

Langdon Primary School – Progression in Design and Technology (Last Reviewed 2024)

	Year R	Years 1 and 2	Years 3 and 4	Years 5 and 6
Design & Research	<ul style="list-style-type: none"> • Talk about what they want to make • Design as they make • Use their senses to explore the simple working characteristics of materials including, food, textiles and construction materials 	<ul style="list-style-type: none"> • Talk about a design brief describing who and what their products are for • Talk about and use ideas from provided similar products • Talk about what they want to make • Say how their products will work • Draw a picture of their product • Label the components and materials they will use • Choose the materials, ingredients and tools they will need • Safely use and explore a variety of tools, materials, components, construction methods and techniques to model ideas they will use • Understand basic principles of a healthy and varied diet and incorporate this within their design • Create simple recipes using drawings and labels 	<ul style="list-style-type: none"> • Research existing products before designing their own • Use their research to develop some of their own design criteria • Draw a fully labelled sketch/diagram of their product, including some measurements • Indicate where electrical components will go and briefly explain how they will function • Choose the materials, ingredients or tools they will use based on their suitability for the task • List the materials, ingredients and/or tools they will need • Order the main stages of making • Use computer aided design • Use the principles of a healthy and varied diet to help inform design decisions • Understand seasonal and local foods and use this knowledge when designing products • Create and/or adapt simple recipes 	<ul style="list-style-type: none"> • Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Children use what they have learnt about media and materials, thinking about uses and purposes • Use their research to develop their own design criteria • Children represent their own ideas, thoughts and feelings through design and technology • Draw a fully labelled/annotated sketch/diagram of their product, including measurements and cross-sections • Indicate where/how materials will be joined in order to create a stable structure • Indicate where electrical components will go and explain how they will function • Explain how computer programming will control the product • Indicate where mechanisms will go and explain how they will function • Choose the materials, ingredients, tools they will use, based on their suitability for the task, including sourcing their own materials where appropriate • List the materials, ingredients, tools they will need. • Write (brief) instructions for how they intend to make their product. • Independently apply the principles of a healthy and varied diet to inform design decisions

				<ul style="list-style-type: none"> • Apply their knowledge of seasonal, local and exported foods in their designs • Create and/or adapt a recipe including measurements of weight/volume. • Adapt recipes to change the appearance, taste, texture and/or aroma
Make - Construction	<ul style="list-style-type: none"> • Experience and improve use of a range of tools (eg. clay tools, scissors) • Experience a range of construction toys and materials (eg. Lego, Duplo, bricks) • Experience a range of large and small construction kits/materials that use different forms of joining eg. magnetic, slot together, stacking etc • Use soft surfaces for hammers and nails, hex nuts, screws and nails, allen keys and stubby screwdrivers 	<ul style="list-style-type: none"> • Mark out, measure cut and shape materials • Cut materials safely and with increasing accuracy • Select a range of materials, tools, components and equipment (eg. staples, split pins, hammer, nails) • Give reasons for their choices • Begin to choose the most effective joining methods for the task/materials • Test their product as they work to see if it meets the requires of the intended user • To apply their knowledge of materials to make a structure more stable or stronger • Use finishing techniques, including those from Art and Design experience 	<ul style="list-style-type: none"> • Select a range of materials, tools and equipment (eg clamping vice, hot glue guns, hand drills) • Measure and mark materials before cutting • Cut materials accurately, using appropriate tools • Score and fold paper/card accurately • Join a range of materials using a variety of methods, usually choosing the method most suited to the task • Test their product as they work, making informed adjustments to ensure their product meets the design criteria • Apply their prior knowledge and understanding to make structures stiffer/more stable as they work • Create a basic electrical circuit and incorporate it into their product • Pay attention to the finishing of the product 	<ul style="list-style-type: none"> • Measure and mark materials with increased accuracy, before cutting • Cut materials accurately, using appropriate tools • Join a range of materials using a variety of suitable methods • Test their product as they work, making informed adjustments and striving to address any anticipated problems • Continue to apply their prior knowledge and understanding to make structures stiffer/more stable as they work • Create a working mechanism (eg. pulleys and gears) and incorporate it into their product. • Create a basic electrical circuit and incorporate it into their product • Programme a computer to control their product • Create a polished and well-finished product
Make - Textiles	<ul style="list-style-type: none"> • Experience using scissors to cut fabric • Learn to thread a large needle • Sewing using a basic running stitch 	<ul style="list-style-type: none"> • Make and use simple paper pattern pieces • Cut fabric carefully • Learn sewing basics- threading a needle, knotting your thread and finishing off • Sew using a running stitch, attempting to produce neat, equal stitches • Create a design on fabric using pens, paint or applique 	<ul style="list-style-type: none"> • Making/using simple paper pattern pieces. • Cutting fabric carefully. • Improve independency with sewing basics - threading a needle, knotting your thread, finishing off. • Sewing using running or back stitch, with neat, equal stitches • Improve designs using pens, paints and applique or a combination of media 	<ul style="list-style-type: none"> • Making/using a paper pattern (front and back pieces) including a seam allowance • Cutting fabric accurately • Independently, thread a needle, knot thread and finish off • Sew neatly using running stitch/back stitch/cross stitch • Turning out so stitching is hidden • Creating designs on fabric using multiple media

			<ul style="list-style-type: none"> • Sewing on simple components - buttons/sequins/ribbons • Using stuffing 	<ul style="list-style-type: none"> • Incorporate a fastening component eg. button/zip/press stud
Make – Food	<ul style="list-style-type: none"> • Know that food needs to be handled safely and how hand washing helps with this • Cut materials such as plasticine or playdough safely • With support, use a knife and chopping board to chop vegetables • Begin to understand/correctly use some food preparation tools, techniques and processes • Discuss how to make an activity safe and hygienic 	<ul style="list-style-type: none"> • Observe and use basic food hygiene procedures eg. washing hands, cleaning surfaces before and after food preparation • Use a knife and chopping board to neatly chop ingredients • Use techniques such as, cutting, peeling and grating • Use a spoon to add ingredients • To prepare simple dishes without using a heat source • Serve food in an appealing way 	<ul style="list-style-type: none"> • Know and use basic food hygiene procedures eg. washing hands, washing fruit and/or vegetables, keeping raw meat separate from other ingredients prior to use • Know and use basic safety procedures eg. use of oven gloves, how to use knives safely • Begin to make appropriate choices of which tools to use to cut, slice, grate and mix ingredients • Knead and roll out dough • Cook simple products in an oven or on a hob • Continue to serve food in an appealing way • With support, clean and wash up after themselves 	<ul style="list-style-type: none"> • Observe basic food hygiene procedures - washing hands, washing fruit/vegetables; avoiding cross contamination when preparing raw meat; cleaning surfaces before and after preparing food • Use appropriate tools to peel, chop, slice, grate and mix ingredients • Cook food in the oven and/or on a hob, ensuring it is fully cooked • Continue to serve food in an appealing way • Clean and wash up after themselves
Evaluate	<ul style="list-style-type: none"> • Talk about what they have made • Discuss what works with their product and whether it is as they had expected • To talk about how and why things work • Begin to adapt work to improve it, if necessary 	<ul style="list-style-type: none"> • Talk about their product against their design brief • Describe what went well and which aspects of their project they are pleased with • Discuss what the intended user might think about the product • Describe anything that did not work well and any changes they had to make • Talk about how they might improve their work further 	<ul style="list-style-type: none"> • Refer to their design criteria as they design and make • Make judgements about their product as they work • Identify any areas for development/improvements that could be made • Identify and discuss the strengths of their product • Discuss whether the product meets the requirements of the brief/the needs of the user, considering if it is fit for purpose • Take part in peer evaluation, giving and receiving feedback from fellow pupils 	<ul style="list-style-type: none"> • Identify and discuss the strengths of their product giving reasons to support opinions • Identify any areas for development/improvements that could be made reasoning why and how • Continue to develop discussion about whether the product meets the requirements of the brief/the needs of the user, considering if it is fit for purpose • Take part in peer evaluation, giving and receiving feedback from fellow pupils

Technical Knowledge

- Have experience of playing with different materials and techniques (eg. sand, water, cutting and sticking, using simple fastenings)
- Explore and use simple mechanisms (eg. levers, sliders, wheels, axles)
- Know that threading is the process of putting one material through an object

- Use and make simple joining techniques
- Be able to use and make simple mechanisms (eg. levers, sliders, wheels, axles)
- How structures can be made stiffer, stronger and more stable
- To understand that a template or fabric pattern is used to cut out the same shape multiple times
- That a 3D textiles product can be assembled from two identical fabric shapes
- Use basic measuring skills eg. weighing and measuring length
- Use simple food preparation techniques such as cutting, slicing and grating
- How to prepare food, without a heat source, safely and hygienically
- Know all food comes from plants or animals
- Know that food has to be farmed, grown or caught
- That food ingredients should be combined according to their sensory characteristics
- That food can be sorted into 5 basic groups
- That everyone should eat at least 5 portions of fruit and vegetables a day

- How to use learning from taught Science and Mathematics to make products that work
- That materials can be combined to make more useful products
- Know how to use mechanical gears, levers and pulleys
- Know which tools and materials are suitable for which task
- Know how mechanical systems such as levers and linkages or pneumatic systems create movement
- Know how simple electrical circuits and components can be used to create functional products
- Know how to program a computer to control their products
- Know how to make strong, stiff shell structures
- Know that a single fabric shape can be used to make a 3D textiles product
- Know that food ingredients can be fresh, pre-cooked and processed
- Know that food maybe grown in the UK and in the wider world
- Know how to prepare and cook simple food dishes hygienically and safely using a heat source
- Know a range of food preparation techniques such as chopping, peeling, kneading, spreading
- Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in the 'Eatwell Plate'
- That to be active and healthy, food and drink are needed to provide energy for the body

- How to use learning from taught Science and Mathematics to make products that work and are high quality
- How mechanical systems such as cams or pulleys or gears create movement
- How more complex electrical circuits and components can be used to create functional products
- How to program a computer to monitor changes in the environment and control their products
- How to reinforce and strengthen a 3D framework
- That a 3D textiles product can be made from a combination of fabric shapes and textures
- That a recipe can be adapted by adding or substituting one or more ingredients in order to change the appearance, taste, texture and/or aroma
- That food availability may be affected by the seasons
- How food is processed into ingredients that can be eaten or used in cooking
- That different foods and drink contain different substances – nutrients, water, fibre – that are needed for health
- Know how to prepare and cook simple food dishes hygienically and safely using a heat source

Knowledge Overview:

Year R	Integrated Learning Topic: To infinity and Beyond	Integrated Learning Topic: People who help us	Integrated Learning Topic: Handa's Surprise
Project Title	<p>DT Focus: Construction Task: To design and make a rocket for bear to get to the moon</p>	<p>DT Focus: Textile Task: To design and make a tabard for a children's nurse</p>	<p>DT Focus: Food Task: To design and make a fruit kebab for Handa's friend</p>
National Curriculum Expectations	<p>Designing:</p> <ul style="list-style-type: none"> • Talk about what they want to make • Design as they make • Use their senses to explore the simple working characteristics of materials <p>Making:</p> <ul style="list-style-type: none"> • Experience and improve use of a range of tools (eg. clay tools, scissors) • Experience a range of construction toys and materials (eg. Lego, Duplo, bricks) • Experience a range of large and small construction kits/materials that use different forms of joining eg. magnetic, slot together, stacking etc <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about what they have made • Discuss what works with their product and whether it is as they had expected • To talk about how and why things work • Begin to adapt work to improve it, if necessary 	<p>Designing:</p> <ul style="list-style-type: none"> • Talk about what they want to make • Design as they make • Use their senses to explore the simple working characteristics of textile materials <p>Making:</p> <ul style="list-style-type: none"> • Experience using scissors to cut fabric • Learn to thread a large needle • Sewing using a basic running stitch <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about what they have made • Discuss what works with their product and whether it is as they had expected • To talk about how and why things work • Begin to adapt work to improve it, if necessary 	<p>Designing:</p> <ul style="list-style-type: none"> • Talk about what they want to make • Design as they make • Use their senses to explore the simple working characteristics of materials including, food, <p>Making:</p> <ul style="list-style-type: none"> • Know that food needs to be handled safely and how hand washing helps with this • Cut materials such as plasticine or playdough safely • With support, use a knife and chopping board to chop vegetables • Begin to understand/correctly use some food preparation tools, techniques and processes • Discus how to make an activity safe and hygienic <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about what they have made • Discuss what works with their product and whether it is as they had expected • To talk about how and why things work • Begin to adapt work to improve it, if necessary
DT Subject Knowledge	<ul style="list-style-type: none"> • Have experience of playing with different materials and techniques (eg. sand, water, cutting and sticking, using simple fastenings) • Explore and use simple mechanisms (eg. levers, sliders, wheels, axles) • Designing includes physically arranging and re-arranging materials and components and orally communicating what they are doing and have done 	<ul style="list-style-type: none"> • Know that threading is the process of putting one material through an object 	<ul style="list-style-type: none"> • Have experience of playing with different materials and techniques (eg. sand, water, cutting and sticking, using simple fastenings) • Begin to understand that eating well contributes to good health • Discuss how to make an activity safe and hygienic

Vocabulary

Join
Attach
Research
Design
Imagination
Ideas
Product
Evaluate
Bendy
Stretchy
Hard
Smooth
Soft
Hard

Bend
Fold
Folded
Stick

Scissors

Cardboard
Plastic
Paper
Lego
Duplo

Join
Attach
Research
Design
Imagination
Ideas
Product
Evaluate

Soft
Hard

Fabric
Thread
Button
Felt

Tools
Needle
Scissors

Join
Attach
Research
Design
Imagination
Ideas
Product
Evaluate

Apple
Banana
Grape
Orange
Melon
Pineapple
Satsumas
Guava
Mango
Tangerine
Passion Fruit
Avocado

Skewer
Knife
Chopping board

Year R	Integrated Learning Topic: The Enchanted Wood	Integrated Learning Topic: What's in the Bowl	Integrated Learning Topic: The Treasure Chest
Project Title	<p>DT Focus: Textile</p> <p>Task: To design and make a bookmark for our reading books</p>	<p>DT Focus: Construction</p> <p>Task: To design and make a new chair for baby bear</p>	<p>DT Focus: Food</p> <p>Task: To design and make a sandwich for a pirate</p>
National Curriculum Expectations	<p>Designing:</p> <ul style="list-style-type: none"> • Talk about what they want to make • Design as they make a bookmark • Use their senses to explore the simple working characteristics of materials including, food, textiles and construction materials <p>Making:</p> <ul style="list-style-type: none"> • Experience using scissors to cut fabric • Learn to thread a large needle • Sewing using a basic running stitch <p>Evaluation:</p> <ul style="list-style-type: none"> • Talk about what they have made • Discuss what works with their product and whether it is as they had expected • To talk about how and why things work • Begin to adapt work to improve it, if necessary 	<p>Designing:</p> <ul style="list-style-type: none"> • Talk about what they want to make • Design as they make • Use their senses to explore the simple working characteristics of materials including, food, textiles and construction materials • Choosing from available materials <p>Making:</p> <ul style="list-style-type: none"> • Experience and improve use of a range of tools (eg. clay tools, scissors) • Experience a range of construction toys and materials (eg. Lego, Duplo, bricks) • Experience a range of large and small construction kits/materials that use different forms of joining eg. magnetic, slot together, stacking etc <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about what they have made • Discuss what works with their product and whether it is as they had expected • To talk about how and why things work • Begin to adapt work to improve it, if necessary 	<p>Designing:</p> <ul style="list-style-type: none"> • Talk about what they want to make • Design as they make • Use their senses to explore the simple working characteristics of materials including, food, textiles and construction materials <p>Making:</p> <ul style="list-style-type: none"> • Know that food needs to be handled safely and how hand washing helps with this • Cut materials such as plasticine or playdough safely • With support, use a knife and chopping board to chop vegetables • Begin to understand/correctly use some food preparation tools, techniques and processes • Discuss how to make an activity safe and hygienic <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about what they have made • Discuss what works with their product and whether it is as they had expected • To talk about how and why things work • Begin to adapt work to improve it, if necessary
DT Subject Knowledge	<ul style="list-style-type: none"> • Know that threading is the process of putting one material through an object 	<ul style="list-style-type: none"> • Have experience of playing with different materials and techniques (eg. sand, water, cutting and sticking, using simple fastenings) • Explore and use simple mechanisms (eg. levers, sliders, wheels, axles) • Designing includes physically arranging and re-arranging materials and components and orally communicating what they are doing and have done 	<ul style="list-style-type: none"> • Have experience of playing with different materials and techniques (eg. sand, water, cutting and sticking, using simple fastenings) • Begin to understand that eating well contributes to good health • Discuss how to make an activity safe and hygienic

Vocabulary	Join	Join	Join
	Attach	Attach	Attach
	Research	Research	Research
	Design	Design	Design
	Imagination	Imagination	Imagination
	Ideas	Ideas	Ideas
	Product	Product	Product
	Evaluate	Evaluate	Evaluate
	texture	texture	Filling
	Soft	Bendy	Tools
Hard	Stretchy	Knife	
Fabric	Hard	Chopping board	
Thread	Smooth		
Needle	Soft		
Scissors	Hard		
	Bend		
	Fold		
	Folded		
	Stick		
	Scissors		
	Cardboard		
	Plastic		
	Paper		

Year 1/2	Integrated Learning Topic: Saint Saens	Integrated Learning Topic: Florence Nightingale	Integrated Learning Topic: Rainforest
Project Title	<p>DT Focus: Construction</p> <p>Task: Design and make an animal mask/headdress as part of a costume for a dance</p>	<p>DT Focus: Textiles</p> <p>Task: To design and make a bag for Florence Nightingale to keep her equipment in</p>	<p>DT Focus: Construction</p> <p>Task: To design and make a cage with a sliding door for an animal from the rainforest</p>
National Curriculum Expectations	<p>Designing:</p> <ul style="list-style-type: none"> • Research/explore what products are, who/what they are for and how they are used. • Talk about a design brief and what they want to make • Talk about and use ideas from provided similar products • Say how their products will work • Choose the materials and tools they will need • Draw a picture of their product • Label the components and materials they will use • Safely use and explore a variety of tools, materials, components, construction methods and techniques to model ideas they will use <p>Making:</p> <ul style="list-style-type: none"> • Mark out, measure cut and shape materials • Cut materials safely and with increasing accuracy • Select a range of materials, tools, components and equipment (eg. staples, split pins, glue) • Give reasons for their choices • Begin to choose the most effective joining methods for the task/materials • Test their product as they work to see if it meets the requires of the intended user • Use finishing techniques, including those from Art and Design experience <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about their product against their design brief • Describe what went well and which aspects of their project they are pleased with • Discuss what the intended user might think about the product • Describe anything that did not work well and any changes they had to make • Talk about how they might improve their work 	<p>Designing:</p> <ul style="list-style-type: none"> • Research/explore what products are, who/what they are for and how they are used. • Talk about a design brief and what they want to make • Talk about and use ideas from provided similar products • Choose the materials and tools they will need • Draw a picture of their product • Label the components and materials they will use • Safely use and explore a variety of tools, materials, components, construction methods and techniques to model ideas they will use <p>Making:</p> <ul style="list-style-type: none"> • Make and use simple paper pattern pieces • Cut fabric carefully • Learn sewing basics - threading a needle, knotting the thread and finishing off • Sew using a running stitch, attempting to produce neat, equal stitches • Create a design on fabric using pens, paint or applique <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about their product against their design brief • Describe what went well and which aspects of their project they are pleased with • Discuss what the intended user might think about the product • Describe anything that did not work well and any changes they had to make • Talk about how they might improve their work further 	<p>Designing:</p> <ul style="list-style-type: none"> • Research/explore what products are, who/what they are for and how they are used. • Talk about a design brief and what they want to make • Talk about and use ideas from provided similar products • Say how their products will work • Choose the materials and tools they will need • Draw a picture of their product • Label the components and materials they will use • Safely use and explore a variety of tools, materials, components, construction methods and techniques to model ideas they will use <p>Making:</p> <ul style="list-style-type: none"> • Mark out, measure cut and shape materials • Cut materials safely and with increasing accuracy • Select a range of materials, tools, components and equipment (eg. staples, split pins, glue) • Give reasons for their choices • Begin to choose the most effective joining methods for the task/materials • Test their product as they work to see if it meets the requires of the intended user • Use finishing techniques, including those from Art and Design experience <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about their product against their design brief • Describe what went well and which aspects of their project they are pleased with • Discuss what the intended user might think about the product • Describe anything that did not work well and any changes they had to make • Talk about how they might improve their work

DT Subject Knowledge	<ul style="list-style-type: none"> • Use and make simple joining techniques • How structures can be made stiffer, stronger and more stable • To understand that a template or fabric pattern is used to cut out the same shape multiple times • Use basic measuring skills eg. measuring length 	<ul style="list-style-type: none"> • Use and make simple joining techniques • To understand that a template or fabric pattern is used to cut out the same shape multiple times • That a 3D textiles product can be assembled from two identical fabric shapes • Use basic measuring skills eg. measuring length 	<ul style="list-style-type: none"> • Use and make simple joining techniques • Be able to use and make simple mechanisms (eg. levers, sliders, wheels, axles) • How structures can be made stiffer, stronger and more stable • Use basic measuring skills eg. measuring length
Vocabulary	<p>Research Design Build Make Ideas Evaluate Investigate Label Plan Product Test Scissor Cut Fasten Finish Join Shape Stick</p>	<p>Applique Join Knot Print Sew Stich thread Fabric Cotton Felt Velcro Needle Scissors Design Improve Plan Product Template</p>	<p>Research Design Build Make Ideas Evaluate Investigate Label Plan Product Test Scissor Cut Fasten Finish Join Shape Stick Slider</p>

Year 1/2	Integrated Learning Topic: Explorers	Integrated Learning Topic: Beanstalks and Giants	Integrated Learning Topic: The Seaside
Project Title	<p>DT Focus: Food</p> <p>Task: To design and make sandwich for an explorer to take on an expedition</p>	<p>DT Focus: Textiles</p> <p>Task: To design and make a purse with a closing flap for Jack to keep the beans in</p>	<p>DT Focus: Food</p> <p>Task: To design and make an ice-cream sundae to sell at the seaside</p>
National Curriculum Expectations	<p>Designing:</p> <ul style="list-style-type: none"> • Research/explore what products are, who/what they are for and how they are used. • Talk about a design brief and what they want to make • Talk about and use ideas from provided similar product • Choose the ingredients and tools they will need • Safely use and explore a variety of tools, materials, components, construction methods and techniques to model ideas they will use • Understand basic principles of a healthy and varied diet and incorporate this within their design • Create simple recipes using drawings and labels <p>Making:</p> <ul style="list-style-type: none"> • Observe and use basic food hygiene procedures eg. washing hands, cleaning surfaces before and after food preparation • Use a knife and chopping board to neatly chop ingredients • Use techniques such as, cutting, peeling and grating • Use a spoon to add ingredients • To prepare simple dishes without using a heat source • Serve food in an appealing way <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about their product against their design brief • Describe what went well and which aspects of their project they are pleased with • Discuss what the intended user might think about the product • Describe anything that did not work well and any changes they had to make • Talk about how they might improve their work 	<p>Designing:</p> <ul style="list-style-type: none"> • Research/explore what products are, who/what they are for and how they are used. • Talk about a design brief and what they want to make • Talk about and use ideas from provided similar products • Say how their products will work • Choose the materials and tools they will need • Draw a picture of their product • Label the components and materials they will use • Safely use and explore a variety of tools, materials, components, construction methods and techniques to model ideas they will use <p>Making:</p> <ul style="list-style-type: none"> • Make and use simple paper pattern pieces • Cut fabric carefully • Learn sewing basics- threading a needle, knotting your thread and finishing off • Sew using a running stitch, attempting to produce neat, equal stitches • Create a design on fabric using pens, paint or applique <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about their product against their design brief • Describe what went well and which aspects of their project they are pleased with • Discuss what the intended user might think about the product • Describe anything that did not work well and any changes they had to make • Talk about how they might improve their work further 	<p>Designing:</p> <ul style="list-style-type: none"> • Research/explore what products are, who/what they are for and how they are used. • Talk about a design brief and what they want to make • Talk about and use ideas from provided similar product • Choose the ingredients and tools they will need • Safely use and explore a variety of tools, materials, components, construction methods and techniques to model ideas they will use • Understand basic principles of a healthy and varied diet and incorporate this within their design • Create simple recipes using drawings and labels <p>Making:</p> <ul style="list-style-type: none"> • Observe and use basic food hygiene procedures eg. washing hands, cleaning surfaces before and after food preparation • Use a knife and chopping board to neatly chop ingredients • Use techniques such as, cutting, peeling and grating • Use a spoon to add ingredients • To prepare simple dishes without using a heat source • Serve food in an appealing way <p>Evaluating:</p> <ul style="list-style-type: none"> • Talk about their product against their design brief • Describe what went well and which aspects of their project they are pleased with • Discuss what the intended user might think about the product • Describe anything that did not work well and any changes they had to make • Talk about how they might improve their work

DT Subject Knowledge	<ul style="list-style-type: none"> • Use basic measuring skills eg. weighing • Use simple food preparation techniques such as cutting, slicing and grating • Prepare food, without a heat source, safely and hygienically • Know all food comes from plants or animals • Know that food has to be farmed, grown or caught • That food ingredients should be combined according to their sensory characteristics • That food can be sorted into 5 basic groups • That everyone should eat at least 5 portions of fruit and vegetables a day 	<ul style="list-style-type: none"> • Use and make simple joining techniques • To understand that a template or fabric pattern is used to cut out the same shape multiple times • That a 3D textiles product can be assembled from two identical fabric shapes • Use basic measuring skills eg. measuring length 	<ul style="list-style-type: none"> • Use basic measuring skills eg. weighing • Use simple food preparation techniques such as cutting, slicing and grating • How to prepare food, without a heat source, safely and hygienically • Know all food comes from plants or animals • Know that food has to be farmed, grown or caught • That food ingredients should be combined according to their sensory characteristics • That food can be sorted into 5 basic groups • That everyone should eat at least 5 portions of fruit and vegetables a day
Vocabulary	<p>Ingredients Bread Butter/margarine Filling Recipe Chop Grate Weigh Spread Slice Cut Design Research Make Evaluate Improve</p>	<p>Applique Join Knot Print Sew Stitch thread Fabric Cotton Felt Velcro Needle Scissors Design Improve Plan Product Template</p>	<p>Ingredients Ice cream Flavours Sprinkles Fruit Sauce Layers Recipe Chop Grate Weigh Cut Design Research Make Evaluate Improve</p>

Year 3/4	Integrated Learning Topic: Sound	Integrated Learning Topic: Wizards and Wizardry	Integrated Learning Topic: The Caribbean
Project Title	<p>DT Focus: Construction</p> <p>Task: Design and make a musical instrument for a child to use</p>	<p>DT Focus: Textiles</p> <p>Task: Design and make a hat for a Wizard</p>	<p>DT Focus: Food</p> <p>Task: Design and make Caribbean cocktails to sell at a cafe</p>
National Curriculum Expectations	<p>Designing:</p> <ul style="list-style-type: none"> Carry out research using web-based resources Gather information about the needs and wants of particular individuals and groups Develop their own design criteria and use these to inform their ideas Generate realistic ideas, focusing on the needs of the user Use annotated sketches to develop and communicate their ideas <p>Making:</p> <ul style="list-style-type: none"> Order the main stages of making Select tools and equipment suitable for the task Explain their choice of tools and equipment in relation to the skills and techniques they will be using Select materials and components suitable for the task Measure, mark out, cut and shape materials and components with some accuracy Assemble, join and combine materials and components with some accuracy Make and present a product appropriately for the intended user and purpose <p>Evaluating:</p> <ul style="list-style-type: none"> Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products Identify the strengths and areas for development in their ideas and products 	<p>Designing:</p> <ul style="list-style-type: none"> Carry out research using web-based resources Develop their own design criteria and use these to inform their ideas Generate realistic ideas, focusing on the needs of the user Use annotated sketches to develop and communicate their ideas Share and clarify ideas through discussions <p>Making:</p> <ul style="list-style-type: none"> Order the main stages of making Select tools and equipment suitable for the task Explain their choice of tools and equipment in relation to the skills and techniques they will be using Select materials and components suitable for the task Cutting fabric carefully. Improve independency with sewing basics - threading a needle, knotting your thread, finishing off. Sewing using running or back stitch, with neat, equal stitches Sewing on simple components - buttons/sequins/ribbons Apply a range of finishing techniques, including those from Art and Design, with some accuracy Make and present a product appropriately for the intended user and purpose <p>Evaluating:</p> <ul style="list-style-type: none"> Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products 	<p>Designing:</p> <ul style="list-style-type: none"> Carry out research using web-based resources Gather information about the needs and wants of particular individuals and groups Develop their own design criteria and use these to inform their ideas Generate realistic ideas, focusing on the needs of the user Share and clarify ideas through discussions <p>Making:</p> <ul style="list-style-type: none"> Produce a list of equipment, ingredients and utensils needed Write a step by step recipe sheet Begin to make appropriate choices of which tools to use to cut, slice, grate and mix ingredients Make and present the food product appropriately for the intended user and purpose With support, clean and wash up after themselves <p>Evaluating:</p> <ul style="list-style-type: none"> Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products Identify the strengths and areas for development in their ideas and products Consider the views of others, including intended users, to improve their work

		<ul style="list-style-type: none"> Identify the strengths and areas for development in their ideas and products 	
DT Subject Knowledge	<ul style="list-style-type: none"> To use learning from science on sound and vibration to help design and make products that work To use learning from mathematics to help design and make products that work Know the correct technical vocabulary for the projects they are undertaking Know how to make a strong, stiff structure 	<ul style="list-style-type: none"> Know that materials have both functional properties and aesthetic qualities Know the correct technical vocabulary for the items used in the projects they are undertaking Know how to make a strong, stiff structure to support fabric Know that materials can be combined and mixed to create more useful characteristics 	<ul style="list-style-type: none"> Know that food ingredients can be fresh, pre-cooked and processed Know how to use utensils and equipment to prepare and cook food Know and use basic food hygiene procedures eg. washing hands, washing fruit Know that food is grown in the UK, Europe and the wider world Know the correct technical vocabulary for the ingredients and items used in the projects they are undertaking
Vocabulary	<p>Research Design criteria Design brief Evaluate Component Instrument Natural resources Purpose Quality Stability Attaching Cutting Layering Measuring Durability Free-standing Note Pitch</p>	<p>Research Design brief Evaluate Fabric Pattern Sew Felt Strength Weakness Stiffening Seam Applique Thread Finishing off Running stitch Back stitch Cross stitch</p>	<p>Design criteria Recipe Research Innovate Evaluate Ingredients Fruit Blend Stir Mix Cut and slice</p>

Year 3/4	Integrated Learning Topic: Ancient Egypt	Integrated Learning Topic: Local Area	Integrated Learning Topic: Romans
Project Title	<p>DT Focus: Textiles</p> <p>Task: Design and make a decorated collar for an Egyptian</p>	<p>DT Focus: Construction</p> <p>Task: Design and make a playground for children</p>	<p>DT Focus: Construction</p> <p>Task: Design and make a catapult for a Roman soldier to use in battle</p>
National Curriculum Expectations	<p>Designing:</p> <ul style="list-style-type: none"> Carry out research using web-based resources Develop their own design criteria and use these to inform their ideas Use annotated sketches to develop and communicate their ideas Share and clarify ideas through discussions <p>Making:</p> <ul style="list-style-type: none"> Order the main stages of making Select tools and equipment suitable for the task Explain their choice of tools and equipment in relation to the skills and techniques they will be using Improve independency with sewing basics - threading a needle, knotting your thread, finishing off. Select materials and components suitable for the task Cutting fabric carefully. Sewing on simple components - buttons/sequins/ribbons Make and present a product appropriately for the intended user and purpose <p>Evaluating:</p> <ul style="list-style-type: none"> Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products Identify the strengths and areas for development in their ideas and products 	<p>Designing:</p> <ul style="list-style-type: none"> Gather information about the needs and wants of particular individuals and groups Carry out research using web-based resources Develop their own design criteria and use these to inform their ideas Generate realistic ideas, focusing on the needs of the user Use annotated sketches to develop and communicate their ideas Share and clarify ideas through discussions <p>Making:</p> <ul style="list-style-type: none"> Order the main stages of making Select tools and equipment suitable for the task Explain their choice of tools and equipment in relation to the skills and techniques they will be using Select materials and components suitable for the task Measure, mark out, cut and shape materials and components with some accuracy Assemble, join and combine materials and components with some accuracy Make and present a product appropriately for the intended user and purpose <p>Evaluating:</p> <ul style="list-style-type: none"> Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products Identify the strengths and areas for development in their ideas and products Consider the views of others, including intended users, to improve their work 	<p>Designing:</p> <ul style="list-style-type: none"> Carry out research using web-based resources Develop their own design criteria and use these to inform their ideas Generate realistic ideas, focusing on the needs of the user Share and clarify ideas through discussions <p>Making:</p> <ul style="list-style-type: none"> Order the main stages of making Select tools and equipment suitable for the task Explain their choice of tools and equipment in relation to the skills and techniques they will be using Select materials and components suitable for the task Measure, mark out, cut and shape materials and components with some accuracy Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques, including those from art and design, with some accuracy Make and present a product appropriately for the intended user and purpose <p>Evaluating:</p> <ul style="list-style-type: none"> Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products Identify the strengths and areas for development in their ideas and products Consider the views of others, including intended users, to improve their work

DT Subject Knowledge	<ul style="list-style-type: none"> • Know the correct technical vocabulary for the items and techniques used in the projects they are undertaking • Know that a product's function depends on suitable material choices • Know how to make a strong, stiff structure • Use simple sewing stitches to join materials together • Consider the aesthetics of a piece of costume jewellery • Know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric 	<ul style="list-style-type: none"> • To use learning from science (forces) to help design and make products that work • To use learning from mathematics to help design and make products that work • Know that materials make both functional properties and aesthetic qualities • Know the correct technical vocabulary for the items used in the projects they are undertaking • Know how to make a strong structure using triangulation • 	<ul style="list-style-type: none"> • Know the correct technical vocabulary for the items in the projects they are undertaking • To know how to create a strong triangular structure with supporting joints • Understand that triangulation allows force to be spread • To know that there is always an input and output in a mechanism • To know that input is the energy that is used to start something moving • To know that output is the movement that happens as a result of the input • To know that a lever is something that turns on a pivot
Vocabulary	<p>Design brief Aesthetics Evaluation Pattern Needle Thread Finishing off Applique Cross-stitch Running-stitch Cotton Silk Felt Embellish Pinking Template Cut Sew</p>	<p>Design criteria Innovation Evaluation Improvement Apparatus Natural/man made materials Modify Reinforce Structure Triangular structures User Bench hook Slide Swing Tunnel Saw Dowel Measure Mark out</p>	<p>Design criteria Evaluation Catapult Missile Tension Energy Lever Counter weight Accumulate Reinforcing Prototype Pivot Bench hook Saw Measure Drill Join Joints Stability</p>

Year 5/6	Integrated Learning Topic: Oceans	Integrated Learning Topic: WW2	Integrated Learning Topic: Jurassic World
Project Title	DT Focus: Textiles Task: Design and create a stuffed toy for a child	DT Focus: Construction Task: Design and Create an Anderson Shelter for a family to use during WWII	DT Focus: Construction Task: Creating a moving buggy for visitors to Jurassic World
National Curriculum Expectations	<p>Designing:</p> <ul style="list-style-type: none"> • Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function • Research the design of stuffed felt toys • Use their research to develop their own design criteria • Children represent their own ideas, through drawings and designs • Create innovative original designs of their new sea creature. • List the materials & tools they will need. • Write (brief) instructions for how they intend to make their product. <p>Making:</p> <ul style="list-style-type: none"> • Making/using a paper pattern (front and back pieces) including a seam allowance • Cutting fabric accurately • Independently, thread a needle, knot thread and finish off • Sew neatly using running stitch/back stitch/cross stitch/blanket stitch • Turning out so stitching is hidden • Creating designs on fabric using multiple media <p>Evaluating:</p> <ul style="list-style-type: none"> • Identify and discuss the strengths of their product giving reasons to support opinions • Identify any areas for development/ improvements that could be made reasoning why and how • Continue to develop discussion about whether the product meets the requirements of the brief/the needs of the user, considering if it is fit for purpose 	<p>Designing:</p> <ul style="list-style-type: none"> • Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Children use what they have learnt about media and materials, thinking about uses and purposes • Use their research to develop their own design criteria • Children represent their own ideas, thoughts and feelings through design and technology • Draw a fully labelled/annotated sketch/diagram of their product, including measurements and cross-sections • Indicate where/how materials will be joined in order to create a stable structure • Choose the materials, ingredients, tools they will use, based on their suitability for the task, including sourcing their own materials where appropriate • List the materials & tools they will need. • Write (brief) instructions for how they intend to make their product <p>Making:</p> <ul style="list-style-type: none"> • Measure and mark materials with increased accuracy, before cutting • Cut materials accurately, using appropriate tools ie. hacksaw, mitre saw, mitre block, fabric scissors • Join a materials (wood/card/fabric) using a variety of suitable methods (gluing card triangle corners to create a rectangular structure; use of textile glue/PVA/glue gun to attach fabric to a structure) • Test their product as they work, making informed adjustments and striving to address any anticipated problems 	<p>Designing:</p> <ul style="list-style-type: none"> • Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Children use what they have learnt about media and materials, thinking about uses and purposes • Use their research to develop their own design criteria • Children represent their own ideas, thoughts and feelings through design and technology • Draw a fully labelled/annotated sketch/diagram of their product, including measurements and cross-sections • Indicate where/how materials will be joined in order to create a stable structure • Choose the materials, ingredients, tools they will use, based on their suitability for the task, including sourcing their own materials where appropriate • List the materials & tools they will need. • Write (brief) instructions for how they intend to make their product. • Indicate where electrical components will go and explain how they will function • Indicate where mechanisms will go and explain how they will function <p>Making:</p> <ul style="list-style-type: none"> • Measure and mark materials with increased accuracy, before cutting • Cut materials accurately, using appropriate tools ie hacksaw, mitre saw, hack saw, scissors • Join a range of materials (wood/balsa wood/dowelling/card/plastic sheets) using a variety

	<ul style="list-style-type: none"> • Take part in peer evaluation, giving and receiving feedback from fellow pupils 	<ul style="list-style-type: none"> • Continue to apply their prior knowledge and understanding to make structures stiffer/more stable as they work • Create a polished and well-finished product <p>Evaluating:</p> <ul style="list-style-type: none"> • Identify and discuss the strengths of their product giving reasons to support opinions • Identify any areas for development/ improvements that could be made reasoning why and how • Continue to develop discussion about whether the product meets the requirements of the brief/the needs of the user, considering if it is fit for purpose • Take part in peer evaluation, giving and receiving feedback from fellow pupils 	<p>of suitable methods (glue gun/PVA/corner connectors such as pipe cleaners)</p> <ul style="list-style-type: none"> • Test their product as they work, making informed adjustments and striving to address any anticipated problems • Continue to apply their prior knowledge and understanding to make structures stiffer/more stable as they work • Create a working mechanism (gears) and incorporate it into their product. • Create a basic electrical circuit and incorporate it into their product • Create a polished and well-finished product <p>Evaluating:</p> <ul style="list-style-type: none"> • Identify and discuss the strengths of their product giving reasons to support opinions • Identify any areas for development/ improvements that could be made reasoning why and how • Continue to develop discussion about whether the product meets the requirements of the brief/the needs of the user, considering if it is fit for purpose • Take part in peer evaluation, giving and receiving feedback from fellow pupils • Evaluate the speed of the final product based on its shape and accuracy of its creation
DT Subject Knowledge	<ul style="list-style-type: none"> • To use previously taught stitches eg. running, back and cross stitch • To use blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. • To understand that it is easier to finish simpler designs to a high standard • To know that soft toys are often made by creating appendages separately and then attaching them to the main body. • To know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely. 	<ul style="list-style-type: none"> • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures • Apply their knowledge of how to join different materials together • To know that measurements and angles must be accurate in order for a frame to be strong 	<ul style="list-style-type: none"> • Know how to create a circuit with a battery and a motor • Know how gears can be used to change the direction or movement from a motor • To know that measurements and angles must be accurate in order for a frame to be strong

Vocabulary	Accuracy Annotate Appendage Blanket-stitch Design criteria Detail Evaluation Fabric Sew Shape stuffing Template/pattern Evaluate	Anderson shelter Strengthen Triangular supports Right angle 90° Framework Structure Reinforcement Mitre saw Mitre block Hack saw Glue gun	Framework Motor Circuit Strengthen Accuracy Streamline Square Right angle 90° Dowling Axel Mitre saw Mitre block Hack saw Glue gun
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Year 5/6	Integrated Learning Topic: Light/ Dark	Integrated Learning Topic: WW2	Integrated Learning Topic: End of Year Production
Project Title	<p>DT Focus: Textiles Task: Creating a cushion using shades and tones for use in your home</p>	<p>DT Focus: Food Task: Design and make foods from the World War 2 period for a family subject to rationing</p>	<p>DT Focus: Construction Task: Construct a cam toy using the end of year production theme, settings and characters.</p>
National Curriculum Expectations	<p>Designing:</p> <ul style="list-style-type: none"> • Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function • Research the design of stuffed felt toys. • Use their research to develop their own design criteria • Children represent their own ideas, through drawings and designs • Create innovative original designs of their new sea creature. • List the materials & tools they will need • Write (brief) instructions for how they intend to make their product <p>Making:</p> <ul style="list-style-type: none"> • Making/using a paper pattern (front and back pieces) including a seam allowance • Cutting fabric accurately • Independently, thread a needle, knot thread and finish off • Sew neatly using running stitch/back stitch/cross stitch • Turning out so stitching is hidden • Creating designs on fabric using multiple media such as fabric applique, buttons, sequins, netting, etc. <p>Evaluating:</p> <ul style="list-style-type: none"> • Identify and discuss the strengths of their product giving reasons to support opinions • Identify any areas for development/ improvements that could be made reasoning why and how 	<p>Designing:</p> <ul style="list-style-type: none"> • Carry out research using web-based resources • Generate innovative ideas drawing on research • Identify the needs, wants, preferences and values of particular individuals and groups • Develop a simple design specification to guide thinking • Make design decisions taking into account constraints of resources and cost <p>Making:</p> <ul style="list-style-type: none"> • Produce a list of equipment, ingredients and utensils needed • Write a step by step recipe sheet • Accurately select and use utensils and equipment to measure and combine appropriate ingredients • Cook food in the oven and/or on a hob, ensuring it is fully cooked • Make and present the food product appropriately for the intended user and purpose • Clean and wash up after themselves <p>Evaluating:</p> <ul style="list-style-type: none"> • Carry out sensory evaluations of the ingredients and final product to determine fitness for purpose • Evaluate final product against design specification • Record evaluations in star diagram form <p>Know how to use utensils and equipment including</p>	<p>Designing:</p> <ul style="list-style-type: none"> • Follow health and safety rules, taking care with the equipment. • Attempt a partial assembly of their toys using an exploded-diagram, following a teacher’s demonstration. • Develop a design idea with some descriptive notes. • Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Children use what they have learnt about media and materials, thinking about uses and purposes • Use their research to develop their own design criteria • Children represent their own ideas, thoughts and feelings through design and technology • Draw a fully labelled/annotated sketch/diagram of their product, including measurements and cross-sections • Indicate where/how materials will be joined in order to create a stable structure • Choose the materials, ingredients, tools they will use, based on their suitability for the task, including sourcing their own materials where appropriate • List the materials & tools they will need. • Write (brief) instructions for how they intend to make their product. <p>Making:</p> <ul style="list-style-type: none"> • Explore different cam profiles and choose three for their follower toppers with an explanation of their choices. • Create neat, decorated follower toppers with some accuracy.

	<ul style="list-style-type: none"> • Continue to develop discussion about whether the product meets the requirements of the brief/the needs of the user, considering if it is fit for purpose • Take part in peer evaluation, giving and receiving feedback from fellow pupils 		<ul style="list-style-type: none"> • Decorate and finish the automata to meet the design criteria and brief. • Measure and cut panels that fit with some inaccuracies to conceal the inner workings of the automata • Mark, saw and cut out the components and supports of their toy with a varying degree of accuracy to the intended measurements. <p>Evaluating:</p> <ul style="list-style-type: none"> • Evaluate their finished product, making descriptive and reflective points on function and form.
DT Subject Knowledge	<ul style="list-style-type: none"> • To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. • To understand that it is easier to finish simpler designs to a high standard. • To know that small, neat stitches which are pulled taut are important to ensure that the pillow is strong and holds the stuffing securely. 	<ul style="list-style-type: none"> • Know how to use utensils and equipment including heat sources to be able to prepare and cook food • To be able to safely use heat sources to prepare and cook food • Understand about limitations (rationing) in relation to food products and the source of different food products • Understand the safe storage of food products • Know that a recipe can be adapted by adding or substituting one or more ingredients • Know and use relevant technical and sensory vocabulary 	<ul style="list-style-type: none"> • To understand that the mechanism in an automata uses a system of cams, axles and followers. • To understand that different shaped cams produce different outputs. • To know that an automata is a hand-powered mechanical toy. • To know that a cross-sectional diagram shows the inner workings of a product.
Vocabulary	<p>Accuracy Annotate Appendage Running, back, cross, blanket stitch Design criteria Detail Evaluation Fabric Netting Applique Sew Shape Wadding/filling Template Evaluate</p>	<p>Ingredients Plain/Self Rising Flour Margarine/spread/butter Baking powder Dried fruit Fat Sugar Carbohydrate Rub in Beat Shape Design brief Design specification Recipe Rationing Research Innovate</p>	<p>Accuracy Assembly-diagram Automata Axle Bench hook Cam Clamp Component Cutting list Dowel drill bits Exploded-diagram Follower Frame Function hand drill Jelutong</p>

		Evaluate	Linkage Mark out Measure Mechanism Model Research Right-angle/90° Set square
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