Ropsley's DT Curriculum

As DT is a broad-ranging subject, we have designed Ropsley's Design and Technology curriculum with careful consideration to the different elements. We wanted to ensure that we had the correct balance of breadth and depth as well as ensuring that our curriculum was relevant to the children and included local links. Our children's DT journey begins in EYFS and is carefully mapped throughout school, with knowledge building year upon year. We have identified how knowledge relates to past and future learning to help children build, connect and remember different aspects of the curriculum in the long term. This helps teachers to emphasise how knowledge is interconnected, enabling children to build a strong schema to remember more. We chose to break our substantive content knowledge into 5 key areas: *structures, mechanisms, textiles, food and nutrition and electronics.* Each of these 5 areas is subsequently broken down further into Technical Knowledge, Designing, Making, Evaluating and Vocabulary.

When designing our DT curriculum, we identified key concepts which run throughout our curriculum. These concepts help both teachers and children to group DT knowledge into more manageable units which helps to draw out the links between ideas and processes as children progress through school.

Structures *Subject broken down into areas of learning*	YEAR 1/2 – Unit 1 – Cycle A – *What are the mega structures local to our school? Belton House* YEAR 3/4 – Unit 2 – Cycle A – *What are the types of photo frames that we can buy? Photo frames* YEAR 5/6 – Unit 1 – Cycle A – *What are truss, beam, suspension and arch bridges and how do they work? Building a bridge*
Mechanisms	YEAR 1/2 – Unit 3 – Cycle A – *How do axles work? Safari vehicle* YEAR 1/2 – Unit 1 – Cycle B – *What are levers and pivots and where are they used? Moving monsters* YEAR 3/4 – Unit 1 – Cycle B – *What is kinetic energy and which toys use it? Sling-shot cars* YEAR 5/6 - Unit 2 – Cycle B – *What are the different types of mechanisms found in books? Pop up books*

Textiles	YEAR 1/2 – Unit 2 – Cycle B – *What are the different types of puppets and how do they move? Puppets* YEAR 3/4 – Unit 1 – Cycle A – *How and why are recyclable bags made? Recyclable bag CAD UNIT – Button for the bag* YEAR 5/6 - Unit 1 – Cycle B – *What are the different types of features on a stuffed toy and how are they made? Stuffed toys. CAD UNIT – Name label for the stuffed toy*
Food and Nutrition	YEAR 1/2 – Unit 3 – Cycle A – *What kinds of fruit salads can I buy in the shop? Fruit salad* YEAR 1/2 – Unit 3 – Cycle B – *How can I be healthy? Healthy sandwich* YEAR 3/4 – Unit 3 – Cycle A – *What biscuits can I buy and how can I adapt a recipe? Biscuits* YEAR 1/2 – Unit 3 – Cycle B – *Where do my fruit and vegetables come from? Seasonal tarts* YEAR 5/6 - Unit 3 – Cycle A – H*ow can I improve and adapt a loaf cake recipe?* YEAR 1/2 – Unit 3 – Cycle B – *Where does my beef come from? Spaghetti bolognaise sauce*
Electronics	YEAR 3/4 – Unit 2 – Cycle B – *How do torches work? Torches* YEAR 5/6 - Unit 2 – Cycle A – *What electronic toy games are available on the market? Moving hand game*

Ropsley's School Curriculum Overview – DT – Cycle A						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
EYFS	Stick puppets Junk modelling Large scale construction	Craft Clay Large scale construction	Stick zigzag puppets Junk modelling	Craft	Vehicle-junk modelling	Weaving Junk modelling Sawing dowel
Y1/2		Structures *What are the mega structures local to our school?* *Investigate, design and make a local mega structure*		Food *What kinds of fruit salads can I buy in the shop?* *Investigate, design and make a fruit salad*		Mechanisms *How do axles work?* *Investigate, design and make a safari vehicle*
Y3/4		Structures *What are the types of photo frames that we can buy?* *Investigate, design and make a photo frame*		Textiles *How and why are recyclable bags made?* *Investigate, design and make a recyclable bag CAD*		Food *What biscuits can I buy and how can I adapt a recipe?* *Investigate, design and make an adapted biscuit recipe*
Y5/6		Structures *What are truss, beam, suspension and arch bridges and how do they work?* *Investigate, design and make a bridge*		Electronics *What electronic toy games are available on the market?* *Investigate, design and make a moving hand game.*		Food H*ow can I improve and adapt a loaf cake recipe?* *Investigate, design and make a loaf cake for a tea party.*

Ropsley's School Curriculum Overview – DT – Cycle B						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
EYFS	Stick puppets Junk modelling Large scale construction	Craft Clay Large scale construction	Stick zigzag puppets Junk modelling	Craft	Vehicle-junk modelling	Weaving Junk modelling Sawing dowel
Y1/2		Mechanisms *What are levers and pivots and where are they used?* *Investigate, design and make a moving monster*		Textiles *What are the different types of puppets and how do they move?* *Investigate, design and make a puppet*		Food *How can I be healthy?* *Investigate, design and make a healthy sandwich*
Y3/4		Mechanisms *What is kinetic energy and which toys use it?* *Investigate, design and make a slingshot car*		Electronics *How do torches work?* *Investigate, design and make a torch*		Food *Where do my fruit and vegetables come from?* *Investigate, design and make a seasonal tart*
Y5/6		Textiles *– What are the different types of features on a stuffed toy and how are they made?* *Investigate, design and make a stuffed toy* *CAD*		Mechanisms *What are the different types of mechanisms found in books?* *Investigate, design and make a pop-up book*		Food *Where does my beef come from?* *Investigate, design and make a spaghetti bolognaise sauce*

Ropsley's School Curriculum Overview – DT				
	EYFS	**Y1/2**	**Y3/4**	**YEAR 5/6**
TEXTILES	**Enquiry Question:** -	**Enquiry Question:** *What are the different types of puppets and how do they move?* *Investigate, design and make a puppet.*	**Enquiry Question:** *How and why are recyclable bags made?* *Investigate, design and make a recyclable bag.*	**Enquiry Question:** *– What are the different types of features on a stuffed toy and how are they made?* *Investigate, design and make a stuffed toy*
	Intent: Children are introduced to the idea of sewing as weaving. Children begin to understand the 'in and out' movement required.	**Intent:** Children are introduced to using and threading a large-holed needle to create running stitch. They understand ways to join fabric, including stapling, gluing and stitching Children learn about using templates to support their making	**Intent:** Children learn how to sew cross stitch and refine the quality of running stitch. Children understand what applique is and how to incorporate it into their design.	**Intent:** Children know how to sew blanket stitch and thread needles independently. Children measure and mark fabric accurately.
	Builds on: 3&4 year old curriculum Use one-handed tools and equipment, for example, making snips in paper with scissors Join different materials and explore different textures.	**Builds on:** – Reception year – Weaving Children are introduced to the idea of sewing as weaving. Children begin to understand the 'in and out' movement required.	**Builds on:** – Y1/2 - Joining fabrics using running stitch, staples and glue, cutting fabric neatly with scissors, using a template to design a puppet	**Builds on:** – Y3/4 – Sewing cross stitch and applique, selecting and cutting fabric, evaluating quality of stitching, threading needles. Y1/2 – Using templates
	Future Learning: Y1/2 – Joining fabrics using running stitch, staples and glue, cutting fabric neatly with scissors, using a template to design a puppet	**Future Learning:** Y3/4 – Sewing cross stitch and applique, selecting and cutting fabric, evaluating quality of stitching, threading needles.	**Future Learning:** Y5/6 - sewing blanket stitch to join fabric, threading needles independently, measuring and marking fabric, creating a 3D stuffed toy from a 2D design, considering proportions of components in a design	**Future Learning:** -

Ropsley's School Curriculum Overview – DT				
	EYFS	**Y1/2**	**Y3/4**	**YEAR 5/6**
MECHANISMS	**Enquiry Question:** -	**Enquiry Question:** *What are levers and pivots, and where are they used?* *Investigate, design and make a moving monster* _____ *How do axles work?* *Investigate, design and make a safari vehicle*	**Enquiry Question:** *What is kinetic energy and which toys use it?* *Investigate, design and make a slingshot car*	**Enquiry Question:** *What are the different types of mechanisms found in books?* *Investigate, design and make a pop-up book*
	Intent: Children are introduced to different types of books which have moving parts. They explore these as well as other toys which have mechanisms. They start to use split pins when making basic puppets and learn how to make a hole safely.	**Intent:** Children are introduced to the words lever, pivot and axle. Children understand that a mechanism makes something work/move. Children know what input and output means.	**Intent:** Children are introduced to kinetic energy and how it works to move an object. Children understand how different toys use kinetic energy.	**Intent:** Children are introduced to cams and recap on input and output. They create mechanisms with a pop-up book using sliders, pivots, folds and levers.
	Builds on: 3&4 year old curriculum Explore and talk about different forces they can feel.	**Builds on:** – Reception – Explore moving parts in books. Uses split pins to make basic moving puppets.	**Builds on:** – Y1/2 – Making levers, pivots and axles to make things move. Knows that mechanisms are a collection of moving parts, understanding input and output.	**Builds on:** – Y3/4 - kinetic energy and how it works to move an object. Know different toys use kinetic energy. Y1/2 – pivots and levers
	Future Learning: Y1/2 – Making levers, pivots and axles to make things move. Knows that mechanisms are a collection of moving parts, understanding input and output.	**Future Learning:** Y3/4 - kinetic energy and how it works to move an object. Know different toys use kinetic energy.	**Future Learning:** Y5/6 – Exploring cams, understanding input and output, making a mechanism using sliders, pivots and folds	**Future Learning:** -

Ropsley's School Curriculum Overview – DT				
	EYFS	**Y1/2**	**Y3/4**	**YEAR 5/6**
STRUCTURES	**Enquiry Question:** -	**Enquiry Question:** *What are the mega structures local to our school?* *Investigate, design and make a local mega structure*	**Enquiry Question:** *What are the types of photo frames that we can buy?* *Investigate, design and make a photo frame*	**Enquiry Question:** *What are truss, beam, suspension and arch bridges and how do they work?* *Investigate, design and make a bridge*
	Intent: Children explore joining boxes and materials using glue and staples. Children learn to use scissors more accurately to cut out paper and card. Children develop model making using a range of play equipment. They learn to talk about what they have made.	**Intent:** Children learn how to roll paper to make tubes. They learn how to make flanges to attach tubes to card. They learn how to make tabs to attach card together.	**Intent:** Children learn to join pieces of wood with glue and triangles to make a secure and reinforce a rectangular shape. They learn to measure and cut wood accurately. Children learn to add cladding over the structure to add decoration.	**Intent:** Children will refine their measuring and cutting techniques. They will learn to add in additional supports in order to make a strong and stable bridge structure, based on research of 4 different types of bridges.
	Builds on: 3 and 4 year old curriculum: Explore different materials freely, develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures.	**Builds on:** – **Reception -** explore joining boxes and materials using glue and staples. Use scissors more accurately to cut out paper and card. Develop model making using a range of play equipment. Talk about what they have made.	**Builds on:** – Y1/2 - Children learn how to roll paper to make tubes. They learn how to make flanges to attach tubes to card. They learn how to make tabs to attach card together.	**Builds on:** – Y3/4 – Learning how to clad, measure and cut wood and how to glue wood together using triangles to secure and reinforce.
	Future Learning: Y1/2 – Learning how to rolls, flange, tab card to secure it.	**Future Learning:** Y3/4 – Learning how to clad, measure and cut wood and how to glue wood together using triangles to secure and reinforce.	**Future Learning:** Y5/6 – Exploring types of bridges, measuring and cutting wood accurately. Adding more supports to make a structure stronger.	**Future Learning:** -

Ropsley's School Curriculum Overview – DT				
	EYFS	**Y1/2**	**Y3/4**	**YEAR 5/6**
ELECTRONICS	**Enquiry Question:** -	**Enquiry Question:** -	**Enquiry Question:** *How do torches work?* *Investigate, design and make a working torch.*	**Enquiry Question:** *What electronic toy games are available on the market?* *Investigate, design and make a moving hand game.*
	Intent:	**Intent:**	**Intent:** Children will look at torches already on the market and design and make one that considers a target audience. They will design their own success criteria and evaluate against this. They will learn about electrical insulators and conductors.	**Intent:** Y5/6 – Children will learn the key components of circuit and how to break it. They will demonstrate their understanding +ve and –ve parts when designing their circuit and incorporate this into a base. They will use previous skills from Structures units to assemble their bases.
	Builds on: 3 and 4 year old curriculum:	**Builds on:** – **Reception -**	**Builds on:** – Y1/2 -	**Builds on:** – Y3/4 – Children will look at torches already on the market and design and make one that considers a target audience. They will design their own success criteria and evaluate against this. They will learn about electrical insulators and conductors.
	Future Learning: Y1/2 –	**Future Learning:** Y3/4 –	**Future Learning:** Y5/6 – Children will learn the key components of circuit and how to break it. They will demonstrate their understanding +ve and –ve parts when designing their circuit and incorporate this into a base. They will use previous skills from Structures units to assemble their bases.	**Future Learning:** -

Ropsley's School Curriculum Overview – DT				
	EYFS	**Y1/2**	**Y3/4**	**YEAR 5/6**
FOOD & NUTRITION	**Enquiry Question:** -	**Enquiry Question:** YEAR 1/2 – Unit 3 – Cycle A *What kinds of fruit salads can I buy in the shop?* *Investigate, design and make a Fruit salad* YEAR 1/2 – Unit 3 – Cycle B *How can I be healthy? Investigate, design and make a Healthy sandwich*	**Enquiry Question:** YEAR 3/4 – Unit 3 – Cycle A – *What biscuits can I buy and how can I adapt a recipe?* *Investigate, design and make Biscuits* YEAR 3/4 – Unit 3 – Cycle B – *Where do my fruit and vegetables come from?* *Investigate, design and make a Seasonal tart*	**Enquiry Question:** YEAR 5/6 - Unit 3 – Cycle A – *How can I improve and adapt a loaf cake recipe?* *Investigate, design and make A loaf cake for a tea party.* YEAR 5/6 – Unit 3 – Cycle B – *Where does my beef come from? Investigate, design and make a spaghetti bolognaise sauce*
	Intent: Children talk about healthy and unhealthy foods. They are willing to try different types of food and discuss their likes and dislikes. They follow given instructions to make basic recipes. They talk about simple ways to be safe and hygienic. Use simple tools safely	**Intent:** Children learn to use and store a knife safely, understand seasonal fruit and vegetable growth, use understanding of balanced diet to make a sandwich/fruit salad, use bridge and claw grip, follow a design brief, test food combinations, identify fruits and vegetables, suggest information that should be on packaging	**Intent:** Children learn to prepare vegetables, adapt a recipe, design appealing packaging, store and clean a knife safely, use a nutritional calculator to see nutritional differences, know where food comes from, use cooking equipment safely	**Intent:** Children will design and make a loaf cake, adapting an existing recipe, considering budget, time constraints and recipes. They will learn to consider cross-contamination. They will know about seasonality when developing a bolognaise sauce recipe and look at the production of beef from 'farm to fork'.
	Builds on: 3 and 4 year old curriculum: Makes healthy choices about food and drink. Talks about changes when things are cooked/cooled Use simple tools safely	**Builds on:** – **Reception -** Children talk about healthy and unhealthy foods. They are willing to try different types of food and discuss their likes and dislikes. They follow given instructions to make basic recipes. They talk about simple ways to be safe and hygienic. Use simple tools safely	**Builds on:** – Y1/2 - Children learn to use and store a knife safely, understand seasonal fruit and vegetable growth, use understanding of balanced diet to make a sandwich/fruit salad, use bridge and claw grip, follow a design brief, test food combinations, identify fruits and vegetables, suggest information that should be on packaging	**Builds on:** – Y3/4 –prepare vegetables, adapt a recipe, design appealing packaging, store and clean a knife safely, use a nutritional calculator to see nutritional differences, know where food comes from, use cooking equipment safely
	Future Learning: Y1/2 – Children learn to use and store a knife safely, understand seasonal fruit and vegetable	**Future Learning:** Y3/4 – prepare vegetables, adapt a recipe, design appealing packaging, store and clean a knife safely, use a	**Future Learning:** Y5/6 – Children will design and make a three course meal, considering budget, time constraints and recipes. They will	**Future Learning:** -

	growth, use understanding of balanced diet to make a sandwich/fruit salad, use bridge and claw grip, follow a design brief, test food combinations food safety, identify fruits and vegetables, suggest information that should be on packaging	nutritional calculator to see nutritional differences, know where food comes from, use cooking equipment safely	learn to consider cross-contamination. They will know about seasonality when developing a bolognaise sauce recipe and look at the production of beef from 'farm to fork'.	