


Braintcroft Design and Technology High Level Plan

	Autumn		Spring		Summer	
Nursey	Make sensory toys (shakers, glitter bottles etc)	Christmas Creative activities to develop fine motor control.	Taste testing different exotic fruits.	Making minibeast from Junk Modelling	Make a dinosaur model.	Make paper animal masks
Reception	Make a puppet.	Design and make a vehicle for people who help us	Cooking using a simple recipe	3D models of the sunflower.	Making animal fruit faces	Design and build houses for the 3 little pigs
	Textiles Global theme link - sustainability Learning textile skills encourages a make do and mend mindset amongst pupils		Mechanisms and Structures		Cooking and nutrition Global theme - sustainability Learning healthy eating, food sustainability and reducing their food waste.	
Year 1	Weaving				Fruit and vegetables	
Composites					Fruit skewers	
Components	<ol style="list-style-type: none"> To know what a loom is and what weaving is To design a cardboard loom. To create the warp part of my weave To create the weft part of my weave. To evaluate my loom weave 		<ol style="list-style-type: none"> What different types of chairs are there? What 3 d shapes are strongest? How can we strengthen paper? Design Make Evaluate 		<ol style="list-style-type: none"> To know what fruit is and name common fruits To know where different fruits are grown To know how to prepare fruit (cut and peel) To design a fruit skewer To make and taste a fruit skewer To evaluate a fruit skewer 	

		Make It: Newspaper Chair How-To Scholastic Parents	
Summative Assessment	<ul style="list-style-type: none"> • Final weave design • End of unit quiz to assess core knowledge 	<p>Design and make a model for a reading chair for the classroom.</p> <p>Thinking questions What is the purpose of the chair? Who will be sitting on the chair? Where will your chair be used?</p> <p><i>Children Let the children sketch a few possible designs, they can then use peer discussions to establish which design will work best as an actual chair.</i></p> <p><i>Ensure that the children know which materials are available to them and encourage them to think practically about how they will use the materials provided to construct their prototype of the chair.</i></p> <p><i>Demonstrate some simple joining techniques (e.g. how to use masking tape to connect two pieces of card to each other)</i></p>	Design and make fruit skewers

Useful links	How to Make a Cardboard Loom The Weaving Loom	Make It: Newspaper Chair How-To Scholastic Parents	
Year 2	Cross Stitch	Moving Story book	Fruit and Vegetables
Composites			Dips and dippers
	<ol style="list-style-type: none"> 1. To know what cross stitch is and how it is created 2. To know how to thread a needle and change threads. 3. Design - to design a cross stitch pattern for a book mark 4. Make - To create a cross stitch pattern 5. Make- To create a cross stitch pattern 6. Evaluate- To evaluate my cross stitch pattern 	<ol style="list-style-type: none"> 1. What is a slider and how does it work? 2. What is a lever and how does it work? 3. What is a linkage and how does it work? 4. Design 5. Make 6. Evaluate 	<ol style="list-style-type: none"> 7. To know what a vegetable is and name common vegetables 8. To know where different vegetables are grown 9. To know how to prepare vegetables (different cutting techniques) 10. To design a dip and dipper platter 11. To make and taste dips and dippers 12. To evaluate the dips and dippers

Summative Assessment	Final cross stitch design End of unit core knowledge quiz 	Design and make a moving story book for the library.	To make a dip and dippers platter
Useful links		Unit - Oak National Academy (thenational.academy) Design and Technology: Levers and Sliders (Year 1) Teaching Resources (tes.com) Using Sliders and Levers to Create Things - YouTube	
Year 3 Composites	Attaching components (fastenings eg buttons, beads, material, etc)	Mechanism Pneumatic toy	Nutrition - healthy balanced diets Smoothies
Components	<ol style="list-style-type: none"> To use different stitches. To attach buttons beads and sequins to fabric To attach ribbon to fabric Design - To design a puppet which includes different attachments Make- To use blanket stitch to create the outline of my puppet 	<ol style="list-style-type: none"> What are pneumatics and when do we use them? How can we use air to make things move? Design Prototype Make <p>Evaluate</p> <p>Need to know</p>	<ol style="list-style-type: none"> To know what a smoothy is and what they are made from To know the nutritional value of smoothy ingredients To know what makes a healthy or unhealthy smoothy To design a healthy smoothy To make and taste a healthy smoothy To evaluate a healthy smoothy



6. Make: To use a range of stitched to add attachments to my puppet
7. Evaluate - To evaluate my puppet.


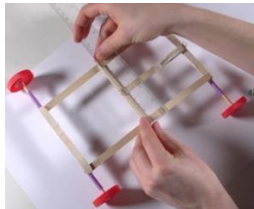
I know that air is a gas and can be compressed. Compressed air produces a force which acts on the side of the container. Compressed air can be used to lift heavy objects. Air flows freely, so pneumatic systems can be controlled from a distance. The air in a storage container can be pushed along any length of tubing until it reaches a second container which inflates (a balloon), or moves (a syringe). Hydraulic mechanisms work in the same way but instead of using air, the system is filled with liquid.

<i>I chose a box</i>	<i>I cut a hole in the top</i>	<i>I attached a lid</i>	

In sketches the children can show which part of the monster moves and how they can make it happen.

A storyboard could be used to reflect on how they made their model.

Useful links		https://www.instructables.com/Simple-Pneumatic-Machine/	
Summative Assessment	<p>Design Criteria: Design a puppet using a template</p> 	<p>Design and make a toy using pneumatics</p> 	Design and make a healthy smoothy
Year 4 Composites	Embroidery - mastering a range of different stitches	Structure Making a sling back car	Nutrition - healthy balanced diets Healthy lunch
Components	<ol style="list-style-type: none"> 1. To know what embroidery is 2. To know how to sew a French knot and a chain stitch 3. To know how to sew a satin stitch and a lazy daisy 4. Design - To design an embroidery 	<ol style="list-style-type: none"> 1. What is a model and why do we use them? 2. What is Kinetic energy? 3. How do I join wood and strengthen 4. How do I make a net? 5. How do I strengthen joints? 6. How do I decorate my model? 	<ol style="list-style-type: none"> 1. To know what makes a balanced diet 2. To know why our body needs macro and micronutrients 3. To design a balanced lunch 4. To make and taste a balanced lunch 5. To evaluate a balanced lunch

	<ol style="list-style-type: none"> 5. Make- to create an embroidery 6. Evaluate - to evaluate my embroidery design 		
Summative Assessment		Design a sling shot car 	Design and make a balanced lunch
Useful links			
Year 5	Textiles	Mechanisms	Macro nutrients
Composites	Following a pattern	Bridges	Bread
Components	<ol style="list-style-type: none"> 1. To know what a sewing pattern is 2. To create a Christmas stocking 3. To know how to use a pattern to cut fabric 4. To add decoration and embellishment to my Christmas stocking 5. To sew my Christmas stocking 6. Evaluate - To evaluate my final piece 	<ol style="list-style-type: none"> 1. Different types of bridges 2. To investigate different bridges from around the world 3. To design my bridge 4. To make my bridge 5. To evaluate my bridge 	<ol style="list-style-type: none"> 1. To know what bread is and what its nutritional value is 2. To know about different breads from around the world 3. To know what ingredients different breads are made from 4. To design a sharing bread 5. To make and taste a sharing bread 6. To evaluate a sharing bread

Summative Assessment	Design Criteria: Using a pattern, design and make a re-usable crown. https://craftysewingsew.co.uk/how-to-make-a-fabric-crown/	Design and make a manual powered toy In sketches the children can show which part of the monster moves and how they can make it happen. A storyboard could be used to reflect on how they made their model.	Design and make a sharing bread
Useful links		MOVING TOYS WORK BOOKLET Teaching Resources (tes.com) https://microbit.org/projects/make-it-code-it/simple-door-alarm/	Bread Making Project Teaching Resources Warburtons (Website with lots of resources for making bread)
Year 6 Composites	Textiles Creating and following a pattern	Mechanisms and Structures	Macro nutrients and Seasonality Filled Pasta
Components	<ol style="list-style-type: none"> To complete market research about fabric Christmas decorations. To design a fabric Christmas decoration To create a pattern for a Christmas decoration 	<ol style="list-style-type: none"> What is an automata cam toy? Research different cam toys Design Make Decorate Evaluate 	<ol style="list-style-type: none"> To know what pasta is and what its nutritional value is To know where pasta comes from and name different types of pasta To understand seasonality To design a seasonal filled pasta To make a seasonal filled pasta To evaluate a seasonal filled pasta

	<ol style="list-style-type: none"> 4. To add embellishment to my decoration 5. To sew a Christmas decoration 6. To evaluate a fabric Christmas decoration 		
Summative Assessment	To create fabric Christmas decorations		Design and make a seasonal filled pasta