

Whole School DT Curriculum

	Components:						Composite:
Year 1 <i>Term 1</i> <i>Mechanisms</i>	How do sliders work?	What makes a good story book design?	What skills do I need to construct a moving picture?	Does my book work in the way I want it to?			How can I use a mechanism to make a moving story book?
Year 1 <i>Term 2</i> <i>Textiles</i>	What different methods can I use to join two pieces of fabric together?	How can I use a template to create a design?	How can I join two pieces of fabric accurately?	What are the different ways I can decorate my puppet?			How can I join fabrics to create a puppet?
Year 1 <i>Term 3</i> <i>Mechanisms</i>	How do wheels move?	Why do wheels stop turning?	How can I design a moving vehicle?	What can I build a vehicle that moves?			How can I make a moving vehicle with wheels and axles?
Year 1 <i>Term 4</i> <i>Structures</i>	What features would appeal to the client and how can I make a suitable design?	How can I make a stable structure that will support a turbine?	How can I add a functioning turbine with an axle into my structure?	What is good about my windmill? What can I do better?			How can I build a stable windmill?
Year 1 <i>Term 5</i> <i>Cooking and nutrition</i>	What is a fruit? What is a vegetable?	Where do fruit and vegetables grow?	What are fruits and vegetables make a smoothie tasty?	How do I prepare fruits and vegetables for a smoothie?			How can I make a tasty fruit and vegetable smoothie?
Year 1 <i>Term 6</i>							
Year 2 <i>Term 1</i> <i>Mechanisms</i>	How do pivots, levers and linkages work?	How can I make linkages using card for levers and split pins for pivots?	What monster design would be suitable for a child?	What materials should I select to make my monster?	How can I assemble my materials to make a moving monster that works?		How can I make a moving monster toy using pivots and levers?
Year 2 <i>Term 2</i> <i>Structures</i>	What are man-made and natural structures?	What are stable and unstable structural shapes?	What features make a chair stable?	How will my ideas be suitable for Baby Bear?	What do I need to produce a model that supports a teddy?	Is my structure strong, stiff and stable?	How can I create a chair that is strong, stiff and stable?
Year 2 <i>Term 3</i> <i>Textiles</i>	How do I sew a running stitch?	How can I prepare and cut fabric using a template?	How do I use running stitch to join two pieces	In what different ways can I decorate my pouch?			How can I sew a pouch?

			of fabric together?				
Year 2 <i>Term 4</i>							
Year 2 <i>Term 5</i> Mechanisms	What is a wheel mechanism? How can I use this knowledge to design my own wheel?	Why do I need to consider the materials, shape, construction and mechanism of my wheel?	How do I build a stable structure with a rotating wheel?	Why is it important to test and adapt my design as I build?	How do I add other Ferris wheel features?		How can I build a working model of a Ferris wheel?
Year 2 <i>Term 6</i> Cooking and nutrition	What are the main food groups and what belongs in them?	How can I describe different foods' taste, smell and texture?	What makes a good flavour combination for a wrap?	How do I construct a wrap that meets the design brief and my plan?			How can I make a healthy wrap?
Year 3 <i>Term 1</i> Structures	Why are multiple shapes used to construct real castles?	What do I need to include in a simple castle design?	What skills do I need to be able to construct a 3D net?	How can I use my skills to build a complex structure from 3D shapes?	Does my castle meet the design brief?		How can I create a strong and stable castle?
Year 3 <i>Term 2</i> Cooking and nutrition	Why and how does climate affect food growth?	What are seasonal fruits and vegetables and why should we eat them?	How can I use seasonal ingredients to design my own tart recipe?	What are the basic rules of food hygiene and safety?	Can I follow instructions in a recipe?		How can I use 'rainbow food' to create a tart?
Year 3 <i>Term 3</i> Electrical systems	What is the purpose and impact of information design?	How can I research a topic to develop a set of initial ideas?	Why is it important to use my initial ideas to create a final design?	How can I assemble and electric poster to include a simple circuit with a bulb?	How can I give my poster a high quality finish?	Does my poster work? Does it fit the client's brief?	How can I make an electric poster that gives information on a topic?
Year 3 <i>Term 4</i> Digital world	What is the impact of the digital revolution in the world of product design?	How can I use Micro:bit to write a program to initiate a flashing light for an eCharm, and fix errors where necessary?	Can I explain the basic functionality of my finished program?	Can I design and create a pouch for my eCharm to keep it safe?	What is a 'point of sale display'?	How can I use CAD to create a 'point of sale' display?	How do I create an eCharm?
Year 3 <i>Term 5</i>	What is cross stitch and applique?	How can I design and cut a template for a cushion?	How can I use applique to	How do I assemble my fabric pieces			How can I use different sewing

Textiles			decorate my cushion face?	to create a cushion?			skills to create a cushion?
Year 3 Term 6 Mechanism systems	How do pneumatic systems work?	Why do I need to have accurate diagrams which are correctly labelled as part of my design?	What is an exploded diagram and why is it useful?	What are the best materials to create a working pneumatic system?	Can I assemble my pneumatic system within a housing to create my desired motion?	Does my toy match the design brief?	How do I make a pneumatic toy?
Year 4 Term 1 Mechanical systems	What skills do I need to use to build a car chassis?	What is kinetic energy and how will that make my car travel?	How can I change the shape of my car to make it travel faster/slower?	How do I create a net to make a 3D shape?	How do I assemble panels to make a chassis correctly?	How well does my car travel?	How do I make a slingshot car?
Year 4 Term 2 Electrical systems	How do electrical products work?	What features of a report are important in a torch?	How can I design a torch that fits a specific set of user needs?	How do I assemble a torch that satisfies my design criteria?			How can I make a torch?
Year 4 Term 3 Cooking and nutrition	How do I follow a recipe?	How can I modify a recipe?	How do I plan my own recipe?	Why is it important to budget a recipe?	What would be suitable packaging for my biscuits?		How can I adapt and use a recipe?
Year 4 Term 4 Textiles	What are fastenings and how do they work?	What features do I need to include when designing a book sleeve?	How can I use a paper mock-up as a test template?	What skills do I need to use to be able to sew a book jacket?			How can I make a book sleeve?
Year 4 Term 5 Structures	How can I test which structures are most stable?	How can I design a structure that is stable and aesthetically pleasing?	How do I strengthen corners to make my structure stable?	What different materials can I use to clad my pavilion?			How can I make a strong, free-standing pavilion?
Year 4 Term 6 Digital world	How could the features of a Micro:bit be used as part of a design idea?	How do I program me a Micro:bit so it can be used as a timer?	Why do I need to check for errors in my algorithm?	What will my prototype for a mindfulness timer look like?	How do I use CAD to create a logo for my design?		How do I build a mindful moments timer?
Year 5 Term 1 Mechanical systems	What different structures and mechanisms can I use in a pop-up book design?	What skills do I need to use to create my pop-up book?	How can I use layers and spacers to cover the working mechanisms?	How do I create a high quality product for a target user?			How can I create an interactive pop-up book that will engage a year 1 child?

Year 5 <i>Term 2</i> Textiles	What are the main component shapes of my stuffed toy?	How is a template useful for creating a textile piece?	How can I use blanket stitch to join 2 pieces of material together?	What is applique and decorative stitching and how will it enhance my stuffed toy?			How can I create a stuffed toy?
Year 5 <i>Term 3</i> Cooking and nutrition	Where does meat come from?	What does healthy food look like?	What are the nutritional differences between similar recipes?	How can I adapt and make a healthy bolognaise recipe?	What does packaging need to include to promote the ingredients of a bolognaise?		How can I make a healthy bolognaise sauce?
Year 5 <i>Term 4</i> Electrical systems	How are motors used in electrical products?	What are the factors that affects a products form and function?	How can I use my research findings to create a unique product?	What do I need to include in my DIY doodler kit for someone else to be able to build it?	What are the steps needed to build my product?		How can I make an electrical doodler?
Year 5 <i>Term 5</i> Structures	How can I reinforce a beam to improve its strength?	What is a truss bridge?	How can I make a wooden truss bridge?	Why do I need to reinforce my truss bridge?	How much weight does my truss bridge take?		How can I build a strong bridge?
Year 5 <i>Term 6</i> Digital world	What is a monitoring ad how have they developed?	What micro:bit program do I need to write to create an ambient temperature monitor, with an alarm?	How can I generate a creative and unique micro:bit case?	What are the pros and cons of virtual vs physical modelling?	How can I develop my 3D CAD skills?		How can I create an animal monitoring device?
Year 6 <i>Term 1</i> Mechanical systems	Why is important to measure, mark and cut accurately?	How can I assemble components to make a stable frame?	Why is an exploded diagram useful?	What is the relationship between cams and followers and what movement do they produce?	How can I make things move at the same time?	What changes would I make if were to do the project again?	How can I make an automata toy?
Year 6 <i>Term 2</i> Structures	What structures do you find in a playground? What makes a playground effective?	How can I use my knowledge of structures to build a range of play apparatus?	What detail can I add to improve my structures?	Why is landscaping important?	How does design impact users in positive and negative ways?		How do I make a playground design prototype?
Year 6 <i>Term 3</i>	What does 'fit for purpose' and 'form over function' mean?	What are the components required in a steady hand game?	How can I make a stable base for a game?	Does my circuit work?	How can I improve my/other's games?		How can I make a steady hand game?

Electrical systems							
Year 6 <i>Term 4</i> Textiles	How do I use specific criteria to design a waistcoat?	Why is a template used to cut out fabric?	Why is it important to mark and cut fabric accurately?	What makes a strong running stitch?	What decorative stitches can I use to decorate a waistcoat?		How can I sew a waistcoat?
Year 6 <i>Term 5</i> Digital world	How do I write a design brief based on a client's request?	How do I write a micro:bit program to create a navigation tool?	What does sustainable mean and how can I apply that to my product?	How can I place and manoeuvre 3D objects using CAD?	How can I create a pitch to 'sell' my product?		How can I create a navigation tool for a specific client?
Year 6 <i>Term 6</i> Cooking and nutrition	What recipes go together to make a balanced three-course meal?	How do I prepare a meal using a recipe?	Where does my food come from?	How do I evaluate a recipe?	How good does the food taste?		How can I make a balanced three-course meal?