Becoming a Design and Technology Expert at Kingsway Primary School

The Kingsway Design and Technology curriculum aims to inspire our children to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation and evaluation. We develop our children's confidence to take risks, through drafting design concepts, modeling and testing and to be reflective learners who evaluate their work and the work of others. We build an awareness of the impact of design and technology on our lives and encourage children to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

Our aim is that children who leave our school in Year 6 will be able:

* To produce high quality, beautiful design work.
* To understand the three main stages that are crucial to producing a successful design
* To research and plan a design. Understanding the importance of redrafting ideas multiple times.
* To make prototypes using the appropriate tools.
* To be able to discuss the reasons behind their design choices and evaluate them.
* To use and understand the language and vocabulary of a designer.

How our children learn to be a Designer and Technologist

Our children are taught to be designers and technologists through the three main stages of the design process: **design**, **make** and **evaluate**. Each stage of the design process is underpinned by **technical knowledge** which encompasses the contextual, historical and technical understanding required for each strand. Cooking and nutrition has a separate section with a focus on specific principles, skills and techniques in food including where food comes from, diet and seasonality.

Kingsway DT LTP 25-26 updated

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	**G- Guided Group AI- Adult initiated in Discover and Do time.**	G- Kapow-Pumpkin Soup G-Structures: Kapow Junk Modelling	AI- Structures: Junk modelling- make a house/ London G- Mechanisms: Make a dinosaur slider scene	AI- Structures/ joining: making a bag for Red Riding Hood G- Cooking and Nutrition : Kapow-Design & make a rainbow salad G- Cooking and Nutrition : Kapow-Fantastic Fruit and Vegetables	AI- Textiles: design and make a spider web (weaving)	AI-Structures: Boats G- Textiles: Kapow Design and make a book mark (stitching)
Year 1-2 A	Structures: Baby Bear's Chair (Cecile Manz- designer)		Mechanisms: Wheels and Axles		Cooking and Nutrition: Smoothies	
Year 1-2 B	Structures: Stable Structures I Cooking and Nutrition: A balanced diet		Textiles: Puppets		Mechanisms:Making a moving monster (Ole Kirk Christiansen Lego inventor)	
Year 3-4 A	Textiles- Fastenings (bookmarks adapt)- Fastenings on a purse		Digital World: Wearable Technology		Cooking and Nutrition: eating seasonally	
Year 3-4 B	Mechanical Systems: Mechanical Cars		Structures: Helmets		Electrical Systems: Torches (Lewis Latimer- Light bulb inventor)	

Year 5-6 A	Mechanical Systems: Automata Toys		Electrical systems: Wobblers		Cooking and Nutrition: Developing a recipe (Monica Galetti- chef)	
Year 5-6 B	Structures: Playgrounds		Textiles: Bags Adaptive clothing (diversity)		Digital World: Navigating the world (Ryan Hudson-Peralta Disabled CAD designer)	
Topic Key	Structures	Textiles	Explore and use mechanisms KS1 Mechanical Systems KS2	Digital World KS2	Electrical Systems KS2	Cooking and Nutrition

Subject: Design & Technology Kingsway Key assessment criteria

EYFS Cooking and Nutrition	Year 1/2 Cycle A Cooking and Nutrition	Year 1/2 Cycle B Cooking and Nutrition
Skills **Cooking and Nutrition- Pumpkin Soup, Rainbow Salad & Fantastic Fruits & Vegetables** **Design:** • I can verbally plan and voice my ideas. • I can plan and select resources needed. • I can 'have-a-go' at recording my ideas. **Make:** • I can safely use tools to prepare ingredients and use a knife safely. **Evaluate:** • I can talk about what I have made. • I can describe what I like about my creation and how I would improve it.	**Skills** **Cooking and Nutrition - Smoothies** **Design:** • I can design smoothie carton packaging by-hand or on ICT software. **Make:** • I can chop fruit and vegetables safely to make a smoothie. • I can identify if a food is a fruit or a vegetable. • I can say where and how fruits and vegetables grow. **Evaluate:** • I can taste and evaluate different food combinations. • I can describe appearance, smell and taste. • I can suggest information to be included on packaging.	**Skills** **Cooking and Nutrition - A Balanced Diet** **Design:** • I can design a healthy wrap based on a food combination which works well together. **Make:** • I can slice food safely using the bridge or claw grip. • I can construct a wrap that meets a design brief. **Evaluate:** • I can describe the taste, texture and smell of fruit and vegetables. • I can taste test food combinations and final products. • I can describe the information that should be included on a label. • I can evaluate which grip was most effective.
Knowledge **Cooking and Nutrition -Pumpkin Soup, Rainbow Salad & Fantastic Fruits & Vegetables** • I know what an ingredient is. • I can name fruits and vegetables and know their colours.	**Knowledge** **Cooking and Nutrition - Smoothies** • I know the difference between fruits and vegetables. • I know that some foods typically known as vegetables are actually fruits (e.g. cucumber).	**Knowledge** **Cooking and Nutrition - A Balanced Diet** • I know that 'diet' means the food and drink that a person or animal usually eats. • I know what makes a balanced diet. • I know where to find the nutritional information on packaging.

	• I know that a blender is a machine which mixes ingredients together into a smooth liquid. • I know that a fruit has seeds and a vegetable does not. • I know that fruits grow on trees or vines. • I know that vegetables can grow either above or below ground. • I know that vegetables can come from different parts of the plant (e.g. roots: potatoes, leaves: lettuce, fruit: cucumber).	• I know that the five main food groups are: carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar. • I know that I should eat a range of different foods from each food group, and roughly how much of each food group. • I know that nutrients are substances in food that all living things need to make energy, grow and develop. • I know that 'ingredients' means the items in a mixture or recipe. • I know that I should only have a maximum of five teaspoons of sugar a day to stay healthy. • I know that many foods and drinks we do not expect to contain sugar do; we call these 'hidden sugars'.
Year 3/4 Cycle A Cooking and Nutrition	**Year 5/6 Cycle A** Cooking and Nutrition	
Skills **Cooking and Nutrition - Eating Seasonally** **Design:** • I can create a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish. **Make:** • I can prepare myself and my work space to cook safely in, after having learnt the basic rules to avoid food contamination. • I can follow the instructions within a recipe. **Evaluate:** • I can establish and use a design criteria to help test and review dishes.	**Skills** **Cooking and Nutrition - Developing a recipe** **Design:** • I can adapt a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients. • I can write an amended method for a recipe to incorporate the relevant changes to ingredients. • I can design appealing packaging to reflect a recipe. **Make:** • I can cut and prepare vegetables safely. • I can use equipment safely, including knives, hot pans and hobs.	

• I can describe the benefits of seasonal fruits and vegetables and the impact on the environment. • I can suggest points for improvement when making a seasonal tart.	• I can avoid cross-contamination and talk about how I have avoided cross-contamination . • I can follow a step by step method carefully to make a recipe. **Evaluate:** • I can identify the nutritional differences between different products and recipes. • I can identify and describe the healthy benefits of food groups.	
Knowledge **Cooking and Nutrition - Eating Seasonally** • I know that not all fruits and vegetables can be grown in the UK. • I know that climate affects food growth. • I know that vegetables and fruit grow in certain seasons. • I know that cooking instructions are known as a 'recipe'. • I know that imported food is food which has been brought into the country. • I know that exported food is food which has been sent to another country. • I know that imported foods travel from far away and this can negatively impact the environment. • I know that each fruit and vegetable gives us nutritional benefits because they contain vitamins, minerals and fibre. • I know that vitamins, minerals and fibre are important for energy, growth and maintaining health. • I know safety rules for using, storing and cleaning a knife safely. • I know that similar coloured fruits and vegetables often have similar nutritional benefits.	**Knowledge** **Cooking and Nutrition - Developing a recipe** • I know where meat comes from - learning that beef is from cattle and how beef is reared and processed, including key welfare issues. • I know that I can adapt a recipe to make it healthier by substituting ingredients. • I know that I can use a nutritional calculator to see how healthy a food option is. • I know that 'cross-contamination' means bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects.	

EYFS Mechanisms	Year 1/2 Cycle B Mechanisms	Year 1/2 Cycle A Mechanisms
Skills **Mechanisms - Making a dinosaur sliding scene** **Design:** • I can verbally plan and voice my ideas. • I can plan and select resources needed. • I can 'have-a-go' at recording my ideas. **Make:** • I can explore different ways to temporarily or permanently join materials together. **Evaluate:** • I can talk about what I have made. • I can describe what I like about my creation and how I would improve it.	**Skills** **Mechanisms - Making a moving monster** **Design:** • I can create a class design criteria for a moving monster. • I can design a moving monster for a specific audience in accordance with a design criteria. **Make:** • I can make linkages using card for levers and split pins for pivots. • I can experiment with linkages adjusting the widths, lengths and thicknesses of card used. • I can cut and assemble components neatly. **Evaluate:** • I can evaluate my own designs against design criteria. • I can use peer feedback to modify a final design.	**Skills** **Mechanisms - Wheels and Axles** **Design:** • I can design a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move. • I can create clearly labelled drawings that illustrate movement. **Make:** • I can make a moving vehicle with working wheels and axles. **Evaluate:** • I can evaluate my own designs against design criteria. • I can test mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move. • I can adapt mechanisms. • I can identify and explain vehicle design flaws using the correct vocabulary.
Knowledge **Mechanisms - Making a dinosaur sliding scene** **Technical:** • I know how to create a picture with a simple sliding mechanism. • I know how to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture. form and function. **Additional:**	**Knowledge** **Mechanisms - Making a moving monster** **Technical:** • I know that mechanisms are a collection of moving parts that work together as a machine to produce movement. • I know that there is always an input and output in a mechanism. • I know that an input is the energy that is used to start something working. • I know that an output is the movement that happens as a result of the input.	**Knowledge** **Mechanisms - Wheels and Axles** **Technical:** • I know that wheels need to be round to rotate and move. • I know that for a wheel to move it must be attached to a rotating axle. • I know that an axle moves within an axle holder which is fixed to a toy or vehicle. • I know that the frame of a vehicle (chassis) needs to be balanced. **Additional:**

• I know some real-life objects that contain mechanisms.	• I know that a lever is something that turns on a pivot. • I know that a linkage mechanism is made up of a series of levers. Additional: • I know some real-life objects that contain mechanisms.	• I know some real-life objects that use wheels. • I know that wheels and axles are used in everyday life,not just in cars.
Year 3/4 Cycle B Mechanical Systems	**Year 5/6 Cycle A** Mechanical Systems	
Skills Mechanical systems - Mechanical Car Design: • I can use a problem statement to identify the design criteria. • I can conduct market research into existing products. • I can draw exploded diagrams and annotated sketches of my different mechanical cars. • I can develop my design by adding details and justifications about materials, tools and methods. • I can describe key design improvements in the history of the automobile. Make: • I can make a model based on my chosen design. • I can measure, mark, cut and assemble with increasing accuracy.	Skills Mechanical systems - Automata Toys Design: • I can develop a design idea with some descriptive notes. • I can explore different cam profiles and choose three for my follower toppers with an explanation of my choices. Make: • I can mark, saw and cut out the components and supports of my toy with varying degrees of accuracy to the intended measurements. • I can attempt a partial assembly of my toys using an exploded diagram following a teacher's demonstration. • I can create neat, decorated follower toppers with some accuracy. • I can measure and cut panels that fit with some inaccuracies to conceal the inner workings of my automata.	

• I can choose and use appropriate tools and materials to make mechanical cars. • I can, with close supervision, use a hot glue gun to join wooden materials. • I can select equipment required for a series of tasks based on the plan and explain why each piece is suitable for each stage. **Evaluate:** • I can measure and compare the distance travelled by different mechanical cars. • I can provide specific feedback and adjust my design to incorporate peer feedback. • I can explain why I think certain aspects of a peer's design are effective or why they suggested specific improvements.	• I can decorate and finish my automata to meet the design criteria and brief. **Evaluate:** • I can evaluate the work of others and receive feedback on my own work. • I can evaluate my finished product, making descriptive and reflective points on function and form.	
Knowledge **Mechanical systems - Mechanical Car** **Technical:** • I know a mechanical system can allow us to move something more easily. • I know mechanical systems have more than one mechanism that moves to make them work. • I know mechanical systems are often hidden in products to make them look more appealing.	**Knowledge** **Mechanical systems - Automata Toys** **Technical:** • I know which mechanisms are working together to make a mechanical system. • I know that there are different directions of movement. • I know that mechanisms can change one type of movement to another.	

EYFS	Year 1/2 Cycle A	Year 1/2 Cycle B
Structures	Structures	Structures

Skills

Structures - Hibernation boxes, junk model houses, boats, a bag for LRRH

Design:

- I can verbally plan and voice my ideas.
- I can plan and select resources needed.
- I can 'have-a-go' at recording my ideas.

Make:

- I can explore different ways to temporarily or permanently join materials together.

Evaluate:

- I can talk about what I have made.
- I can share my finished model and talk about the processes in its creation.
- I can describe what I like about my creation and how I would improve it.

Skills

Structures - Baby Bear's Chair

Design:

- I can generate and communicate ideas using sketching and modelling.
- I can use a simple design brief that outlines the intended use, target user and key features of the product to create simple design criteria

Make:

- I can make a structure according to design criteria, for a specific user.
- I can create joints and structures from paper/card and tape.
- I can build a strong and stiff structure by folding paper, making it thicker so it is more stable.
- I can begin to shape objects to improve how they work.

Evaluate:

- I can test the strength of my own structure.
- I can identify the weakest part of a structure.
- I can evaluate the strength, stiffness and stability of my own structure, against the design criteria..
- I can discuss a range of existing products and say what I like and dislike about them.
- I can compare a range of products and explain why some better meet different design criteria than others.

Skills

Structures - Stable Structures

Design:

- I can say what I intend to make and why – identifying the purpose.
- I can talk about ideas, with purpose and user in mind.
- I can talk about existing products when generating ideas.
- I can use basic drawing skills to communicate ideas.

Make:

- I can choose between a small number of materials and components.
- I can begin to use objects with a fixed width or length to create even spacing of markings or cuts (e.g. a lolly stick).

Evaluate:

- I can discuss existing products, saying what I like about them.
- I can compare two products and discuss which is better for a specific purpose.
- I can say what I like about my peers' designs and products.
- I can accept feedback and understand it is meant to improve my work.

Knowledge **Structures - Hibernation boxes, junk model houses, boats, a bag for LRRH** • I know some different ways to join materials together. • I know how to explore and investigate the materials and tools needed for junk modelling.	**Knowledge** **Structures - Baby Bear's Chair** • I know how chairs are made for different users and purposes. • I know that materials can be manipulated to improve strength and stiffness. • I know that a structure is something which has been formed or made from parts. • I know that a 'stable' structure is one which is firmly fixed and unlikely to change or move. • I know that a 'strong' structure is one which does not break easily. • I know that a 'stiff' structure or material is one which does not bend easily.	**Knowledge** **Structures - Stable Structures** • I know that structures are things that are built and have a purpose. • I know that structures with a wider base are more stable than ones with a narrow base. • I know that extra weight added to the base of a structure makes it more stable.
Year 3/4 Cycle B **Structures**	**Year 5/6 Cycle B** **Structures**	
Skills **Structures - Helmets** **Design:** • I can describe what a shell structure is and describe what makes an effective helmet. • I can design a helmet for a specific user by choosing appropriate features. • I can begin to use 2D CAD software to communicate my ideas. • I can develop my drawing and sketching skills with a focus on clarity and simplicity. **Make:** • I can explain and use layering techniques to strengthen and make a helmet, reflecting on the process.	**Skills** **Structures - Playgrounds** **Design:** • I can design a playground using a variety of different structures, giving consideration to how the structures will be used and making sure it is inclusive. • I can create five apparatus designs, applying the design criteria. • I can consider effective and ineffective designs. **Make:** • I can build a range of play structures drawing upon new and prior knowledge of structures. • I can measure, mark and cut wood to create a range of structures. • I can make 3 different structures from my plans using the materials available. • I can use a range of materials to reinforce and add decoration to structures. • I can secure my apparatus to a base.	•

• I can follow a design plan and use appropriate techniques to strengthen and stiffen the helmet. • I can make facades from a range of materials. Evaluate: • I can evaluate the strengthening required in the helmet and justify appropriate strengthening techniques. • I can communicate with peers when making improvements. • I can analyse helmets' strengths and weaknesses and evaluate how they work for their purpose.	Evaluate: • I can improve my design plan based on peer evaluation. • I can test and adapt a design to improve it as it is developed. • I can identify what makes a successful structure.	
Knowledge Structures - Helmets Technical: • I know that a 'shell' structure is a hollow shape with a thin outer layer. • I know that 3D shapes can form structures. • I know that structures can be strengthened by manipulating materials and shapes.	Knowledge Structures - Playgrounds Technical: • I know that structures can be strengthened by manipulating materials and shapes. • I know what a footprint plan is. • I know that a prototype is a cheap model to test design criteria. Additional: • I know that in the real world, design can impact users in positive or negative ways.	•
EYFS Textiles	Year 1/2 Cycle B Textiles	Year 5/6 Cycle B Textiles

Skills
Textiles - Spider web weaving, book mark
Design:
- I can verbally plan and voice my ideas.
- I can plan and select resources needed.
- I can 'have-a-go' at recording my ideas.

Make:
- I can explore different ways to temporarily or permanently join materials together.
- I can develop my threading and weaving ability.

Evaluate:
- I can talk about what I have made.
- I can share my finished model and talk about the processes in its creation.
- I can describe what I like about my creation and how I would improve it.

Skills
Textiles - Puppets
Design:
- I can use a template to create a design for a puppet.

Make:
- I can cut fabric neatly with scissors.
- I can use joining methods to decorate a puppet.
- I can sequence the steps taken during construction.

Evaluate:
- I can reflect on a finished product, explaining likes and dislikes.

Skills
Textiles- Bags (adaptive clothing)
Design:
- I can develop and test design ideas by creating pattern pieces and making prototypes to explore how well they work.
- I can use labelled drawings and diagrams to show clear design ideas, including how pattern pieces will fit together.
- I can use fabrics and materials suitable for the product, thinking about how they look and how well they work.
- I can explore and compare real textile products, thinking about how they look, how they are used and how they affect the environment.

Make:
- I can make 3D textile shapes by carefully cutting, folding and joining materials to match the design.
- I can join fabrics securely using stitches or knots and add decorative details to improve the appearance.

Evaluate:
- I can evaluate my designs against a more complex set of design criteria that includes functionality, aesthetics, user experience, sustainability and cost.
- I can consider alternative materials, tools or techniques that could enhance the product.

Knowledge **Textiles - Spider web weaving, book mark** • I know that I can weave with different materials. • I know I can thread with different materials.	**Knowledge** **Textiles - Puppets** • I know that 'joining technique' means connecting two pieces of material together. • I know that there are various temporary methods of joining fabric by using staples. glue or pins. • I know that different techniques for joining materials can be used for different purposes. • I know that a template (or fabric pattern) is used to cut out the same shape multiple times. • I know that drawing a design idea is useful to see how an idea will look.	**Knowledge** **Textiles- Bags** • I know how to thread a needle independently. • I know how to use pins effectively to secure a template to fabric without creases or bulges. • I know how to attach objects like buttons using thread. • I know how to tie strong knots.
Year 3/4 Cycle A **Textiles**	**Year 3/4 Cycle A** **Digital World**	**Year 5/6 Cycle B** **Digital World**
Skills **TEXTILES- Fastenings on a purse (adapt bookmarks)** **Design:** • I can incorporate a fastening into a purse design. • I can write design criteria for a product and articulate the decisions I have made. **Make:** • I can make and test a paper template with accuracy and in keeping with the design criteria. • I can measure, mark and cut fabric using a paper template. • I can select a stitch style to join fabric. **Evaluate:**	**Skills** **Digital World - Wearable technology- Diversity** **Design:** • I can develop design ideas through annotated sketches to create a product concept. • I can develop a design criteria to respond to a design brief. • I can follow a list of design requirements. • I can problem solve, by suggesting potential features on the virtual micro:bit that is suitable for the product, and justifying my ideas. • I can suggest key features for a way to attach the product to a user, creating annotated designs to display this. **Make:** • I can draw and manipulate 2D shapes using computer-aided design, to produce a point of sale badge.	**Skills** **Digital World - Navigating the World** **Design:** • I can write a design brief from information submitted by a client. • I can develop design criteria to fulfil the client's request. • I can consider and suggest additional functions for my navigation tool. • I can develop a product idea through annotated sketches. • I can place and manoeuvre 3D objects, using CAD. • I can change the properties of, or combine one or more 3D objects, using CAD. **Make:** • I can consider materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo).

• I can identify the features, benefits and disadvantages of a range of fastening types.	• I can write a program that initiates a flashing LED panel, or another pattern, on the virtual micro:bit when a button is pressed. **Evaluate:** • I can analyse and evaluate an existing product. • I can use feedback from peers in a focus group, to improve a design.	• I can explain material choices and why they were chosen as part of a product concept. • I can program an N,E, S, W cardinal compass. **Evaluate:** • I can explain how my program fits the design criteria and how it would be useful as part of a navigation tool. • I can develop an awareness of sustainable design. • I can identify key industries that utilise 3D CAD modelling and explain why. • I can explain the key functions and features of my navigation tool to the client as part of a product concept pitch. • I can demonstrate a functional program as part of a product concept pitch.
Knowledge **TEXTILES- Fastenings on a purse (adapt bookmarks)** **Technical:** • I know that a fastening is something that holds two pieces of material together. • I know that different fastening types are used for different purposes.	**Knowledge** **Digital World - Wearable Technology** **Technical:** • I know what a 'point of sale' display is and can explain it. • I know that in programming a 'loop' is code that repeats something again and again until stopped. • I know that micro:bit is a pocket-sized codeable computer. • I know that a simulator is able to replicate the functions of an existing piece of technology. • I know that CAD stands for 'computer-aided design'. • I know what a focus group is by taking part in one. **Additional:** • I know what the 'Digital revolution' is and features of some of the products that have evolved as a result.	**Knowledge** **Digital World - Navigating the World** **Technical:** • I know that accelerometers can detect movement. • I know that sensors can be useful in products as they mean the product can function without human input. **Additional:** • I know that 'multifunctional' means an object or product has more than one function. • I know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.
Year 3/4 Cycle B Electrical Systems	**Year 5/6 Cycle A** Electrical Systems	
Skills Electrical Systems - Torches Design:	**Skills** Electrical Systems - Wobble Bots Design:	

• I can design a torch, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas. **Make:** • I can make a torch with a working electrical circuit and switch. • I can use appropriate equipment to cut and attach materials. • I can assemble a torch according to the design and success criteria. **Evaluate:** • I can evaluate electrical products, testing and evaluating the success of a final product.	• I can design a motorised product for a particular purpose. • I can create appropriate design criteria based on the function of the proposed product. • I can explain design choices based on the desired functionality of a product. **Make:** • I can make a product that uses a motor. • I can create an innovative motorised product based on knowledge of existing products. **Evaluate:** • I can reflect on the usability, aesthetics, innovation and sustainability of products and discuss how design choices impact these aspects. • I can evaluate my designs against a more complex set of design criteria that includes functionality, aesthetics, user experience, sustainability and cost. • I can consider alternative materials, tools or techniques that could enhance the product. • I can provide feedback that is helpful, specific and encouraging.	
Knowledge **Electrical Systems - Torches** **Technical:** • I know that an electrical circuit must be complete for electricity to flow. • I know that a switch can be used to complete and break an electrical circuit. **Additional:** • I know the features of a torch: case, contacts, batteries, switch, reflector, lamp, lens.	**Knowledge** **Electrical Systems - Wobble Bots** **Technical:** • I know that electricity flows around a circuit. • I know that I can use different components to produce different results from electrical systems. • I know how to create working electrical circuits with a wider variety of electrical components. • I know how to reconstruct electrical systems to understand how they work.	

• I know facts from the history and invention of the electric light bulb(s) - by Sir Joseph Swan and Thomas Edison.		

EYFS - Other objectives covered within class provision and adult-led activities

Personal, Social, Emotional Development
3 / 4 year olds:

- Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.

Physical Development
3 / 4 year olds:

- Use large-muscle movements to wave flags and streamers, paint and make marks.
- Choose the right resources to carry out their own plan.
- Use one-handed tools and equipment, for example, making snips in paper with scissors.

Understanding the World
3 / 4 year olds:

- Explore how things work.

Expressive Arts and Design
3 / 4 year olds:

- Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.
- Explore different materials freely, in order to develop their ideas about how to use them and what to make.

Physical Development
Reception:

- Progress towards a more fluent style of moving, with developing control and grace.
- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.

ELG: PD: Fine motor skills:

- Use a range of small tools, including scissors, paintbrushes and cutlery.

Expressive Arts and Design
Reception:

- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.

ELG: EAD: Creating with materials:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used.

• Develop their own ideas and then decide which materials to use to express them. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects.	