their ideas and products against their own design criteria and consider the views of others to improve their work		understand and use electrical systems in their products.	

This overview organises the curriculum into our main categorises to support the children with making important learning connections and support with building subject schema. If you would like further detail regarding this curriculum area please e-mail your enquiry to: admin@rivermead.wokingham.sch.uk with the subject “DT Curriculum enquiry FAO Curriculum and DT leader”