

YEAR GROUP	Autumn Term	Spring Term	Summer Term
1	Mechanisms: Making a moving story book Textiles: Puppets	Structures: Constructing a windmill	Food: Fruit and vegetables
2	Mechanisms: Making a moving monster	Textiles: Pouches	Food: A balanced diet
3	Food: Eating seasonally	Textiles: Cross-stitch and applique Egyptian collars	Structures: Constructing a castle
4	Digital world: Mindful moments timer	Food: Adapting a recipe ?	Electrical systems: Torches Textiles: Fastenings
5	Mechanical systems: Making a pop-up book	Textiles: Stuffed Toys	Structures: Bridges
6	Textiles: Waistcoats	Food: Come dine with me	Structures/Mechanical systems: K'nex Constructions

OPTIONS

Year 1 - Food: Fruit and vegetables/ Mechanisms: Making a moving story book / Structures: Constructing a windmill /Textiles: Puppets / Mechanisms: Wheels and axles

Year 2 - Mechanisms: Fairground wheel / Food: A balanced diet / Mechanisms: Making a moving monster / Structures: Baby bear's chair /Textiles: Pouches

Year 3 - Textiles: Cross-stitch and applique Cushions or Egyptian collars/ Electrical systems: Electric poster/ Mechanical systems: Pneumatic toys / Digital world: Electronic charm/ Food: Eating seasonally/ Structures: Constructing a castle

Year 4 - Electrical systems: Torches / Mechanical systems: Making a slingshot can/ Digital world: Mindful moments timer/ Food: Adapting a recipe/ Structures: Pavilions/ Textiles: Fastenings

Year 5 - Mechanical systems: Making a pop-up book/ Digital world: Monitoring devices/ Food: What could be healthier? /Structures: Bridges /Textiles: Stuffed Toys/ Electrical systems: Doodlers

Year 6 - Digital world: Navigating the world/ Food: Come dine with me/ Structures: Playgrounds/ Textiles: Waistcoats / Electrical systems: Steady hand game /Mechanical systems: Automata toys

KSI

Year 1

Making a moving story book (4 lessons) 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. [start and end of year for progression]

Puppets (4 lessons) 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.

Constructing a windmill(4 lessons) 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.

Fruit and vegetables (4 lessons) 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.

Year 2

Making a moving monster (4 lessons) 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.

Pouches (4 lessons) Introduction to sewing. Pupils make their own template, accurately cut their fabric and sew a basic running stitch

A balanced diet (4 lessons) 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

KS2

Year 3

Eating seasonally (4 lessons) Pupils discover when and where fruits and vegetables are grown and learn about seasonality in the UK. They look at the relationship between the colour of fruits and vegetables and their health benefits by making three dishes.

Cross stitch and appliqué (4 lessons) Cushions or Egyptian collars. Introduce two new skills to add to the pupils' repertoire: cross stitch and appliqué. Pupils apply their knowledge to the design, decoration and assembly of their own cushions or Egyptian collars.

Constructing a castle (4 lessons) Learning about the features of a castle, pupils design and make one of their own. They will also be using configurations of handmade nets and recycled materials to make towers and turrets before constructing a stable base.

Year 4

Mindful moments timer (4 lessons) 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.

Adapting a recipe (4 lessons) 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. ?

Torches (4 lessons) 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.

Fastenings (4 lessons) 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

Making a pop-up book (4 lessons) 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.

Stuffed Toys (4 lessons) Create a stuffed toy by applying skills learnt in previous units. Introduce blanket stitch.

Bridges (4 lessons) 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.

Year 6

Waistcoats (4 lessons) Select fabrics, use templates, pin, decorate and stitch materials together to create a waistcoat for a person or purpose of their choosing. Create or use a pattern template to fit a desired person or item (e.g. teddy bear).

Come dine with me (4 lessons) Research and prepare a three-course meal and taste-test and score their food. Research the journey of their main ingredient from 'farm to fork' or write a favourite recipe

K'Nex Construction Systems (4 lessons) Design and build mechanical k'nex, using and applying knowledge of construction to create strong structures.