

Design and Technology Long Term Plan



Design and Technology in the Early Years

Design and Technology is embedded within the Early Years' Foundation Stage Curriculum through the use of the learning environment and classroom provision. Teachers in the Early Years plan topics and experiences to provide opportunities for children to gain knowledge and understanding of their world (UTW/PSED) and to cover the breadth of the curriculum, but also follow the children's interests, which can often take them in a different direction. Design is not just about drawing, but about thinking, involving some experience, some imagination and a willingness to change and modify ideas (C&L/EAD). Technology, on the other hand, is about doing - making something for a purpose, involving putting ideas into practice and having an awareness of the possibilities and limitations of different materials, including making mistakes (PD/PSED).

DT forms part of the learning within Understanding the World as well as Expressive Arts & Design ELG: Creating with Materials. Design and technology in EYFS enables learners to make sense of the 'made world' in which they live (UTW). By making, changing and modifying (or designing) things for themselves, learners come not simply to a greater understanding of their world, but to a sense of agency - of being able to change and modify their environment (UTW/PSED).

Design and Technology in Key Stage One and Key Stage Two

Design and Technology in Key Stage One and Two is taught in half termly units of work. On our Subject Long Term Plan, learning is presented in a consistent manner as detailed below:

Autumn One: Textiles

Cross-stitch and appliqué

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products
evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge: To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces.

What stitch have you used along the seam?

Term Coverage and Unit Focus

Unit Overview

National Curriculum Focus

Non-Statutory Focus

Enquiry Question(s)

Design and Technology Long Term Plan



	Autumn Term	Spring Term	Summer Term
Year One	<p><u>Autumn One: Cooking and nutrition</u> <i>Fruit and Vegetable Smoothies</i></p> <p><u>Design</u> <i>design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i></p> <p><u>Make</u> <i>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i></p> <p><u>Technical Knowledge</u> <i>Understand where food comes from</i></p> <p>What parts of a plant can be eaten by people as food? How can you prepare this food for eating?</p> <p><u>Autumn Two: Mechanisms / Mechanical systems</u> <i>Making a moving story</i></p> <p><u>Design</u> <i>design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i></p> <p><u>Make</u> <i>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i></p> <p><u>Evaluate</u> <i>explore and evaluate a range of existing products evaluate their ideas and products against design criteria</i></p> <p><u>Technical Knowledge</u> <i>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</i></p> <p>How does a slider help your character to move across a page?</p>	<p><u>Spring One: Textiles</u> <i>Making a puppet</i></p> <p><u>Design</u> <i>design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i></p> <p><u>Make</u> <i>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i></p> <p><u>Evaluate</u> <i>explore and evaluate a range of existing products</i></p> <p>How will I join fabric to make a puppet?</p>	<p><u>Summer One: Structures</u> <i>Constructing windmills</i></p> <p><u>Make</u> <i>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i></p> <p><u>Evaluate</u> <i>explore and evaluate a range of existing products evaluate their ideas and products against design criteria</i></p> <p><u>Technical Knowledge</u> <i>Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</i></p> <p>How can you make your structure stable?</p> <p><u>Summer Two: Mechanisms</u> <i>Wheels and Axels</i></p> <p><u>Design</u> <i>design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</i></p> <p><u>Make</u> <i>select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</i></p> <p><u>Evaluate</u> <i>explore and evaluate a range of existing products evaluate their ideas and products against design criteria</i></p> <p><u>Technical Knowledge</u> <i>Build structures, exploring how they can be made stronger, stiffer and more stable.</i></p> <p>How do wheels move?</p>

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Year Two

Autumn Two: Structures

Designing and producing freestanding baby bear chair

Design

*design purposeful, functional, appealing products for themselves and other users based on design criteria
generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology*

Make

*select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics*

Evaluate

*explore and evaluate a range of existing products
evaluate their ideas and products against design criteria*

Technical Knowledge

Build structures, exploring how they can be made stronger, stiffer and more stable.

How can you make a structure strong?

Spring One: Mechanisms

„Moving Monster

Design

*design purposeful, functional, appealing products for themselves and other users based on design criteria
generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology*

Make

*select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics*

Evaluate

*explore and evaluate a range of existing products
evaluate their ideas and products against design criteria*

Technical Knowledge

Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

What materials could you use to represent fur, scales and claws?

Spring Two: Cooking and Nutrition

Balanced diets

Design

*design purposeful, functional, appealing products for themselves and other users based on design criteria
generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology*

Make

*select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics*

Evaluate

*explore and evaluate a range of existing products
evaluate their ideas and products against design criteria*

Technical Knowledge

*Understand where food comes from.
Use basic principles of a healthy and varied diet to prepare dishes.*

How will you include multiple food groups within a recipe?

What are the 5 different food groups?

Summer One: Mechanisms

Fairground wheels

Design

*design purposeful, functional, appealing products for themselves and other users based on design criteria
generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology*

Make

*select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics*

Evaluate

*explore and evaluate a range of existing products
evaluate their ideas and products against design criteria*

Technical Knowledge

Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

How will I create a strong and stable Ferris wheel?

Summer Two: Textiles

Pouches

Design

*design purposeful, functional, appealing products for themselves and other users based on design criteria
generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology*

Make

*select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics*

Evaluate

*explore and evaluate a range of existing products
evaluate their ideas and products against design criteria*

What can I do to ensure the stitch is secure?

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Year Three

Autumn One: Textiles

Cross-stitch and appliqué

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge: To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces.

What stitch have you used along the seam?

Spring One: Mechanical Systems

Pneumatic Toys

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose,

aimed at particular individuals or groups

generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

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Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

How will you create a pneumatic system to create a desired motion?

Spring Two: Cooking and Nutrition

Eating seasonally

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting and finishing], accurately

select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities

Technical Knowledge

Understand and apply principles of a healthy and varied diet. Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.

Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

What are the benefits of seasonal fruit and vegetable when cooking?

Summer One: Digital World

Wearable technology

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose,

aimed at particular individuals or groups

generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Apply their understanding of computing to program, monitor and control their products.

How can I control and monitor wearable technology?

Summer Two: Structures

Castles

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

How can I create a stable castle?

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Year Four

Autumn Two: Structures
Shell structures (Pyramids)

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

What frame structure have you used for your structure, is it a stable structure?

Spring One: Mechanical Systems
Slingshot Cars

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

Which vehicle has the least air resistance?

Spring two: Cooking and Nutrition

Adapting a recipe

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting and finishing], accurately
select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities

Technical Knowledge

Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.

How can I adapt a simple recipe to make it unique?

Summer One: Textiles
Fastening

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
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Make

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Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Which fastening will I use to bring two pieces of fabric together?

Summer Two: Electrical Systems

Torches

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].

How will I get a working electrical circuit and switch?

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Year Five

Autumn Two: Structures

Creating a bridge using triangulation.

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

On your structure where might there be a compression force, how will you reinforce the structure?

Spring One: Mechanical systems

Making a pop- up book

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

How will you create and input and output in your pop-up book?

Spring Two: Digital World

Monitoring Devices

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Apply their understanding of computing to program, monitor and control their products.

How will you programme to monitor the temperature and code an (audible or visual) alert when the temperature moves out of a specified range?

Summer One: Cooking and Nutrition

Developing a recipe (Baking bread rolls)

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Understand and apply principles of a healthy and varied diet. Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.

Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Technical Knowledge: Apply their understanding of computing to program, monitor and control their products.

How will you add nutritional value to my recipe?

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SPRING GROVE
PRIMARY SCHOOL

Summer One: Electrical Systems

Doodlers

Design

*use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design*

Evaluate

*investigate and analyse a range of existing products
evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
understand how key events and individuals in design and technology have helped shape the world*

Technical Knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].

How will you create a functional series circuit?

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Year Six

Autumn Two: Structures

To design and building a range of play apparatus structures drawing upon new and prior knowledge of structures.

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products
evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

What materials will you use to decorate and reinforce the structure?

Spring One: Cooking and Nutrition

Food Come Dine with Me

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products
evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Understand and apply principles of a healthy and varied diet.

Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.

Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

How will you ensure safety and hygiene when creating a 3 course meal?

Summer One Mechanical Systems

Automata Toys

Design

use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

investigate and analyse a range of existing products
evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
understand how key events and individuals in design and technology have helped shape the world

Technical Knowledge

Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

How can you create different movements in your Automata?

Design and Technology Long Term Plan



		<p style="text-align: center;"><u>Spring Two: Digital World</u> <i>Navigating the World</i></p> <p style="text-align: center;"><u>Design</u></p> <p style="text-align: center;"><i>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</i></p> <p style="text-align: center;"><i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i></p> <p style="text-align: center;"><u>Make</u></p> <p style="text-align: center;"><i>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i></p> <p style="text-align: center;"><i>select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</i></p> <p style="text-align: center;"><u>Evaluate</u></p> <p style="text-align: center;"><i>investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world</i></p> <p style="text-align: center;"><u>Technical Knowledge</u></p> <p style="text-align: center;"><i>Apply their understanding of computing to program, monitor and control their products.</i></p> <p style="text-align: center;">How can you place and manoeuvre objects using CAD?</p>	<p style="text-align: center;"><u>Summer Two: Electrical Systems</u> <i>Steady Hand Game</i></p> <p style="text-align: center;"><u>Design</u></p> <p style="text-align: center;"><i>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</i></p> <p style="text-align: center;"><i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i></p> <p style="text-align: center;"><u>Make</u></p> <p style="text-align: center;"><i>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i></p> <p style="text-align: center;"><i>select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</i></p> <p style="text-align: center;"><u>Evaluate</u></p> <p style="text-align: center;"><i>investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world</i></p> <p style="text-align: center;"><u>Technical Knowledge</u></p> <p style="text-align: center;"><i>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</i></p> <p style="text-align: center;">How will you create difficulty to your steady hand game?</p>
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