

Slingsby School Design & Technology Curriculum Overview



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1 Food: Fruit and vegetables Handle and explore fruits and vegetables and learn how to identify which category they fall into, before undertaking taste testing to establish chosen ingredients for a smoothie they will make, with accompanying packaging.	Mechanisms: Making a moving story book Experiment with sliders before planning and making three pages of a moving story book, based on a familiar story, drawing the page backgrounds, creating the moving parts and assembling it.	Structures: Constructing a windmill Design, decorate and build a windmill for a mouse (client) to live in, develop an understanding of different types of windmill, how they work and their key features. Look at real existing examples and the functions that they carry out.	Structures/Textiles: Puppets Explore different ways of joining fabrics before creating hand puppets based upon characters from a well-known fairytale. Develop technical skills of cutting, glueing, stapling and pinning.	Mechanisms: Wheels and axles Learn about the main components of a wheeled vehicle. Develop understanding of how wheels, axles and axle holders work; problem-solve why wheels won't rotate; to design and build their own vehicle designs.	Overflow time to complete units where other school events takeover or to provide more time for classes to complete projects.	
Year 2 Mechanisms: Fairground wheel Design and create a functional Ferris wheels, consider how the different components fit together so that the wheels rotate and the structure stands freely. Select appropriate materials and develop their cutting and joining skills.	Food: A balanced diet Explore and learn what forms a balanced diet, pupils will taste test ingredient combinations from different food groups that will inform a wrap design of their choice which will include a healthy mix of protein, vegetables and dairy.	Mechanisms: Making a moving monster After learning the terms: pivot, lever and linkage, pupils design a monster that will move using a linkage mechanism. Pupils practise making linkages and experiment with various materials to bring their monsters to life.	Mechanisms: Baby bear's chair Using the tale of Goldilocks and the Three Bears as inspiration, pupils help Baby Bear by making him a brand new chair, exploring different shapes and materials. When designing the chair, they consider his needs and what he likes.	Structures/Textiles: Pouches Introduction to sewing. Pupils make their own template, accurately cut their fabric and sew a basic running stitch.	Overflow time to complete units where other school events takeover or to provide more time for classes to complete projects	
Year 3 Textiles: Cushions Introduce two new skills to add to the pupils' repertoire: cross stitch and appliqué. Pupils apply their knowledge to the design, decoration and	Electrical Systems: Electric poster An introduction to information design and electrical systems, pupils create an electric poster using a basic circuit to	Mechanical Systems: Pneumatic toys Design and create a toy with a pneumatic system, learning how trapped air can be used to create a product with moving parts. Pupil are introduced to	Digital World: Electronic charm Design, code, make and promote a Micro:bit electronic charm to use in low-light conditions, developing their	Food: Eating seasonally Pupils discover when and where fruits and vegetables are grown and learn about seasonality in the UK. They look at the relationship between the	Structure: Constructing a castle Learning about the features of a castle, pupils design and make one of their own. They will also be using	

	assembly of their own cushions.	develop a museum display about The Romans.	thumbnail sketches and exploded diagrams.	understanding of programming to monitor and control products to solve a design scenario.	colour of fruits and vegetables and their health benefits by making three dishes.	configurations of handmade nets and recycled materials to make towers and turrets before constructing a stable base.
Year 4	Electrical Systems: Torches Pupils apply their scientific understanding of electrical circuits to create a torch made from recycled and reclaimed materials and objects. They design and evaluate their product against set design criteria.	Mechanical Systems: Making a slingshot car Transform lollipop sticks, wheels, dowel and straws into a moving car. Pupils use a glue gun to construct, make the launch mechanism, design and create the chassis of a vehicle using nets.	Digital World: Mindful moments timer Design, program, prototype and brand a Micro:bit timer to a specified amount of minutes. Pupils carry out research and existing product analysis to determine how a programmable product could be personalised to their needs.	Food: Adapting a recipe Work in groups to adapt a simple biscuit recipe, to create the tastiest biscuit ensuring that their creation comes within the given budget of overheads and costs of ingredients	Structure: Pavilions Exploring pavilion structures, learning 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.	Textiles: Fastenings Building upon their sewing skills from previous years, pupils design and create a book sleeve; exploring a variety of fastenings and selecting the most appropriate for their design based on strength and appropriate-use.
Year 5	Mechanical Systems: Making a pop-up book Create a four-page pop-up story book design, incorporating a range of functional mechanisms that use levers, sliders, layers and spacers to give the illusion of movement through interaction.	Digital World: Monitoring devices Program a Micro: bit animal monitoring device that will alert the owner when the temperature is not optimal. Develop 3D CAD skills by learning how to navigate the Tinkercad interface and essential tools.	Food: What could be healthier? Research and modify a traditional bolognese sauce recipe to make it healthier. Cook improved versions, creating appropriate packaging and learn about where the ingredients the importance of animal welfare when farming cattle.	Structures: Bridges After learning about various types of bridges and exploring how the strength of structures can be affected by the shapes used, create their own bridge and test its durability - using woodworking tools and techniques.	Textiles: Stuffed Toys Create a stuffed toy by applying skills learnt in previous units. Introduce blanket stitch.	Electrical Systems: Electronic greetings cards Explore how circuits can be adapted to suit different purposes, explore series circuits and recreate one using conductive adhesive copper tape. Apply this knowledge to design and create an electronic greeting card.
Year 6	Digital World: Navigating the world Program a navigation tool to produce a multifunctional device for trekkers. Combine 3D virtual objects to form a	Food: Come dine with me Research and prepare a three-course meal and taste-test and score their food. Research the journey of their main ingredient	Structures: Playgrounds Design and create a model for a new playground featuring five apparatus, made from three different structures. Using a footprint as the base,	Textiles: Waistcoats Select fabrics, use templates, pin, decorate and stitch materials together to create a waistcoat for a person or purpose of their choosing.	Electrical Systems: Steady hand game Design and create a steady hand game, use nets to create the bases and apply knowledge of electrical circuits to build	Mechanical Systems: Automata toys Use woodworking skills, pupils construct an automata; measuring and cutting their materials, assembling the frame,

	complete product concept in 3D computer-aided design modelling software.	from 'farm to fork' or write a favourite recipe.	practise visualising objects in plan view and get creative including natural features.	Create or use a pattern template to fit a desired person or item (e.g. teddy bear).	an operational circuit with a buzzer that completes the circuit when the handle makes contact with the wire.	choosing cams and designing the characters that sit on the followers to form an interactive shop display.
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