Little Heaton C of E Primary Long term plan Design technology subject overview.

Design technology will be taught in a block for one half term each term through weekly lessons – Our subject focus, knowledge and skills are sequentially planned so progress and links occur over the 7 years of Primary Education EYFS,KS1-KS2).

At Little Heaton' CE Primary School, we value Design Technology, Design Technology embodies some of the highest forms of human creativity. A high-quality Design Technology education should engage, inspire and challenge pupils, equipping them with the knowledge and skills to experiment, invent and create their own works of craft and design. As pupils progress, they should be able to think critically and develop a more rigorous understanding of Design Technology. Pupils should also know how Design Technology both reflect and shape our history, and contribute to the culture, creativity and wealth of our nation.

	Autumn	Spring -	Summer
EYFS Reception	**The topics in Reception are planned linked to the children's interests. They will enable the children to talk about designers, creativity and the skills which they need to develop to become successful designers.**		
KS1 Year 1	Structures: Constructing Windmills (4 lessons) Designing, decorating and building a windmill for their mouse client to live in, developing an understanding of different types of windmill, how they work and their key features.	Textiles: Puppets (4 lessons) Exploring different ways of joining fabrics before creating their own hand puppets based upon characters from a well-known fairy-tale. Children work to develop their technical skills of cutting, gluing, stapling and pinning.	Food: Fruit & Vegetables (4 lessons) Handling and exploring fruits and vegetables and learning how to identify which category they fall into, before undertaking taste testing to establish their chosen ingredients for the smoothie they will make a design packaging for.
KS1 Year 2	Structures: Baby Bear's chair (4 lessons) Using the tale of Goldilocks and the Three Bears as inspiration, children help Baby Bear by making him a brand new chair. When designing the chair, they consider his needs and what he likes and explore ways of building it so that it is strong + A Balanced Diet: Hidden sugars in drinks (1 Lesson)	Mechanisms: Fairground wheel (4 lessons) Designing and creating their own Ferris wheels, considering how the different components fit together so that the wheels rotate and the structures stand freely. Pupils select appropriate materials and develop their cutting and joining skills	Mechanisms: Making a moving monster (4 lessons) After learning the terms; pivot, lever and linkage, children design a monster which will move using a linkage mechanism. Children practise making linkages of different types and varying the materials they use to bring their monsters to life.
KS2 Lower Year 3	Food: Eating seasonally (4 lessons) Discovering when and where fruits and vegetables are grown. Learning about seasonality in the UK and the relationship between the colour of fruits	Structures: Constructing a castle (4 lessons) Learning about the features of a castle, children design and make one of their own. Using configurations of handmade nets and	Electrical Systems Static Electricity (4 lessons) Explore the science behind static electricity and apply this new knowledge to generate ideas for making a static- electricity game. This is for 2022, when school have the

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	and vegetables and their health benefits by making three dishes. Cross-stitch & applique	recycled materials to make towers and turrets and constructing a base to secure them.	equipment and staff have the expertise this unit will be Digital world: Electronic charm (4 lessons) Designing, coding, making and promoting a Micro:bit electronic charm to use in low-light conditions. Children develop their understanding of programming to monitor and control their products. Exploring pneumatics Designing a pneumatic toy
KS2 Lower Year 4	Structures: Pavilions (4 lessons) Exploring pavilion structures, children learn about what they are used for and investigate how to create strong and stable structures before designing and creating their own pavilions, complete with cladding.	Electrical Systems: Torches (4 lessons) Applying their scientific understanding of electrical circuits, children create a torch, designing and evaluating their product against set design criteria. Following a recipe	Mechanical Systems: making a sling-shot car (4 lessons) Transforming lollipop sticks, wheels, dowels and straws into a moving car. Using a glue gun to, making a launch mechanism, designing and making the body of the vehicle using nets and assembling these to the chassis. Evaluating fastenings
KS2 Upper Year 5	Electrical Systems: Electronic greetings card (4 lessons) Exploring how circuits can be adapted to suit different purposes, children explore series circuits and recreate one using conductive adhesive tape. They then apply this knowledge to design and create an electronic greeting card.	Mechanical Systems: making a pop-up book (4 lessons) Creating a four-page pop-up storybook design incorporating a range of mechanisms and decorative features, including: structures, levers, sliders, layers and spacers.	Food: What could be healthier (4 lessons) Researching and modifying a traditional bolognese sauce recipe to make it healthier. Children cook their healthier versions, making appropriate packaging and learn about farming cattle.
KS2 Upper Year 6	Textiles: Waistcoats (4 lessons) Selecting suitable fabrics, using templates, pinning, decorating and stitching to create a waistcoat for a person or purpose of their choice	Structures: Playgrounds (4 lessons) Designing and creating a model of a new playground featuring five apparatus, made from three different structures. Creating a footprint as the base, pupils visualise objects in	Mechanical Systems Automata Toys (4 lessons) Develop a functional automata window display, to meet the requirements in a design brief. Explore & create cam, follower and axle mechanisms to mimic different movements

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		plan view and get creative with their use of natural features.	This is for 2022, when school have the equipment and staff have the expertise this unit will be Digital World: Navigating the World (4 lessons) Programming a navigation tool to produce a multifunctional device for trekkers. Combining 3D objects to form a complete product in CAD 3D modelling software and presenting a pitch to 'sell' their product.