D&T Curriculum Intentions

End of Year Curriculum Intent Statement	
Year Group	**End Point for Year Group**
A Design and Technology Expert in Ladybugs will…	…know: use playdough tools, e.g. rolling pins, playdough scissors and cutters. …be able to: practice to use a range of tools.
A Design and Technology Expert in Mighty Oaks will…	…experience: complete design and technology challenges, using construction, found and natural materials. …be able to: use cooking tools e.g. grater, safety knife, whisks make snips in paper using scissor using forward snipping motion Use a variety of joining materials such as Sellotape, glue, hole punch, treasury tags, stapler)
Key Vocabulary	**Key assessment of learning questions**
Scissors, build, knives, cut, tools, rolling pin, cutter, glue, cellotape	What will you make? How will you make…? What will you use? How did you make it? Did it work? Can you change it to make it better?
Logical Progression Links to Enhance Long Term Memory (learning)	Construction equipment
A Design and Technology Expert in Reception will…	… experience: design a seed packet/booklet using joining materials, models using construction models Using different materials, tools such as hammer, saw, scissors, rollers …be able to: to cut paper following an outline, holding the scissors correctly Use a range of cooking tools competently and safely. Construct with a purpose in mind using a variety of resources (Sellotape, glue, hole punch, treasury tags, stapler)

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<table>
<tr><td colspan="2"></td><td>Adapt work such as if a model falls over how would you improve it?</td></tr>
<tr><td colspan="2">Key Vocabulary</td><td>Key assessment of learning questions</td></tr>
<tr><td>Cut, snip, join, hammer, nail, add, roll, mix,</td><td>Model words like “improve” “ adapt”</td><td>Observations, taking notes on Evidence Me of key vocabulary children use when taking part in construction activities, construction play.</td></tr>
<tr><td colspan="2">Logical Progression Links to Enhance Long Term Memory (learning)</td><td>Construction equipment, writing area, playdough, outside writing area, base camp and forest school. Healthy lifestyles week/cooking.</td></tr>
<tr><td colspan="2">A Design and Technology Expert in Year 1 will…</td><td>…know:
What a wheel and axel is and how they work.
Joining techniques such as gluing and sewing (running stitch).
Healthy choices for sandwiches.
…be able to:
explore and use mechanisms in their own product.
Join two pieces of materials using the running stitch.
Cut, spread and squeeze.</td></tr>
<tr><td colspan="2">Key Vocabulary</td><td>Key assessment of learning questions</td></tr>
<tr><td>Cut
Join
Sew
Thread
Wheel
Axel
Vehicle</td><td>Design
Make
Evaluate</td><td>Explain how your fire engine moves.
Why did we use marmalade? (Literacy link)
Tell me how you made your puppet.</td></tr>
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<table>
<tr><td>Spread
Squeeze
Material</td><td></td><td></td></tr>
<tr><td colspan="2">Logical Progression Links to Enhance Long Term Memory (learning)</td><td>D&T – Make a fire engine.
HLW- Marmalade Sandwiches (Paddington Bear link)
Textiles- Sewing- Make puppets.</td></tr>
<tr><td colspan="2">A Design and Technology Expert in Year 2 will…</td><td>know:
and understand that different mechanisms produce different types of movement.
how to use a range of tools to best perform practical tasks (e.g. cutting, shaping, joining)
and understand where a range of fruit and vegetables come from.
…be able to:
explore and use mechanisms (e.g. levers and sliders) in their products.
build structures, exploring how they can be made stronger, stiffer and more stable.
understand and use basic principles of a healthy and varied diet.
use simple utensils and equipment to peel, cut, grate, slice and chop.</td></tr>
<tr><td colspan="2">Key Vocabulary</td><td>Key assessment of learning questions</td></tr>
<tr><td>mechanisms
cutting
shaping
joining
levers
sliders
cut
grate
chop</td><td>design
function
purpose
evaluate
finishing
model
slice
peel
utensil</td><td>What is the purpose of your product?
Which cooking skills would you use to prepare a carrot for a stir fry?
How did you make your character move?</td></tr>
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<table>
<tr><td colspan="2">Logical Progression Links to Enhance Long Term Memory (learning)</td><td>TBC
Cooking – link to Nature walk (harvest apple and blackberry crumble), Eatwell project linked to Science healthy eating unit and Healthy Lifestyles Week.
Create a product as a gift (e.g. levers and sliders)</td></tr>
<tr><td colspan="2">A Design and Technology Expert in Year 3 will…</td><td>…know:
What a pneumatic system is and how it works.
How to use a net to create a 3D structure.
The ingredients and skills required to create a pizza.
…be able to:
Use syringes and tubing to create a simple pneumatic system.
Design a net including tabs and cut it carefully, using scoring to create folds.
Weigh and mix ingredients, use a grater to grate, a knife to spread and cut using a claw and bridge grip.</td></tr>
<tr><td colspan="2">Key Vocabulary</td><td>Key assessment of learning questions</td></tr>
<tr><td>Net
3-D
Pneumatic system
Tabs
Scoring</td><td>Ingredients
Weigh
Claw grip
Bridge clip
Grate
Spread
Cut
Knead</td><td>Explain how a pneumatic system works
What skills are required to make a pizza
Explain to another learner how to draw a net to create a 3D structure.</td></tr>
<tr><td colspan="2">Logical Progression Links to Enhance Long Term Memory (learning)</td><td>Pizza –Instructional writing.
Packaging –Christmas presents.
Moving Monsters –Stone Age monsters.</td></tr>
<tr><td colspan="2">A Design and Technology Expert in Year 4 will…</td><td>…know:
How to make a simple circuit including a switch.
A range of stitches including whipstitch or blanket stitch.
Cutting using a knife and the bridge and claw techniques, depending on vegetable type and required finish.</td></tr>
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- Food is seasonal alongside how and where the ingredients are grown.

…be able to:

- Choose appropriate materials for building based on their characteristics and propose how to make improvements to stability and rigidity.
- Create a working torch with a switch in an electric circuit.
- Create products to fit a design brief. (Torches/Anglo-Saxon houses)
- Combine different fabrics (Lavender bags)
- Make healthy food choices (Eatwell nuggets and tomato sauce and curry) and cook a healthy meal.
- Select materials or joining methods to reflect the design criteria, taking into account the child's skill level.
- Consolidate the DT skills from previous years.
- Evaluate products against design criteria.

</td></tr>
<tr><td colspan="3">Key Vocabulary</td><td>Key assessment of learning questions</td></tr>
<tr><td><u>Electrical systems</u>
Circuit
Switches
Battery
Cell
Positive
Negative
Electricity
Torch
Wire
Complete
Simple</td><td><u>Textiles</u>
Whip stitch
Blanket stitch
Fabric
Joining
Containers
Secure</td><td><u>Cooking</u>
Claw and bridge
Cutting
(revisit previous vocab)</td><td><u>Electrical Systems</u>
Draw a complete circuit that can be turned on and off.

<u>Textiles</u>
How would you teach a new learner the blanket stitch?

<u>Cooking</u>
Can you give examples of food you would cut using the claw technique?
Can you give examples og when you would use the bridge technique?</td></tr>
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Logical Progression Links to Enhance Long Term Memory (learning)	Science link with Water cycle tactile posters. Science link with Christmas cards (electricity) Healthy lifestyles Week link to cooking. SMSC – Lavendar bags link to relaxation.
A Design and Technology Expert in Year 5 will…	…know: • That a CAM can affect the movement of an object. • That a CAM mechanism is comprised of a CAM, slider and follower to create a linkage system. • That pillars/ beams/ trusses/ arches reinforce bridge structures. • That the rubbing in technique helps to combine a mixture. • Whether the bridge or claw grip is most appropriate to use dependent upon the vegetable. …be able to: • Insert a CAM onto a linkage system. • Saw dowel to a given length. • Join parts together using PVA/ hot glue guns. • Build structures which are durable/stable. • Use the rubbing in technique when making scones. • Consolidate using the bridge and claw cutting technique.
Key Vocabulary	**Key assessment of learning questions**
Product Purpose Prototypes CAM mechanism Slider/follower Pillars/beams/trusses/suspension bridge Structure Durable/Stable Aesthetic	How does the shape of a CAM affect the movement of the linkage system? How can we reinforce a bridge structure for improved durability? How was the Ironbridge an innovative design?

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Reinforce Mechanical Rubbing-in technique	
Logical Progression Links to Enhance Long Term Memory (learning)	Mars Rover (CAM) Scones- Best of British Topic Ironbridge- History
A Design and Technology Expert in Year 6 will…	…know: • Seasons affect availability • Food is processed into ingredients that can be eaten or used in cooking • Recipes can be adapted to change the appearance, taste, texture and aroma • Different food and drink contain different substances for health: nutrients, water and fibre. • How more complex electrical circuits and components can be used to create functional products • How to reinforce and strengthen a 3D framework …be able to: • Develop a simple design specification to guide their thinking • Identify the needs, wants, preferences and values of particular groups and individuals • Generate innovative ideas, drawing on research • Make design decisions, taking account of constraints such as time, resources and cost • Produce appropriate lists of tools, equipment and materials that they need • Formulate step-by-step plans as a guide to making • Use techniques that involve a number of steps Evaluate their ideas and products against their original design specification
Key Vocabulary	**Key assessment of learning questions**

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Cooking and Nutrition: Healthy Varied diet Savoury / Sweet Techniques Seasonality Reared / Caught / Processed Nutrients Ingredients **Design:** Research Develop Criteria Innovative Functional Appealing Purpose Diagrams Generate Model Communicate Specification Annotate Prototypes Pattern pieces	**Make:** Tools / equipment Cutting Shaping Joining Finishing Accuracy Materials and components Construction Textiles Functional Aesthestic	**Evaluate:** Investigate Analyse Evaluate Improve **Technical Knowledge:** Strengthen Stiffen Reinforce Structure Mechanical system Gears / Pulleys / Cams / Levers / Linkages Series circuits – switches / bulbs / buzzers / motors Program / monitor and control	How is your product fit for purpose? How could you improve your product? What skills have you used? What specification are you following? What equipment will you need to create your produce?

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CAD – Computer Aided Design			
Logical Progression Links to Enhance Long Term Memory (learning)			Cookery – using seasonal produce Using electrical circuits to create a Christmas decoration Prop and set design for end of year production

End of Key Stage Curriculum Intent Statement		
Early Years	**Key Stage One**	**Key Stage Two**
A Design and Technology Expert by the end of **Early Years** will… … experience: • Designing a simple packet/booklet using joining materials • Making models using construction models • Using different materials, tools such as hammer, saw, scissors, rollers …be able to: • To cut paper following an outline, holding the scissors correctly • Use a range of cooking tools competently and safely. • Construct with a purpose in mind using a variety of resources	A Design and Technology Expert by the end of **Key Stage One** will… …know: • How to design purposeful, functional, appealing products for themselves and other users based on design criteria • A range of tools and equipment to perform practical tasks e.g. cutting, chopping, joining • How to use materials and components to construct products. • The purpose of different mechanisms e.g. levers, sliders, wheels and axles • What qualities makes a product effective …be able to:	A Design and Technology Expert by the end of **Key Stage Two** will… …know: • The main stages within DT: research, design, make and evaluate • Key terminology such as exploded diagrams, prototypes etc. • A range of materials and components and select them according to their functional properties and aesthetic qualities • The names and uses of different mechanisms such as CAMs. • Key events and significant people

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• Make improvements to their work	• Communicate ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology • Build structures, exploring how they can be made stronger, stiffer and more stable • Evaluate products • Use tools to perform practical tasks e.g. chopping.	• Materials and components which strengthen, stiffen and reinforce more complex structures • The components within an electrical system. …be able to: • Use research and develop designs • Generate and develop their ideas through discussion, annotated sketches etc • Select from and use a wider range of tools and equipment to perform practical tasks • Select from and use a wider range of materials and components according to their functional properties and aesthetic qualities • Evaluate their ideas and products • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures • Understand and use mechanical systems in their products • Understand and use electrical systems in their products • Apply their understanding of computing to program, monitor and control their products

End of Primary School Curriculum Intent Statement/School Ready for Key Stage Three

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A Design and Technology Expert by the end of **Key Stage Two** will…

…know:

- The main stages within DT: research, design, make and evaluate
- Key terminology such as exploded diagrams, prototypes etc.
- A range of materials and components and select them according to their functional properties and aesthetic qualities
- The names and uses of different mechanisms such as CAMs.
- Key events and significant people
- Materials and components which strengthen, stiffen and reinforce more complex structures
- The components within an electrical system.

…be able to:

- Use research and develop designs
- Generate and develop their ideas through discussion, annotated sketches etc
- Select from and use a wider range of tools and equipment to perform practical tasks
- Select from and use a wider range of materials and components according to their functional properties and aesthetic qualities
- Evaluate their ideas and products
- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- Understand and use mechanical systems in their products
- Understand and use electrical systems in their products
- Apply their understanding of computing to program, monitor and control their products