DT Long Term Map 2023/24

	Autumn 2	Summer 1
Phase 0	<u>Mechanisms</u>	<u>Structures</u>
Key Vocab to be taught	Making a Moving Story Book	Constructing a Windmill
across topics Like, dislike, use, different,	Our pupils experiment with sliders before planning and making three pages of a moving story book, based on a familiar story. They will draw the page backgrounds, make the moving parts and assemble it. Lesson 1: Exploring Sliders and Movement Lesson 2: Design	This unit is inspired by the song, 'Mouse in a windmill', design and construct a windmill for a client (mouse) to live in. Explore various types of windmill, how they work and their key features. Lesson 1: Designing the Structure Lesson 2: Assembling the Structure
bumpy, smooth, rough, shiny, hard, soft	Lesson 3: Construction Lesson 4: Testing and Evaluation Key Vocabulary: Sliders, mechanism, adapt, design, criteria, input,	Lesson 3: Assembling the Windmill Lesson 4: Testing and Evaluating Key Vocabulary: Axle, bridge, design, criteria, model, net, packaging,
nara, son	model template, assemble, test	structure, template, unstable, structure, strong, weak, Science Phase 1 – Why does a stone fall faster than a feather? Science Phase 1 – Why are most houses made of brick?
	History Phase 1 - When my grandparents were young	

Phase 1	Healthy Eating	Joining / Sewing
Key Vocab	Fruit and Vegetables	<u>Puppets</u>
to be taught across topics Like, dislike, use, healthy, unhealthy, different, bumpy, smooth, rough, shiny, hard, soft	Our pupils handle and explore fruits and vegetables and learn how to identify which category they fall into, before undertaking taste testing to establish their chosen ingredients for the smoothie they will make and design packaging for. Lesson 1: Fruit or Vegetable? Lesson 2: Where Fruit and Vegetables grow Lesson 3: Smoothie Tasting Lesson 4: Making Smoothies Key Vocabulary: Blender, Carton, Fruit, Healthy, Ingredients, Peel, Peeler, Recipe, Slice, Smoothie, Stencil, Template, Vegetable CC Links: Science Phase 1 – Is a car alive? Science Phase 2 – How does my body work? Science Phase 3 – How can I live to be 100? Science Phase 4 – Am I top of the food chain? Science Phase 5 – Am I the same as early man? Geography Phase 4 – Are humans damaging the world? Geography Phase 5 – Are humans damaging the world? History Phase 1 - When my grandparents were young CC - British Values Individual liberty	Our pupils explore different ways of joining fabrics before creating their own hand puppets based upon characters from a well-known fairy tale. Throughout they work to develop their technical skills of cutting, gluing, stapling and pinning. Lesson 1: Joining Fabrics Lesson 2: Designing Puppets Lesson 3: Making and Joining my Puppet Lesson 4: Decorating my Puppet Key Vocabulary: Decorate, Design, Fabric, Glue, Model, Hand puppet, Safety pin, Staple, Stencil, Template CC Links: Science Phase 1 - Why are most houses made of brick? History Phase 1 - When my grandparents were young

Phase 2 **Healthy Eating Key Vocab** to be taught A Balanced Diet across topics Through their exploration of what makes a balanced diet, Our pupils taste test food combinations of different food groups. They will also aim to make a wrap that includes a healthy mix of protein, vegetables Design. criteria, and dairy, and learn about the term 'hidden sugars'. hygiene. shape. Lesson 1: Fruit or Vegetable? decorate. Lesson 2: Where Fruit and Vegetables grow measure. Lesson 3: Smoothie Tasting Lesson 4: Making Smoothies material, evaluate. healthy. unhealthy. Kev Vocabulary: Balanced Diet. Carbohydrate. Dairy. Fruit. Ingredients, Oils, Sugar, Protein, Vegetables, Design Criteria, Alternative, Evaluation, Expensive, Healthy, Nutrients, Packaging, Refrigerator, Sugar, Substitute CC Links -Science Phase 1 - Is a car alive? Science Phase 2 - How does my body work? Science Phase 3 - How can I live to be 100? Science Phase 4 - Am I top of the food chain? Science Phase 5 - Am I the same as early man? Geography Phase 4 - Are humans damaging the world? Geography Phase 5 - Are humans damaging the world? History Phase 1 - When my grandparents were young CC - British Values Individual liberty

Mechanisms

Fairground Wheels

This unit brings together the Our pupils' knowledge of mechanisms and structures. They design and create their own Ferris wheels, considering how the different components fit together so that their wheels rotate and their structures stand freely. Pupils select appropriate materials and develop their cutting and joining skills to create a final product.

Lesson 1: Design a Ferris Wheel Lesson 2: Planning the Build

Lesson 3: Building the Frame and Wheels

Lesson 4: Adding Pods

<u>Key Vocabulary</u>: Design, Criteria, Wheel, Ferris Wheel, Pods, Axel, Frame Holder, Pod, Mechanism, Axle holder, Chassis, Evaluation, Fix, Mechanic, Model, Test, Waterproof,

CC Links -

Science Phase 1 - Why are most houses made of brick?

History Phase 1 - When my grandparents were young

Phase 3

Key Vocab to be taught across topics

Appealing, product, preference, purpose, tools, materials, function, evaluate,

Healthy Eating

Eating Seasonally

Our pupils discover when and where fruits and vegetables are grown and also learn about seasonality in the UK. They will also learn about the relationship between the colour of fruits and vegetables and their health benefits by making three dishes using seasonal ingredients.

Lesson 1: Where in the World? Lesson 2: British Seasonal Foods Lesson 3: Rainbow Foods

Lesson 4: Making Tarts

<u>Key Vocabulary</u>: Balanced Diet, Climate, Natural, Processed, Reared, Seasons, Exported, Imported, Nationality, Nutrients, Polar climate, Recipe, Seasonal food, Seasons, Temperate climate, Tropical climate

CC Links -

Science Phase 1 – Is a car alive?

Science Phase 2 - How does my body work?

Science Phase 3 – How can I live to be 100?

Science Phase 4 – Am I top of the food chain? Science Phase 5 – Am I the same as early man?

Geography Phase 1 - My local area

Geography Phase 1 – Why can't meerkats live in the North Pole?

Geography Phase 2 – Enfield / Hatfield Heath

Geography Phase 3 – Cities on river banks

Geography Phase 3 – London as a global city

Geography Phase 4 – Are humans damaging the world? Geography Phase 5 – Are humans damaging the world?

History Phase 1 - When my grandparents were young

<u>CC - British Values</u> Individual liberty

Electrical Systems

Static Electricity

Our pupils are introduced to static electricity and based on scientific understanding of positive and negative charges. They observe the effects of static electricity on objects such as plastic straws, tissue paper and glitter. They will then consider ways of using static electricity as part of a simple game that they will make.

Lesson 1: Static Magic

Lesson 2: Electrostatic Game Design

Lesson 3: Electrostatic Game Manufacture

Lesson 4: Electrostatic Game Evaluation

<u>Key Vocabulary</u>: Attract, Electricity, Electrostatic, Repel, Innovative, Motion, Research, Stable, Template, Component, Constructive-criticism, Design criteria, Electrostatic, Evaluation, Feedback, Motion, Repel, Target audience, Test

CC Links -

Science Phase 1 – Why are most houses made of brick? Science Phase 4 – What happens when I turn my light on?

Science Phase 5 - Can I help save the planet?

Geography Phase 4 – Are humans damaging the world? Geography Phase 5 – Are humans damaging the world? Phase 4

Key Vocab to be taught across topics

Component, preference, innovative, equipment, ingredients, strengths, evaluate, quality, manufacture,

preparation,

Healthy Eating

Adapting a Recipe

Our pupils work in groups to adapt a simple biscuit recipe, to create the tastiest biscuit. While making they will also ensure that their creation comes within the given budget of overheads and costs of ingredients

Lesson 1: Following a Recipe Lesson 2: Testing Ingredients Lesson 3: Final Design and Budget Lesson 4: Biscuit Bake-Off

Key Vocabulary: Balanced Diet, Design Criteria, Research, Texture, Innovative, Aesthetic, Measure, Cross-Contamination, Diet, Processed, Packaging, Adapt, Budget, Cooling rack, Creaming, Equipment, Evaluation, Flavour, Ingredients, Method, Net, Packaging, Prototype, Quantity, Recipe, Rubbing, Sieving, Target audience, Unit of measurement, Utilities

CC Links -

Science Phase 1 - Is a car alive?

Science Phase 2 - How does my body work?

Science Phase 3 - How can I live to be 100?

Science Phase 4 - Am I top of the food chain?

Science Phase 5 - Am I the same as early man?

Geography Phase 4 – Are humans damaging the world? Geography Phase 5 – Are humans damaging the world?

<u>CC - British Values</u> Individual liberty

Mechanical Systems

Slingshot Cars

Our pupils transform lollipop sticks, wheels, dowels and straws into a moving car. They will be using a glue gun to construct the materials, making the launch mechanism, designing and also making the body of the vehicle using nets and assembling these to the chassis

Lesson 1: Chassis and Launch Mechanisms

Lesson 2: Designing the Car Body

Lesson 3: Making the Car Body

Lesson 4: Assembly and Testing

<u>Key Vocabulary</u>: Chassis, Energy, Kinetic, Mechanism, Air Resistance, Design, Structure, Graphics, Research, Model, Template, Aesthetic, Air resistance, Chassis Design, Design criteria, Function Graphics, Kinetic energy, Mechanism, Net, Structure

CC Links -

Science Phase 1 – Why does a stone fall faster than a feather? Science Phase 1 – Why are most houses made of brick?

Geography Phase 4 – Are humans damaging the world? Geography Phase 5 – Are humans damaging the world? Phase 5

Key Vocab to be taught across topics

Component, preference, innovative, equipment, suitable.

strengths,

evaluate, quality,

manufacture,

preparation,

functional,

technique.

Healthy Eating

What Could Be Healthier?

Focusing on nutrition, our pupils research and modify a traditional Bolognese sauce recipe to make it healthier. They will cook their new and improved versions, making appropriate packaging and also learn about the ethical considerations of farming cattle.

Lesson 1: From Farm to Fork

Lesson 2: What Does Healthy Look Like?

Lesson 3: Adapting and Improving a Recipe

Lesson 4: Mamma Mia – What a Tasty Bolognese!

<u>Key Vocabulary</u>: Beef, Reared, Processed, Ethical, Diet, Ingredients, Supermarket, Farm, Balanced, Cross-contamination, Healthy, Method, Nutrients, Packaging, Reared, Recipe, Research, Substitute, Vegan, Vegetarian, Welfare

CC Links -

Science Phase 1 – Is a car alive?

Science Phase 2 - How does my body work?

Science Phase 3 – How can I live to be 100?

Science Phase 4 - Am I top of the food chain?

Science Phase 5 - Am I the same as early man?

History Phase 5 - World War II

Geography Phase 4 – Are humans damaging the world? Geography Phase 5 – Are humans damaging the world?

<u>CC - British Values</u> Individual liberty

Electrical Systems

Electronic Cards

This unit builds on pupils' knowledge of how to incorporate electrical circuits into products from Y4. Our pupils explore how circuits can be adapted to suit different purposes, explore series circuits and recreate one using conductive adhesive tape. They then apply this knowledge to design and create an electronic greeting card.

Lesson 1: Greetings Cards

Lesson 2: Series Circuits

Lesson 3: Inspired Design

Lesson 4: Electronic Greetings Cards

Key Vocabulary: Greeting Card, Purpose, Seasonal, Commemorative, Sentimental, Personalised, Development, Commercial, Invention, Penny Black, Bespoke, Mass Production, Design Brief, Design Criteria, Circuit, LED, Cell, Current, Flow, Positive, Negative, Switch, Battery, Buzzer, Component, Conductor, Copper, Function, Innovative, Insulator, LED, Modify, Series circuit, Switch, Target audience, Test, Wire

CC Links -

Science Phase 1 – Why are most houses made of brick? Science Phase 4 – What happens when I turn my light on? Science Phase 5 – Can I help save the planet?

History Phase 5 – World War II

Geography Phase 4 – Are humans damaging the world? Geography Phase 5 – Are humans damaging the world?