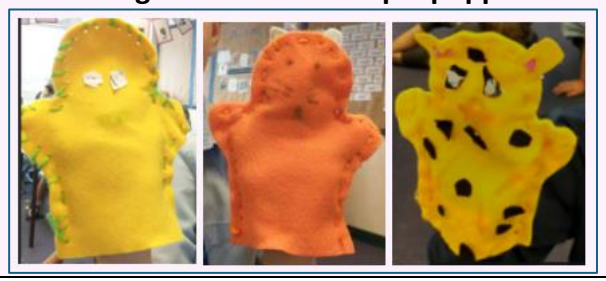
D.T. Long Term Plan – Year 1 September 2025

Cottingley Village Primary School

	Autumn 1	Spring 1	Summer 1
D.T.	**Design and make me a house to live in.** 	**Design and make a simple puppet** 	**Design and make a healthy smoothie** 
	Focus: Structures **Area Specific Skills** • To understand the characteristics of different materials. • To understand the characteristics of different components. • To understand how structures are made. • To understand how a structure can be made stronger, stiffer and more stable.	**Focus: Textiles** **Area Specific Skills** • To mark desired shapes onto fabric. • To cut out simple 2D shapes made from fabric. • To join material together using simple techniques to create a 3D textiles product: glue, staples, ribbon	**Focus: Cooking** **Area specific skills** • To understand basic food hygiene. • To understand how to be safe about cooking equipment. • To understand the basics of a healthy diet. • To understand the components of a healthy snack. • To develop practical skills: - Pour / Peel / Measure / Cut / Mix
	Other Skills **Research** • To discuss existing products and how they are made. **Design** • To draw on own experiences to generate ideas. • To identify the purpose of a product. • To design a product against a simple design criteria. • To use pictures and words to plan. **Make** • To identify different tools and know the correct name. • To describe the purpose of different tools. • To select and use a range of different materials and components for a particular purpose. • To join materials using simple techniques. • To safely use scissors to cut. • To use glue and masking tape to join materials and components. • To use simple finishing techniques to improve the appearance of the product.	**Other skills**. **Research** • To discuss existing products and how they are made. **Design** • To draw on own experiences to generate ideas. • To identify the purpose of a product. • To design a product against a simple design criteria. • To use pictures and words to plan. **Make** • To identify different tools and know the correct name. • To describe the purpose of different tools. • To select and use a range of different materials and components for a particular purpose. • To join materials using simple techniques. • To safely use scissors to cut. • To use glue and masking tape to join materials and components.	**Other Skills** **Research** • To discuss existing products and how they are made. **Design** • To draw on own experiences to generate ideas. • To identify the purpose of a product. • To design a product against a simple design criteria. • To use pictures and words to plan. **Make** • To identify different tools and know the correct name. • To describe the purpose of different tools. • To select and use a range of different materials and components for a particular purpose. • To join materials using simple techniques. • To safely use scissors to cut. • To use glue and masking tape to join materials and components.

	Evaluate • To evaluate pre -existing product by discussing the overall purpose verbally. • To identify the strengths of their product. • To suggest simple improvements for their product. • To explain what and how their product is made.	• To use simple finishing techniques to improve the appearance of the product. **Evaluate** • To evaluate pre -existing product by discussing the overall purpose verbally. • To identify the strengths of their product. • To suggest simple improvements for their product. • To explain what and how their product is made.	• To use simple finishing techniques to improve the appearance of the product. **Evaluate** • To evaluate pre -existing product by discussing the overall purpose verbally. • To identify the strengths of their product. • To suggest simple improvements for their product. • To explain what and how their product is made.
	Why? This unit teaches children basic concepts about materials and structures. They learn about different materials and components, how structures are made, and ways to make them stronger. These skills are important for young learners as they start to explore and understand the world around them. Children also learn about shapes, sizes, and how different pieces fit together to make a finished product.	**Why?** This unit teaches children how to mark shapes onto fabric, cut out simple 2D shapes, and join materials using easy techniques. These activities help develop their fine motor skills, creativity, and understanding of how to create 3D textile products.	**Why?** This unit teaches children essential life skills early on. Understanding basic food hygiene and how to be safe with cooking equipment ensures they can handle food safely. Learning about a healthy diet and the components of a healthy snack helps them make good food choices.
	Why Now? This unit builds upon the experimentation using large and small construction within EYFS and uses familiar materials to design and make something which is familiar to them. It encourages children to deepen their understanding of how to use materials for a specific purpose.	**Why Now?** This unit is taught in Year One because children at this age have developed the fine motor skills and attention span needed to handle tasks like marking shapes, cutting fabric, and joining materials.	**Why Now?** This unit is taught in Year One because children at this age are ready to learn basic food hygiene, safety with cooking equipment, and healthy eating habits. It also builds upon their confidence and coordination in the kitchen and sets them up on a journey for a healthy lifestyle during their time in school.

D.T. Long Term Plan – Year 2 September 2025

	Autumn 1	Autumn 2	Summer 1
D.T.	**Design and make a moving vehicle**  **Focus: Mechanisms** **Area Specific Skills** • To explore different mechanisms. • To understand the purposes and uses of different mechanisms. • To select and use a suitable mechanisms for their own design (e.g. wheels, axles). • To use the correct technical vocabulary based on their product.	**Design and make a bug hotel.** **Focus: Structures**  **Area Specific Skills** • To understand the functional properties of a material. • To understand the characteristics of different components. • To understand how a structure can be made stronger, stiffer and more stable. • To understand the purposes and uses of different mechanisms. • To select and use a suitable mechanism for their own design (e.g. wheels, axles).	**Design and make a healthy wrap for a king**  **Focus: Cooking** **Area Specific Skills** • To follow safe procedures for food safety and hygiene. • To understand where different foods come from. • To identify the key principles for a healthy diet. • To look at different foods from around the world. • To develop practical skills: - Slice - Grate
	Other Skills **Research** • To discuss existing products: what they are and who/what they are for. • To identify materials used in an existing product. • To discuss likes/dislikes about an existing product. **Design** • To develop ideas through discussion and observation. • To take design inspiration from existing products. • To identify the purpose and audience for what they intend to design and make. • To identify a simple design criteria. • To make simple design drawings with labels. • To create a template/mock-up of their design.	**Other Skills** **Research** • To discuss existing products: what they are and who/what they are for. • To identify materials used in an existing product. • To discuss likes/dislikes about an existing product. **Design** • To develop ideas through discussion and observation. • To take design inspiration from existing products. • To identify the purpose and audience for what they intend to design and make. • To identify a simple design criteria. • To make simple design drawings with labels. • To create a template/mock-up of their design.	**Other Skills** **Research** • To discuss existing products: what they are and who/what they are for. • To identify materials used in an existing product. • To discuss likes/dislikes about an existing product. **Design** • To develop ideas through discussion and observation. • To take design inspiration from existing products. • To identify the purpose and audience for what they intend to design and make. • To identify a simple design criteria. • To make simple design drawings with labels. • To create a template/mock-up of their design.

	Make • To describe materials and components according to their characteristics. • To select the correct tools and equipment for a project. • To begin to measure and mark out. • To assemble, join and combine different materials. • To use hand tools safely and appropriately. • To use finishing techniques to strengthen a product. **Evaluate** • To identify and evaluate the strengths and weaknesses of their product. • To identify possible changes they could make to their design/product. • To discuss what went well and what could have been done differently.	**Make** • To describe materials and components according to their characteristics. • To select the correct tools and equipment for a project. • To begin to measure and mark out. • To assemble, join and combine different materials. • To use hand tools safely and appropriately. • To use finishing techniques to strengthen a product. **Evaluate** • To identify and evaluate the strengths and weaknesses of their product. • To identify possible changes they could make to their design/product. • To discuss what went well and what could have been done differently.	**Make** • To describe materials and components according to their characteristics. • To select the correct tools and equipment for a project. • To begin to measure and mark out. • To assemble, join and combine different materials. • To use hand tools safely and appropriately. • To use finishing techniques to strengthen a product. **Evaluate** • To identify and evaluate the strengths and weaknesses of their product. • To identify possible changes they could make to their design/product. • To discuss what went well and what could have been done differently.
	Why? This unit teaches children to explore different mechanisms and understand their purposes and uses. Children select and use suitable mechanisms like wheels and axles and learn how to use them in their own designs. Simple technical vocabulary is introduced, and this helps them describe their products accurately.	**Why?** This unit teaches children about the functional properties of materials and the characteristics of different components. They can learn how to make structures stronger, stiffer, and more stable. At this age, they are also able to grasp the purposes and uses of different mechanisms and select suitable ones for their own designs, such as wheels and axles.	**Why?** This unit teaches children important skills related to food safety and hygiene. They can understand where different foods come from and identify the key principles of a healthy diet. Exploring foods from around the world broadens their cultural awareness.
	Why Now? This unit is taught in Year Two because children at this age have more developed cognitive understanding needed to can grasp how wheels and axles work together to make objects move, this also builds on their existing knowledge of shapes and spatial awareness. Their fine motor skills are more developed and they are capable of more precise cutting, joining, and assembling tasks. This also lays the foundation for more complex mechanical concepts that will be explored in later years.	**Why Now?** This unit is taught in Year Two because children at this age have developed the cognitive and fine motor skills needed to understand the functional properties of materials and the characteristics of different components. The structures learning will build upon the Year One house project with an opportunity to choose from a wider range of materials and adopting different choices to create an individual product.	**Why Now?** This unit is taught in Year Two because children at this age are naturally curious and eager to learn about the world around them. Introducing a range of different foods and culture taps into their curiosity and makes learning more engaging. More accurate fine motor skills enable the skills of slicing and grating to be achieved safely. This builds upon the learning of Year One smoothies as the children will explore savoury flavours that will be prepared and presented in a different way. Encouraging the children to choose healthy food builds a strong foundation for healthy eating habits in the future.

D.T. Long Term Plan – Year 3 September 2025

Cottingley Village Primary School

D.T.

Autumn 2

Design and create a foraging bag

Focus: Textiles

Area Specific Skills

- To plan and mark desired shapes and outlines onto fabric.
- To use fabric scissors to cut out different fabric materials with some accuracy.
- To attach 2D shapes together using pins.
- To thread a needle.
- To join identical material together using a running stitch.

Other Skills

Research

- To research existing products and discuss the overall purpose.
- To discuss the aesthetic qualities of an existing product.
- To understand how products work to achieve their purpose.

Design

- To generate ideas by considering the purpose of their design.
- To describe the purpose and intended audience of their product to support their design.
- To establish a simple design criteria for a functional product.
- To make design drawings with clear labelled aspects and an outline of materials/equipment needed.

Spring 2

Design and make a healthy pizza

Focus: Cooking

Area Specific Skills

- To reinforce knowledge of basic food hygiene.

- To use all cooking equipment responsibly and safely.
- To begin to demonstrate hygienic food preparation.
- To understand the components for a healthy and varied diet.
- To understand how different foods are sourced.
- To develop practical skills:
  - Knead
  - Bake

Other Skills

Research

- To research existing products and discuss the overall purpose.
- To discuss the aesthetic qualities of an existing product.
- To understand how products work to achieve their purpose.

Design

- To generate ideas by considering the purpose of their design.
- To describe the purpose and intended audience of their product to support their design.
- To establish a simple design criteria for a functional product.
- To make design drawings with clear labelled aspects and an outline of materials/equipment needed.

Summer 1

Design and make a Greek temple for a god

Focus: Structures / Mechanisms

Area Specific Skills

- To apply their understand of measures to their product (mm, cm, m).
- To understand the aesthetic qualities of a material.
- To use technical vocabulary to describe their product.
- To develop a good understanding of how structures work.

Other Skills

Research

- To research existing products and discuss the overall purpose.
- To discuss the aesthetic qualities of an existing product.
- To understand how products work to achieve their purpose.

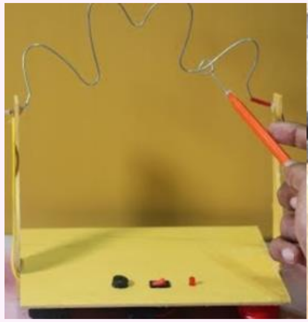
Design

- To generate ideas by considering the purpose of their design.
- To describe the purpose and intended audience of their product to support their design.
- To establish a simple design criteria for a functional product.
- To make design drawings with clear labelled aspects and an outline of materials/equipment needed.

	• To develop designs by modelling ideas in the form of a prototype. **Make** • To select tools and techniques to use with their product. • To begin to measure and mark out materials and components. • To work safely and accurately with a range of different tools. • To use finishing techniques to improve the appearance of a product. **Evaluate** • To evaluate their product against their design criteria. • To identify what worked well during the making stage. • To identify the strengths and weaknesses of their product. • To consider views of others with improvement suggestions linking to the design brief.	• To develop designs by modelling ideas in the form of a prototype. **Make** • To select tools and techniques to use with their product. • To begin to measure and mark out materials and components. • To work safely and accurately with a range of different tools. • To use finishing techniques to improve the appearance of a product. **Evaluate** • To evaluate their product against their design criteria. • To identify what worked well during the making stage. • To identify the strengths and weaknesses of their product. • To consider views of others with improvement suggestions linking to the design brief.	• To develop designs by modelling ideas in the form of a prototype. **Make** • To select tools and techniques to use with their product. • To begin to measure and mark out materials and components. • To work safely and accurately with a range of different tools. • To use finishing techniques to improve the appearance of a product. **Evaluate** • To evaluate their product against their design criteria. • To identify what worked well during the making stage. • To identify the strengths and weaknesses of their product. • To consider views of others with improvement suggestions linking to the design brief.
	Why? This unit teaches children basic skills in textiles and fabric work. They plan and mark shapes on fabric, which helps with spatial awareness. Cutting fabric with scissors improves their fine motor skills. Using pins to attach shapes teaches assembly techniques. Threading a needle and sewing with a running stitch builds dexterity and introduces sewing skills. These activities encourage creativity, independence, and problem-solving, preparing them for future design and technology learning.	**Why?** This unit teaches reinforces knowledge of basic food hygiene and teaches children to use cooking equipment responsibly and safely, children learn the importance of cleanliness and safety in the kitchen. They begin to demonstrate hygienic food preparation and understand the components of a healthy and varied diet, which lays the foundation for lifelong healthy eating habits. Additionally, understanding how different foods are sourced broadens their knowledge of food origins.	**Why?** This unit teaches allows children to apply their understanding of measurements like millimetres, centimetres, and meters in practical ways. They learn to appreciate the aesthetic qualities of different materials and use technical vocabulary to describe their creations. They explore a range of different paper engineering techniques to create their own 3D shapes and decorations to ensure their product is carefully suited towards their audience.
	Why Now? Teaching this unit of work in Year Three strikes a balance between the developmental readiness of children and the complexity of the skills involved. By Year Three, children are more capable of understanding and following multi-step instructions, which is crucial for planning, marking, and assembling fabric pieces. This builds upon the Year One puppets as the children use more advanced joining techniques (sewing) to combine pieces of fabric together.	**Why Now?** Teaching this unit in Year Three is ideal because children at this age have developed better fine motor skills and can handle cooking tools more safely. They are also more capable of understanding and following hygiene practices and the basics of a healthy diet. This builds upon the learning from Year One and Two with a deeper emphasis on how savoury flavours go together when cooking food. The children are old enough to understand safety around using an oven.	**Why Now?** Teaching this unit in Year Three is ideal because children at this age have a better grasp of measurements and can apply them more accurately. They are also more capable of understanding and discussing the aesthetic qualities of materials and using technical vocabulary. Introducing these concepts earlier might be too complex, while waiting until later could delay the development of these important skills in understanding how structures work. This builds upon the learning from Year One and Two, allowing children to create a more complex structure using a range of different techniques with the freedom of choice.

D.T. Long Term Plan – Year 4 September 2025

<table>
<tr><th></th><th>Autumn 1</th><th>Spring 2</th><th>Summer 1</th></tr>
<tr><td rowspan="2">D.T.</td>
<td>Design and make a Pneumatic toy
 
Focus: Mechanisms

To join materials using permanent and temporary fixings.
To combine a number of components in a product.
Selecting appropriate materials to make a strong structure.
To look at the different functions of mechanical systems.
To understand the components within a mechanical system.
To evaluate the purpose of a particular mechanical system.
</td>
<td>Design and make a Steady Hand game
  
Focus: Electrical & Structures

To join materials using permanent and temporary fixings.
To combine several components in a product.
Selecting appropriate materials to make a strong structure.
To make links with science and their understanding of a circuit.
To apply their knowledge of what components a circuit needs.
To design and make a product that incorporates a working electrical circuit.
</td>
<td>Design and make Rainforest Cookies
 
Focus: Cooking

To apply their understanding of basic food hygiene.
To apply their understanding of how to be safe around cooking equipment.
To demonstrate hygienic food preparation.
To look at different cooking techniques.
To begin to use different cooking techniques.
To follow and adapt a recipe.
</td></tr>
<tr>
<td><u>Other Skills</u>
<u>Research</u>

To research and evaluate existing products.
To evaluate different products and take inspiration for their own design criteria.

<u>Design</u>

To generate ideas for a product by considering the purpose and audience.
To generate a range of realistic ideas that focus on the needs of the user.
To make labelled designs from different viewpoints.
To outline the making process alongside the materials, components and appropriate tools needed.

<u>Make</u></td>
<td><u>Other Skills</u>
<u>Research</u>

To research and evaluate existing products.
To evaluate different products and take inspiration for their own design criteria.

<u>Design</u>

To generate ideas for a product by considering the purpose and audience.
To generate a range of realistic ideas that focus on the needs of the user.
To make labelled designs from different viewpoints.
To outline the making process alongside the materials, components and appropriate tools needed.

<u>Make</u></td>
<td><u>Other Skills</u>
<u>Research</u>

To research and evaluate existing products.
To evaluate different products and take inspiration for their own design criteria.

<u>Design</u>

To generate ideas for a product by considering the purpose and audience.
To generate a range of realistic ideas that focus on the needs of the user.
To make labelled designs from different viewpoints.
To outline the making process alongside the materials, components and appropriate tools needed.

<u>Make</u></td></tr>
</table>

	• To explain their choice of materials and components based on their functional properties. • To select the most effective components for their product. • To mark out, measure and cut a range of different materials with accuracy. • To join and combine different materials and components accurately. **Evaluate** • To evaluate their work during and after they have made their product. • To evaluate their product by carrying out appropriate tests to check its purpose. • To evaluate the appearance and usability of their product. • To evaluate against the design brief.	• To explain their choice of materials and components based on their functional properties. • To select the most effective components for their product. • To mark out, measure and cut a range of different materials with accuracy. • To join and combine different materials and components accurately. **Evaluate** • To evaluate their work during and after they have made their product. • To evaluate their product by carrying out appropriate tests to check its purpose. • To evaluate the appearance and usability of their product. • To evaluate against the design brief.	• To explain their choice of materials and components based on their functional properties. • To select the most effective components for their product. • To mark out, measure and cut a range of different materials with accuracy. • To join and combine different materials and components accurately. **Evaluate** • To evaluate their work during and after they have made their product. • To evaluate their product by carrying out appropriate tests to check its purpose. • To evaluate the appearance and usability of their product. • To evaluate against the design brief.
	Why? This unit integrates practical learning with critical thinking. Children join materials using permanent and temporary fixings, combine components, and select appropriate materials to create strong structures, enhancing their understanding of material properties and construction techniques. Exploring mechanical systems and their functions helps children grasp how everyday objects work, fostering problem-solving skills and mechanical reasoning. Evaluating the purpose of these systems encourages thoughtful design and functionality. This project also links with the Science curriculum, reinforcing concepts like sound and vibration, and showing real-world applications.	**Why?** This unit on Electrical Structures & Mechanisms combines hands-on learning with critical thinking. Children join materials, integrate components, and select appropriate materials, fostering practical skills and decision-making. Understanding mechanical systems and evaluating their purpose enhances problem-solving abilities. Linking science concepts, particularly circuits, shows real-world applications and solidifies their knowledge. Designing and making products with working electrical circuits encourages creativity and innovation. Overall, this unit builds technical skills, creativity, and a deeper understanding of how things work, essential for future learning and development.	**Why?** This unit integrates practical learning with environmental education. Children learn about the origins of ingredients found in the rainforest, fostering an appreciation for biodiversity and sustainability. This project also teaches essential cooking skills, such as measuring and combining ingredients, which enhances their fine motor skills and understanding of food science. Creating their own recipe supports them to understand the importance of precise measurements and following instructions, which are essential skills in both cooking and other areas of learning. Packaging design helps communicate the product's identity and features, making it more appealing and informative. It teaches children how to convey essential information and brand identity through visual elements. Good packaging also protects the product during transportation and storage, ensuring it remains intact and fresh.
	Why Now? This unit build upon the work done in year 3 and KS1 on structures and simple mechanisms but introduces the element of Pneumatics to allow movement. Pneumatics also links with the Science curriculum, reinforcing concepts taught previously in year 3 such as air pressure and movement, and showing real-world applications. By this time children have developed the cognitive skills necessary to understand and construct simple pneumatic systems. Children can also handle practical tasks like joining materials and integrating several components effectively, which enhances their problem-solving abilities and mechanical reasoning skills.	**Why Now?** Teaching this unit in Year Four is ideal because children at this age have developed the necessary foundational skills in both science and design technology to tackle more complex concepts. By Year 4, children are ready to understand and construct simple electrical circuits, which aligns with the Science curriculum's focus on electricity. Children also have the fine motor skills and cognitive abilities to handle more intricate tasks like joining materials and integrating components. The structures element of this unit builds upon the earlier work in year 3 and KS but introduces the children to working with a soft wood to make the frame in readiness for yr6.	**Why Now?** This unit builds upon the Year 3 savoury cooking experience, where children learned to prepare savoury dishes. In Year 4, they transition to cooking sweet foods, expanding their culinary skills and knowledge. Children at this can begin to appreciate the elements that go into creating a simple recipe and how these must be carefully combined to create a product that looks good and tastes nice. This will then be built upon in upper KS2 where more complex recipes will be designed and made.

D.T. Long Term Plan – Year 5 September 2025

	Spring 1	Spring 2	Summer 1
	One theme each term		
D.T.	**Design and make a nutritious vegetarian curry**  **Focus: Cooking** • To outline their understanding of basic food hygiene. • To reinforce their understanding of how to be safe around cooking equipment. • To look at more complex cooking techniques. • To understand how foods are sourced and grown different times of year (based on the season).	**Design and make a comfort toy**  **Focus: Textiles** • To plan and design a 2D pattern piece. • To use fabric scissors to cut out different fabric materials with accuracy. • To join a combination of fabric shapes together. • To use an invisible stitch. • To choose the correct needle for a desired purpose. • To add appropriate and aesthetically pleasing finishing techniques.	**Design and make a moving story book**  **Focus: Mechanisms** • To understand the use of different mechanical systems for different existing products. • To experiment with different levers and linkages to understanding how they work (e.g. levers, sliders). • To add mechanical elements to make movements in a finished product.
	<u>Other Skills</u> <u>Research</u> • To conduct research and use different sources to gather information about existing products. • To discuss and analyse a range of existing products. • To understand how key events in design and technology have helped to shape the world. <u>Design</u> • To generate ideas through mind-mapping. • To create a design criteria which identifies essential and desirable aspects. • To draw multiple designs with key label and identify positives and negatives. • To produce a detailed plan of their chosen design. • Create a step-by-step guide of the making process.	<u>Other Skills</u> <u>Research</u> • To conduct research and use different sources to gather information about existing products. • To discuss and analyse a range of existing products. • To understand how key events in design and technology have helped to shape the world. <u>Design</u> • To generate ideas through mind-mapping. • To create a design criteria which identifies essential and desirable aspects. • To draw multiple designs with key label and identify positives and negatives. • To produce a detailed plan of their chosen design. • Create a step-by-step guide of the making process.	<u>Other Skills</u> <u>Research</u> • To conduct research and use different sources to gather information about existing products. • To discuss and analyse a range of existing products. • To understand how key events in design and technology have helped to shape the world. <u>Design</u> • To generate ideas through mind-mapping. • To create a design criteria which identifies essential and desirable aspects. • To draw multiple designs with key label and identify positives and negatives. • To produce a detailed plan of their chosen design. • Create a step-by-step guide of the making process.

	• To experiment with materials and equipment to make a functioning prototype. **Make** • To use different tools to expertly adopt differing techniques for a desired effect. • To cut and join materials together with accuracy to create a good quality product. • To assemble components with working models. • To consider appropriate aesthetic techniques and functionality. • Begin to be resourceful with practical problems. **Evaluate** • To evaluate their product against their own design criteria and specification. • To evaluate their product independently and determine is It fit for purpose? • Suggest improvements considering materials and methods used.	• To experiment with materials and equipment to make a functioning prototype. **Make** • To use different tools to expertly adopt differing techniques for a desired effect. • To cut and join materials together with accuracy to create a good quality product. • To assemble components with working models. • To consider appropriate aesthetic techniques and functionality. • Begin to be resourceful with practical problems. **Evaluate** • To evaluate their product against their own design criteria and specification. • To evaluate their product independently and determine is It fit for purpose? • Suggest improvements considering materials and methods used.	• To experiment with materials and equipment to make a functioning prototype. **Make** • To use different tools to expertly adopt differing techniques for a desired effect. • To cut and join materials together with accuracy to create a good quality product. • To assemble components with working models. • To consider appropriate aesthetic techniques and functionality. • Begin to be resourceful with practical problems. **Evaluate** • To evaluate their product against their own design criteria and specification. • To evaluate their product independently and determine is It fit for purpose? • Suggest improvements considering materials and methods used.
	Why? This unit teaches children in Year Five to outline their understanding of basic food hygiene and reinforce their knowledge of safety around cooking equipment. They explore more complex cooking techniques (use of a hot plate) and learn how foods are sourced and grown at different times of the year based on the season. Children will also explore flavours using spices for a desired and flavoursome taste.	**Why?** This unit teaches children in Year Five to develop essential research skills and critical thinking by analysing existing products. It also helps children understand the impact of key events in Design and Technology on the world. By linking this to the textiles industry, children learn basic sewing skills, which are crucial for everyday life. Sewing promotes sustainability by enabling clothing repairs, fosters creativity through garment creation, and enhances problem-solving and hand-eye coordination, providing valuable life skills.	**Why?** This unit teaches children to understand the use of different mechanical systems in existing interactive books. By experimenting with levers and linkages, they learn how these mechanisms work and this hands-on experience allows them to add these elements to their product. The purpose of the mechanisms is to provide an interactive reading experience for their target audience.
	Why Now? This unit is taught in Year Five because it builds on the foundational cooking skills the children have previously developed, such as making a smoothie in Year 1, a savoury wrap in Year 2, pizza in Year 3 and an adapted cookie recipe in Year 4. At this stage, children are ready to handle more complex cooking techniques, like using a hot plate, which requires a deeper understanding of food hygiene and safety around cooking equipment. They also learn about seasonal food sourcing and the use of spices to create desired flavours, which adds to their culinary knowledge. This progression prepares them for making more intricate dishes, such as a vegetarian curry, by reinforcing their skills in food preparation, safety, and flavour enhancement.	**Why Now?** This unit is taught in Year Five because it builds on the foundational skills the children have already developed, such as making a small tote bag with a running stitch in Year 3 and a fairy puppet in Year 1. At this stage, children are ready to advance to more complex projects, like creating a comfort toy with an invisible stitch and intricate finishing techniques. This progression allows them to refine their sewing skills, learn more sophisticated methods, and pay greater attention to detail, which are appropriate challenges for their developmental level. It also helps them gain confidence in their abilities and prepares them for more advanced Design and Technology tasks in the future.	**Why Now?** This unit is taught in Year Five because it builds on the mechanical skills the children have previously developed. Having made a moving vehicle with wheels and axles in Year Two and a pneumatic toy in Year Four, they are now ready for more complex projects. Creating an interactive storybook with mechanisms allows them to deepen their understanding of mechanical systems, experiment with levers and linkages, and apply these elements to make movements in their finished product. Additionally, it gives children the freedom to choose appropriate mechanisms to achieve a desired effects for their own products, fostering creativity and decision-making skills.

D.T. Long Term Plan – Year 6 September 2025

Cottingley Village Primary School

	Autumn 1	Spring 1	Summer 1
D.T.	**Design and make a Victorian automata toy**  **Focus: Mechanisms / Structures** • Measuring, making and checking the accuracy of the wood and dowel. • To use a vice to hold wood in place. • To use the correct techniques to saw safely under adult supervision. • Assembling components accurately to make a steady frame. • Experimenting with a range of cams to create a desired movement.	**Design and make a 3D pencil holder**  **Focus: CAD/CAM** • To understand what CAD is. • To look at existing products with CAD. • To understand the different forms of CAD. • To begin to use different CAD resources. • To incorporates CAD into a design.	**Come dine with me – Design and create a 3-course meal**  **Focus: Cooking** • To demonstrate a strong understanding of food handling and safety. • To select suitable cooking techniques for a desired outcome. • To select ingredients suitable for a particular purpose. • To weigh and measure accurately. • To use finishing techniques with a range of different ingredients. • To write their own recipe.
	Other Skills **Research** • To discuss some of the great designers. • To suggest improvements upon existing designs and products. **Design** • To carry market research through interviews, surveys and questionnaires. • To identify the needs, wants and preferences of the intended user. • To develop their own specification against their own design criteria. • To develop a design proposal through modelling their ideas in a variety of ways.	**Other Skills** **Research** • To discuss some of the great designers. • To suggest improvements upon existing designs and products. **Design** • To carry market research through interviews, surveys and questionnaires. • To identify the needs, wants and preferences of the intended user. • To develop their own specification against their own design criteria. • To use CAD (Computer Aided Design) to design elements of a product. • To develop a design proposal through modelling their ideas in a variety of ways.	**Other Skills** **Research** • To discuss some of the great designers. • To suggest improvements upon existing designs and products. **Design** • To carry market research through interviews, surveys and questionnaires. • To identify the needs, wants and preferences of the intended user. • To develop their own specification against their own design criteria. • To develop a design proposal through modelling their ideas in a variety of ways.

	Make • To select and use appropriate tools, materials and techniques for their product to create a desired effect. • Use of materials and components to help make modifications as they go with precision. • To construct products using permanent joining techniques. • To use finishing techniques that require more than one step whilst considering aesthetic aspects and functionality. **Evaluate** • To identify the strengths and weaknesses of their product by carrying out appropriate tests. • To record their evaluations using detailed drawings with labels. • To evaluate their product against their own specification and suggest areas of improvements. • To evaluate their peers' products. • To consider the sustainability of their product and how much it would cost to make.	**Make** • To select and use appropriate tools, materials and techniques for their product to create a desired effect. • Use of materials and components to help make modifications as they go with precision. • To construct products using permanent joining techniques. • To use finishing techniques that require more than one step whilst considering aesthetic aspects and functionality. **Evaluate** • To identify the strengths and weaknesses of their product by carrying out appropriate tests. • To record their evaluations using detailed drawings with labels. • To evaluate their product against their own specification and suggest areas of improvements. • To evaluate their peers' products. • To consider the sustainability of their product and how much it would cost to make.	**Make** • To select and use appropriate tools, materials and techniques for their product to create a desired effect. • Use of materials and components to help make modifications as they go with precision. • To construct products using permanent joining techniques. • To use finishing techniques that require more than one step whilst considering aesthetic aspects and functionality. **Evaluate** • To identify the strengths and weaknesses of their product by carrying out appropriate tests. • To record their evaluations using detailed drawings with labels. • To evaluate their product against their own specification and suggest areas of improvements. • To evaluate their peers' products. • To consider the sustainability of their product and how much it would cost to make.
	Why? This develops children' technical skills, creativity, and understanding of design principles. Discussing great designers and suggesting improvements fosters critical thinking and conducting market research and identifying user needs enhances their ability to create relevant products. Developing specifications and design proposals through modelling ideas builds a strong foundation in design. Focusing on mechanisms and structures, this unit also develops skills such as precision measuring, sawing, and assembling components in a safe and focussed way. Children will learn that a cam typically converts rotary motion into linear motion and as the cam rotates, it causes a follower to move back and forth in a straight line - This mechanism is commonly used in various machinery to control movement precisely.	**Why?** This unit is crucial as it develops essential technical skills, fosters creativity and innovation, and prepares children for future careers in various fields like engineering and design. CAD allows for precise and efficient design work, integrating well with modern technology such as 3D printing. It helps children stay current with technological advancements and brings their creative ideas to life, encouraging problem-solving and innovation. Understanding CAD gives children a competitive edge and aligns with real-world applications, making it a valuable addition to the curriculum.	**Why?** This unit is essential as it helps children develop a strong understanding of food handling and safety, which is crucial for their well-being. They learn to select suitable cooking techniques for desired outcomes and choose ingredients for specific purposes. Accurate weighing and measuring are taught to ensure precision in cooking. Children also practice using finishing techniques with various ingredients, enhancing their culinary skills. Writing their own recipes fosters creativity and confidence in the kitchen. Working together to prepare a meal promotes teamwork and collaboration, essential skills for their future education and life promoting healthy eating habits, and encouraging independence and self-sufficiency.
	Why Now? This unit builds on previous skills learned in yr 2 and yr 5 creating moving vehicles, a pneumatic toy and moving storybooks using levers and linkages and allows them to use all of these skills in addition to adding a new skill to make their finished product. Year 6 children are better suited for this project because they have developed the cognitive and fine motor skills necessary for handling complex tasks like precision measuring, sawing, and assembling components safely. They	**Why Now?** Teaching CAD (Computer Aided Design) in Year 6 is ideal because children have developed the cognitive and fine motor skills necessary to handle CAD software effectively. CAD involves understanding complex design principles and technology, which are better grasped by older children. Introducing CAD at this stage prepares children for more advanced studies in secondary school and beyond. Older children are more likely to be engaged and interested in using	**Why Now?** This taught in the the final Term in school as it serves as a culmination of their learning, integrating knowledge from different subjects like maths (measuring ingredients), science (understanding food properties), and design technology (planning and creating a meal). Successfully creating a three-course meal boosts their confidence and prepares them for more complex tasks in secondary school and it provides a fun and rewarding way to

	have the maturity and understanding to engage in critical thinking when discussing great designers and suggesting improvements and are better suited to grasp the concept of how cams convert rotary motion into linear motion.	sophisticated tools like CAD, enhancing their learning experience. Year 6 children can build on their existing knowledge of design and technology, making the transition to using CAD smoother and more meaningful.	celebrate their achievements and the end of their primary school journey.