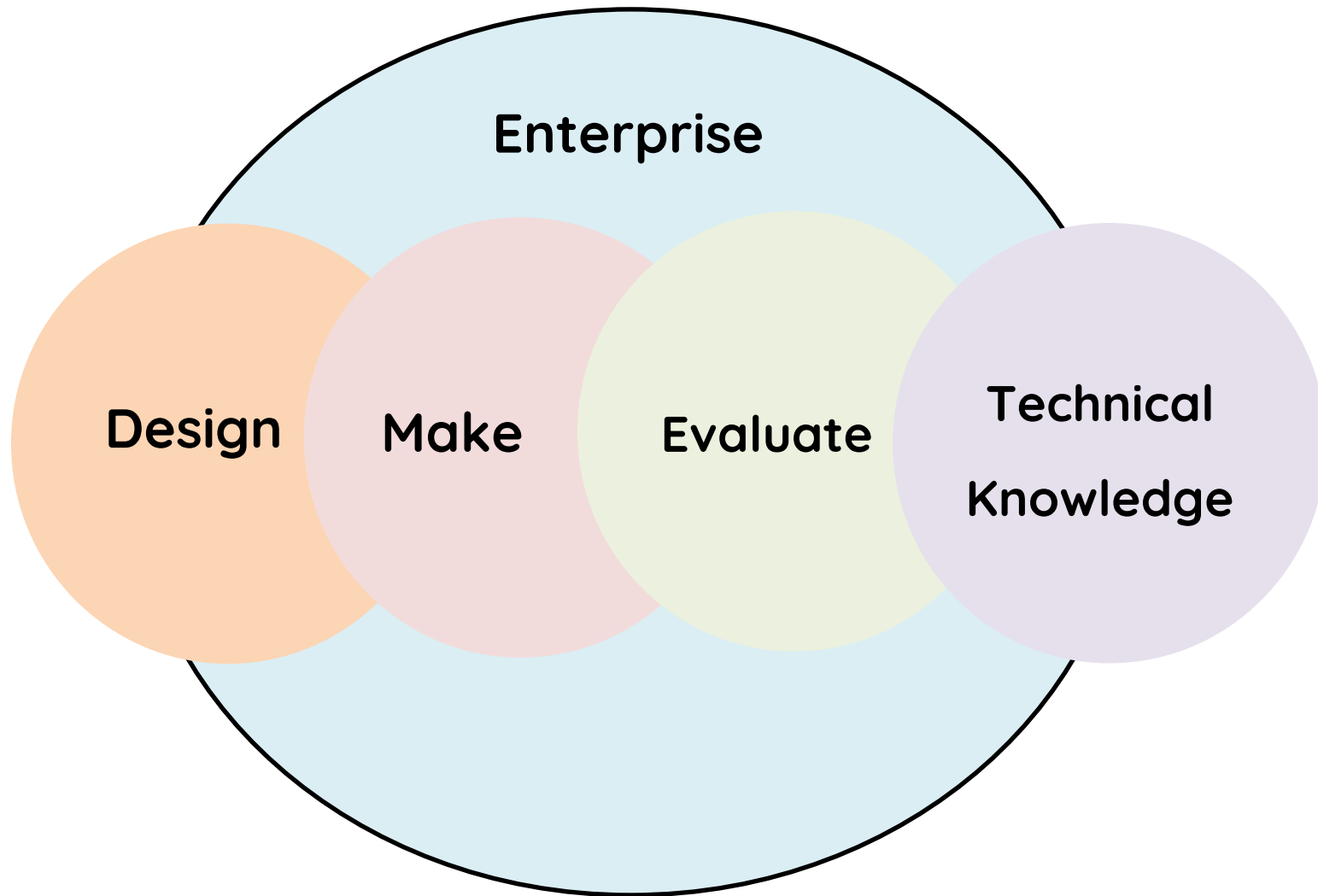


Herringthorpe Infant School

Design & Technology – Subject Overview

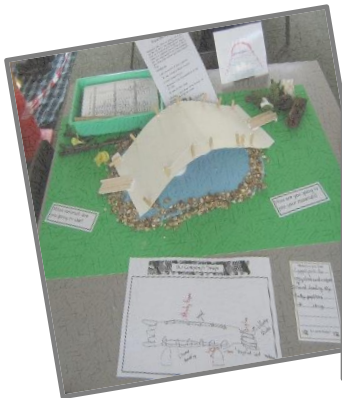
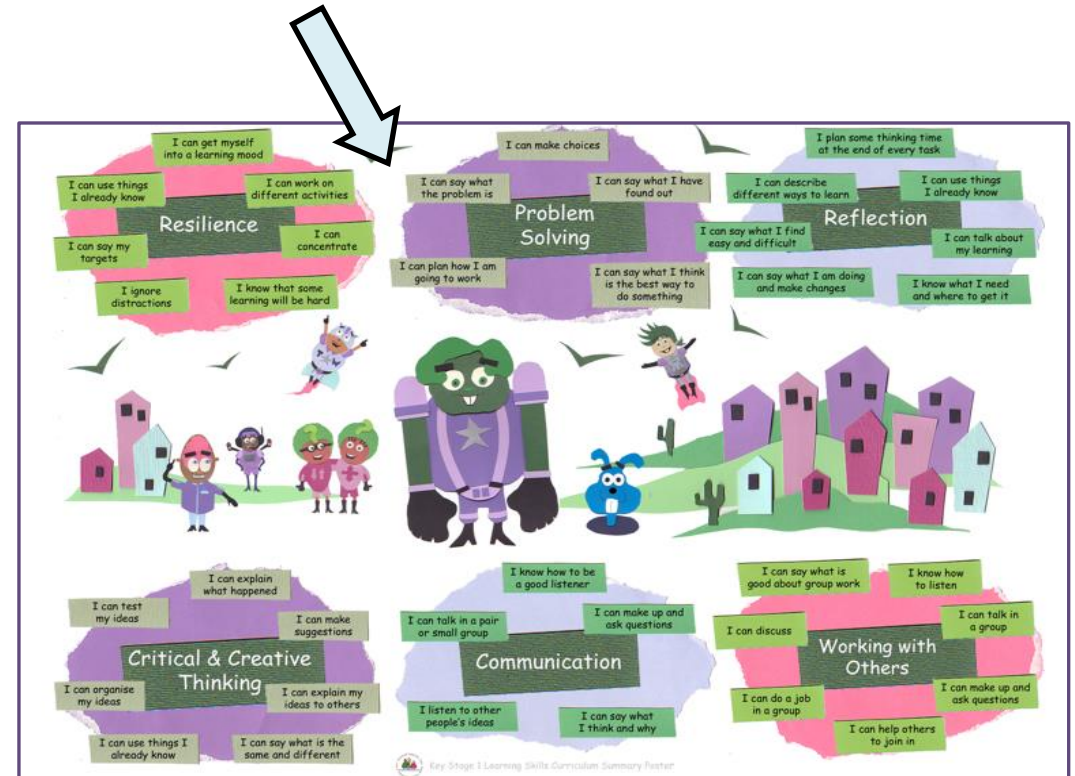


Key strands to the curriculum



The knowledge skills and learning progression for each component is delivered through a spiral curriculum

The Enterprise Curriculum



Progression of Strands - DT

	EYFS	Year 1	Year 2
Design	ELG: Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.	- Begin to draw on their own experience to help generate ideas and research conducted on criteria. - Begin to understand the development of existing products: What they are for, how they work, materials used. - Start to suggest ideas and explain what they are going to do. - Understand how to identify a target group for what they intend to design and make based on a design criteria. - Begin to develop their ideas through talk and drawings. - Make templates and mock ups of their ideas in card and paper or using ICT with adult support.	- Start to generate ideas by drawing on their own and other people's experiences. - Begin to develop their design ideas through discussion, observation, drawing and modelling. - Identify a purpose for what they intend to design and make. - Understand how to identify a target group for what they intend to design and make based on a design criteria. - Develop their ideas through talk and drawings and label parts. - Make templates and mock ups of their ideas in card and paper or using ICT.
Make (Technical Skill)	ELG: Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Technical Skill - Join items in a variety of ways – Sellotape, masking tape, string, ribbon, treasury tags, split pins etc - Use a combination of two or more different joining techniques independently on a 3D model - Use ready-made ingredients to mix and handle hygienically. - Children can safely sift, mix, stir, whisk and knead ingredients with tools and their hands hygienically.	- Begin to make their design using appropriate techniques. - With support, follow a plan or basic recipe. Begin to build structures, exploring how they can be made stronger, stiffer and more stable. - With help measure, mark out, cut and shape a range of materials. - Explore using tools, including kitchen equipment e.g. scissors and a hole-punch safely. - Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. - Begin to use simple finishing techniques to improve the appearance of their product Technical Skill - Use tools appropriately (scissors) - Join materials securely to make a structure. - Strengthen structures to make them stronger/stiffer. - Use tools appropriately (saw, block, glue) - Join materials securely to make a structure (wood & cardboard)	- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. - Begin to select tools, including kitchen tools, and materials; use correct vocabulary to name and describe them. - Follow a plan or basic recipe. - With help measure, cut and score with some accuracy. Learn to use hand tools safely and appropriately. - Assemble, join and combine materials in order to make a product. - Start to choose and use appropriate finishing techniques based on own ideas. Technical Skill - Use the tools appropriately - Make a lever, slider and pivot mechanism. - Fix wheels and axles to a product securely. - Make a winding mechanism. - Assemble fruit ingredients to prepare food, using simple tools to chop, peel, slice hygienically.

		- Strengthen structures to make them stronger/stiffer using cardboard triangles. - Assemble fruit ingredients to prepare food, using simple tools to chop, peel, slice hygienically.	
Evaluate	ELG: Share their creations, explaining the process they have used. Will be able to suggest how to improve their model – scrunching, twisting, folding etc with adult prompting	- Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). - When looking at existing products explain what they like and dislike about products and why. - Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.	- Evaluate their work against their design criteria. - Look at a range of existing products explain what they like and dislike about products and why. - Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. - With confidence talk about their ideas, saying what they like and dislike about them.
Technical Knowledge	- Knows how to secure different materials to a flat surface. - Knows how to secure boxes, kitchen rolls and decorate bottles - Children can name and function of basic tools; Sieve, Rolling pins, pans, spoon, fork, knife – - Understand that an apron is a protective garment worn over clothing - Know that germs can cause illness but we can protect ourselves against them through hygiene - Food can be stored in fridges, freezers or in containers in cupboards	- Choose materials. - Know how to join materials (card/paper) securely. - Know how to make structures stronger/stiffer. - Know how to join materials (fabric) securely. - Know how to make structures stronger/stiffer. - Know how to create a wooden frame. - Know how to strengthen the frame using cardboard triangles. - Understand where common fruit and vegetables come from. - Understand that fruits and vegetables provide essential vitamins and minerals - Use technical and sensory vocabulary in relation to food.	- Be able to identify a lever, slider and pivot mechanism. - Know the type of movement created from a lever, slider and pivot mechanism. - Choose materials - Know how to make a lever, slider and pivot mechanism. - Know the difference between fixed and free moving axles. - Know how to fix wheels and axles to a product securely. - Be able to identify a winding mechanism. - Know how to make a winding mechanism. - Know how fruit and vegetables are grown and harvested. - Understand and use basic principles of a healthy and varied diet. - Understand the function of and why we use a blender. - Use technical and sensory vocabulary in relation to food. - Demonstrate a consumer awareness.

Refer to EYFS progression skills document for curriculum overview

Design & Technology Y1

Subject Yearly Overview

Autumn Term	Spring Term	Summer Term
Unit Title: Structures (joining card/paper)	Unit Title: Structures (joining fabric)	Unit Title: Structures (joining wood/card)
Prior Knowledge:	Prior Knowledge:	Prior Knowledge:
<i>Prior knowledge</i> • ELG: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Introduction to scissors & a basic joining of materials.	<i>Prior knowledge</i> • ELG: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Scissor skills & using a needle and thread (pinch and push technique) experimentally.	<i>Prior knowledge</i> • Joining materials securely to make a structure (Y1) • Strengthen structures to make them stronger/stiffer (Y1)
New Knowledge:	New Knowledge:	New Knowledge:
<i>By the end of this unit Y1 pupils will:</i> Substantive Knowledge: • Choose materials. (K) • Know how to join materials (card/paper) securely. (K) • Know how to make structures stronger/stiffer. (K) Disciplinary Knowledge: • Use tools appropriately (scissors) (S) • Join materials securely to make a structure. (S) • Strengthen structures to make them stronger/stiffer. (S)	<i>By the end of this unit Y1 pupils will:</i> Substantive Knowledge: • Choose materials. (K) • Know how to join materials (fabric) securely. (K) • Know how to make structures stronger/stiffer. (K) Disciplinary Knowledge: • Use tools appropriately (scissors/needle/thread) (S) • Join materials securely to make a structure. (S) • Strengthen structures to make them stronger/stiffer. (S)	<i>By the end of this unit Y1 pupils will:</i> Substantive Knowledge: • Know how to create a wooden frame. • Know how to strengthen the frame using cardboard triangles. Disciplinary Knowledge: • Use tools appropriately (saw, block, glue) (S) • Join materials securely to make a structure (wood & cardboard) (S) • Strengthen structures to make them stronger/stiffer using cardboard triangles. (S)
Vocabulary:	Vocabulary:	Vocabulary:
<i>By the end of this unit Y1 pupils will understand and use the vocabulary:</i>	<i>By the end of this unit Y1 pupils will understand and use the vocabulary:</i>	<i>By the end of this unit Y1 pupils will understand and use the vocabulary:</i>

• Join • Secure (securely) • Strengthen • Stronger/stiffer	• Join • Pinch & push technique • Template/pattern • Mock-up • Stronger/stiffer • Secure/securely	• Frame • Join • Secure (securely) • Triangles • Strengthen • Stronger/stiffer
Learning Sequence:	Learning Sequence:	Learning Sequence:
Investigate joining materials using construction equipment (lego, meccano, k-nex etc) Tinker session (joining materials together and recording how successful they are, card, paper, glue, sellotape etc.) Learn how to join paper/card effectively. Learn how to make structures stronger/stiffer. Design, make and evaluate a structure using secure joining techniques.	Investigate clothing compare factory/handmade clothes (Fairtrade). Tinker session (joining fabric together). Learn how to make a paper template to cut a pattern for a fabric item. Learn how to join two pieces of fabric together (pinch and push technique). Design, make and evaluate a structure using secure joining techniques (fabric).	Tinker session (joining wood together). Learn how to saw wood safely. Learn how to join wood using glue and cardboard triangles for strength. Design, make and evaluate a structure made out of wood using secure joining techniques.
Assessment Opportunities	Assessment Opportunities	Assessment Opportunities
• The children will know how to join materials (card/paper) securely. • The children will know how to make structures stronger/stiffer. • They will make a structure by joining materials securely. • They will strengthen their structure to make it stronger/stiffer. The children will design, make and evaluate a structure using secure joining techniques (card/paper, glue/masking tape). Evidence of Assessment – design and product and/or photo of product.	• The children will know how to join fabric securely. • They will join fabric using appropriate materials. The children will design, make and evaluate an outfit using secure joining techniques (fabric/thread/glue). Evidence of Assessment – design and product and photo of product.	• The children will know how to join wood securely. • The children will know how to use triangles to strengthen a structure. • They will join wood securely to make a structure. • They will strengthen their structure using triangles. The children will design, make and evaluate a structure using secure joining techniques (wood, cardboard, glue). Evidence of Assessment – design and product or photo of product
Resources:	Resources:	Resources:
• Cardboard boxes • Card • Paper • Glue • Tape •	• Paper • Card • Fabric • Scissors • Thread • Needle	• Wood • Cardboard triangles • Glue

Design & Technology Y2

Subject Yearly Overview

Autumn Term	Spring Term	Summer Term
Unit Title: Mechanisms (Levers, sliders, pivots)	Unit Title: Mechanisms (Wheel and axle)	Unit Title: Mechanisms (Winding)
Prior Knowledge:	Prior Knowledge:	Prior Knowledge:
<i>Prior knowledge</i> - Secure joining techniques (Y1) using glue/tape/card to make structures stronger/stiffer. - Scissor skills.	<i>Prior knowledge</i> - Secure joining techniques (Y1) wooden frames secured with cardboard triangles. - Using a saw safely.	<i>Prior knowledge</i> - Secure joining techniques (Y1). - Levers, sliders, pivot, wheel & axle mechanisms (Y2).
New Knowledge:	New Knowledge:	New Knowledge:
<i>By the end of this unit Y2 pupils will:</i> Substantive Knowledge: - Be able to identify a lever, slider and pivot mechanism. (K) - Know the type of movement created from a lever, slider and pivot mechanism. (K) - Choose materials (K) - Know how to make a lever, slider and pivot mechanism. (K) Disciplinary Knowledge: - Use the tools appropriately (S) - Make a lever, slider and pivot mechanism. (S)	<i>By the end of this unit Y2 pupils will:</i> Substantive Knowledge: - Know the difference between fixed and free moving axles. (K) - Choose materials (K) - Know how to fix wheels and axles to a product securely. (K) Disciplinary Knowledge: - Use the tools appropriately (S) - Fix wheels and axles to a product securely. (S)	<i>By the end of this unit Y2 pupils will:</i> Substantive Knowledge: - Be able to identify a winding mechanism. (K) - Choose materials (K) - Know how to make a winding mechanism. (K) Disciplinary Knowledge: - Use the tools appropriately (S) - Make a winding mechanism. (S)
Vocabulary:	Vocabulary:	Vocabulary:
<i>By the end of this unit Y2 pupils will understand and use the vocabulary:</i> - Secure (Y1) - Lever mechanism - Sliding mechanism - Pivot mechanism - Fastener	<i>By the end of this unit Y2 pupils will understand and use the vocabulary:</i> - Secure - Vehicle - Wheel and axle - Axle holder - Chassis	<i>By the end of this unit Y2 pupils will understand and use the vocabulary:</i> - Secure - Axle - Winding mechanism - Handle

Learning Sequence:	Learning Sequence:	Learning Sequence:
Revisit secure joining techniques (using glue/tape/card to make structures stronger/stiffer) (Y1). Look at levers/sliders/pivots in a range of books/cards and teach the children how each type of mechanism creates movement. Tinker with materials and attempt to make their own levers/sliders and pivots. Learn how to create levers, sliders and pivot mechanisms. Design, make and evaluate a moving picture incorporating a lever, slider and pivot mechanism.	Revisit secure joining techniques (wooden frames/triangles) (Y1). Look at axles on a range of toys (vehicles) Investigate wheels and axles (tinker with materials and attempt to make their own) Learn how to create fixed and free moving axles. Design, make and evaluate a vehicle.	Revisit levers, sliders, pivot and wheel and axle mechanisms. Look at winding mechanisms (toys/real life). Investigate winding mechanisms (tinker with materials and attempt to make their own) Learn how to create a winding mechanism. Design, make and evaluate a product that incorporates a winding mechanism.
Assessment Opportunities	Assessment Opportunities	Assessment Opportunities
- The children will know the difference between a lever, slider and pivot mechanism. - The children will know the type of movement created from a lever, slider and pivot mechanism. - They will make a product which incorporates a lever, slider and pivot mechanism. - They will describe the materials that they have chosen and why. The children will design, make and evaluate a moving picture incorporating a lever, slider and pivot mechanism. Evidence of Assessment – design and product (moving picture).	- The children will know the difference between fixed and free moving axles. - They will know simple methods to fix wheels and axles to a product. - They will make a product which moves. - They will describe the materials that they have chosen. - They will say why they have chosen moving parts. The children will design, make and evaluate a vehicle made from a secure structure and incorporating wheels and axles. Evidence of Assessment – design with a photograph of their vehicle.	- The children will know what a winding mechanism is. - They will make a product that incorporates a winding mechanism. - They will describe the materials that they have chosen and why. The children will design, make and evaluate a product that incorporates a winding mechanism. Evidence of Assessment – design with a photograph of their product.
Resources:	Resources:	Resources:
- Selection of pop up books/cards to demonstrate levers, sliders and pivots. - Split pins - Scissors - Tape - Card	- Selection of toy vehicles to explore - Wooden wheels of various sizes - Dowel to fit the wheels - Masking tape - Wood - Axle holders - Cardboard triangles - Glue - Saw & block - Images of vehicles	- Cotton reels - String - Tape - Dowel - Saw and block - Card - Cardboard tubes (kitchen roll holders for example)

Design & Technology – Food

Subject Yearly Overview

EYFS	Year 1	Year 2
Baking Ginger bread men/Bread (Literacy Links)	What makes a snack healthy? Design a fruit kebab for a class picnic. (PSHE links)	Why is it important to eat healthy foods? Design a fruit/vegetable smoothie for a company. (PSHE links)
Prior Knowledge:	Prior Knowledge:	Prior Knowledge:
<i>Prior knowledge Nursery/F1 provision</i> Experiences of naming and using tools in the following areas: role play area (home corner): Oven, mixing bowls, mixing spoons, baking trays etc Play dough area: Using rolling pins, cutters, knives, bun cases etc Sand Area: Sieves, spoons, measuring cups Water area: Measuring jugs, measuring cups Mud Kitchen: Cooking/mixing utensils Adding water to mud and mixing (producing different textures)	<i>Prior knowledge from EYFS</i> Substantive Knowledge: - Sweet foods have a taste of sugar or honey - Savoury foods are items that are not sweet – - Children can name and function of basic tools; Sieve, Rolling pins, pans, spoon, fork, knife – - Understand that an apron is a protective garment worn over clothing - Know that germs can cause illness but we can protect ourselves against them through hygiene - Food can be stored in fridges, freezers or in containers in cupboards Disciplinary Knowledge: - Use ready-made ingredients to mix and handle hygienically. - Children can safely sift, mix, stir, whisk and knead ingredients with tools and their hands hygienically.	<i>Prior knowledge from Y1</i> Substantive Knowledge: - Understand where common fruit and vegetables come from. - Understand that fruits and vegetables provide essential vitamins and minerals - Use technical and sensory vocabulary in relation to food. Disciplinary Knowledge: - Assemble fruit ingredients to prepare food, using simple tools to chop, peel, slice hygienically.

New Knowledge:	New Knowledge:	New Knowledge:
<i>By the end of this unit EYFS pupils will:</i> Substantive Knowledge: - Sweet foods have a taste of sugar or honey - Savoury foods are items that are not sweet - - Children can name and function of basic tools; Sieve, Rolling pins, pans, spoon, fork, knife - - Understand that an apron is a protective garment worn over clothing - Know that germs can cause illness but we can protect ourselves against them through hygiene - Food can be stored in fridges, freezers or in containers in cupboards Disciplinary Knowledge: - Use ready-made ingredients to mix and handle hygienically. - Children can safely sift, mix, stir, whisk and knead ingredients with tools and their hands hygienically.	<i>By the end of this unit Y1 pupils will:</i> Substantive Knowledge: - Understand where common fruit and vegetables come from. - Understand that fruits and vegetables provide essential vitamins and minerals - Use technical and sensory vocabulary in relation to food. Disciplinary Knowledge: - Assemble fruit ingredients to prepare food, using simple tools to chop, peel, slice hygienically.	<i>By the end of this unit Y2 pupils will:</i> Substantive Knowledge: - Know how fruit and vegetables are grown and harvested. - Understand and use basic principles of a healthy and varied diet. - Understand the function of and why we use a blender. - Use technical and sensory vocabulary in relation to food. - Demonstrate a consumer awareness. Disciplinary Knowledge: - Prepare fruit and vegetables safely using chop, peel, slice, grate hygienically. - Measuring and weighing ingredients using measuring cups and digital scales. - Use a blender with adult supervision.
Vocabulary:	Vocabulary:	Vocabulary:
<i>By the end of this unit EYFS pupils will understand and use the vocabulary:</i> Pour, mix, stir, whisk, squeeze, knead, rolling, dough, sift, bake, fork, knife, spoon, sieve	<i>By the end of this unit Y1 pupils will understand and use the vocabulary:</i> - fruit and vegetable names, names of equipment and utensils, sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour - slicing, peeling, cutting, squeezing, healthy diet,	<i>By the end of this unit Y2 pupils will understand and use the vocabulary:</i> - Revisit Y1 Vocabulary - flesh, skin, seed, pip, core, coring, grating blending
Learning Sequence:	Learning Sequence:	Learning Sequence:
Design Children to design what they would like to add to the bread or what they will use to decorate the ginger bread men. Children to communicate their ideas through simple pictures and verbal explanations. Technical Skill Children taught hand hygiene and how to wash hands in the correct way. Children taught the technique of rolling, mixing, stirring, sieving etc Make Children to work in small groups to create ginger bread men/bread led by an adult.	Research Prior to: Taste and evaluate different fruits – discover personal preferences. Design Create design criteria as a class. Communicate ideas through talking and plans/drawings. Technical Skill Children taught food hygiene, hand washing and importance of washing/preparing fruits. Children taught techniques for peeling, cutting, slicing. Make	Research Research the benefits to a range of fruits and vegetables Prior to: Taste and evaluate different fruits – discover class preferences and record research findings. Design Create design criteria as a class. Communicate ideas through talking and detailed plans/drawings. Select fruit and vegetables based on different health benefits. Technical Skill Children taught food hygiene, hand washing, work station preparation, and washing/preparing of fruits and vegetables.

Evaluate When complete: Evaluate bread/ginger bread. Did they prefer the sweet or savoury taste? Use opinions from users that tried the products baked to inform evaluation.	Use simple utensils and equipment for: peeling, cutting, slicing. <i>(application of technical skill)</i> Evaluate When complete: Evaluate fruit kebab against design criteria – use opinions from users that tried the kebabs to inform evaluation.	Children taught techniques for Cutting, slicing, grating, peeling, squeezing, blending. Make Use simple utensils and equipment for: Cutting, slicing, grating, peeling, squeezing, blending. <i>(application of technical skill)</i> Evaluate When complete: Evaluate fruit/vegetable smoothie against design criteria – use opinions from users that tried the smoothie to inform evaluation.
Assessment Opportunities	Assessment Opportunities	Assessment Opportunities
- The children can name and function of basic tools; Sieve, Rolling pins, pans, spoon, fork, knife – - They can explain why they need to wear an apron - They can explain why it is important to wash their hands - They will understand that food can be stored in fridges, freezers or in containers in cupboards Disciplinary Knowledge: - The children can use ready-made ingredients to mix and handle hygienically. - Children can safely sift, mix, stir, whisk and knead ingredients with tools and their hands hygienically. Evidence of Assessment – photograph of their involvement in the baking process.	- The children will be able to say where common fruit and vegetables come from. - They will know fruits and vegetables provide essential vitamins and minerals - They will be able to use technical and sensory vocabulary in relation to describing food. - The children will be able to assemble fruit ingredients to prepare food, using simple tools to chop, peel, slice hygienically. Evidence of Assessment – design with a photograph of their fruit kebab.	- The children will be able to say how fruit and vegetables are grown and harvested. - They will be able to explain the basic principles of a healthy and varied diet. - They will understand the function of and why we use a blender. - They will be able to use technical and sensory vocabulary in relation to describing food. - They will demonstrate a consumer awareness when designing a product. - They will be able to prepare fruit and vegetables safely using chop, peel, slice, grate hygienically. - They will be able to measuring and weigh ingredients using measuring cups and digital scales. - They will be able to use a blender with adult supervision. Evidence of Assessment – design with a photograph of their fruit/vegetable smoothie
Resources:	Resources:	Resources:
- Ingredients for baking - Bowls - Spoons - Measuring jug - Rolling pin - Cutters - Aprons	- Fruits/vegetables - Kebab sticks - Knives - Chopping boards - Storage containers - Aprons - peelers	- Fruits/vegetables - Blender - Knives - Chopping boards - Storage containers - Plastic cups - Aprons - Peelers

Subject Yearly Overview

EYFS	Year 1	Year 2
Design	Design	Design
<i>EYFS Pupils will be able to:</i> ELG: Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.	<i>Y1 Pupils will be able to:</i> - Begin to draw on their own experience to help generate ideas and research conducted on criteria. - Begin to understand the development of existing products: What they are for, how they work, materials used. - Start to suggest ideas and explain what they are going to do. - Understand how to identify a target group for what they intend to design and make based on a design criteria. - Begin to develop their ideas through talk and drawings. Make templates and mock ups of their ideas in card and paper or using ICT with adult support.	<i>Y2 Pupils will be able to:</i> - Start to generate ideas by drawing on their own and other people's experiences. - Begin to develop their design ideas through discussion, observation, drawing and modelling. - Identify a purpose for what they intend to design and make. - Understand how to identify a target group for what they intend to design and make based on a design criteria. - Develop their ideas through talk and drawings and label parts. - Make templates and mock ups of their ideas in card and paper or using ICT.
Make	Make	Make
<i>EYFS Pupils will be able to:</i> ELG: Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	<i>Y1 Pupils will be able to:</i> - Begin to make their design using appropriate techniques. - With support, follow a plan or basic recipe. Begin to build structures, exploring how they can be made stronger, stiffer and more stable. - With help measure, mark out, cut and shape a range of materials. - Explore using tools, including kitchen equipment e.g. scissors and a hole-punch safely. - Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. - Begin to use simple finishing techniques to improve the appearance of their product	<i>Y2 Pupils will be able to:</i> - Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. - Begin to select tools, including kitchen tools, and materials; use correct vocabulary to name and describe them. - Follow a plan or basic recipe. - With help measure, cut and score with some accuracy. Learn to use hand tools safely and appropriately. - Assemble, join and combine materials in order to make a product. - Start to choose and use appropriate finishing techniques based on own ideas.

Evaluate	Evaluate	Evaluate
<i>EYFS Pupils will be able to:</i> ELG: Share their creations, explaining the process they have used.	<i>Y1 Pupils will be able to:</i> • Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). • When looking at existing products explain what they like and dislike about products and why. • Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.	<i>Y2 Pupils will be able to:</i> • Evaluate their work against their design criteria. • Look at a range of existing products explain what they like and dislike about products and why. • Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. • With confidence talk about their ideas, saying what they like and dislike about them.