

Typically Rec, Y1 & Y2			Typically Y3 & Y4		Typically Y5 & Y6	

## The RAINBOW Continuum: Design Technology: Children can ...

	OBSERVATION AND CONCLUSION		ENQUIRY, PREDICTION, TESTING		DATA COLLECTION		RECORDING	
	Talk about what they want to make	YR	Make models randomly	YR	Be excited about what they have made	YR	Talk about what they want to make	YR
	Generate ideas from their own experience	Y1/2	Know the features of some familiar products	Y1/2	Recognise the characteristics of familiar products	Y1/2	Generate ideas from their own experience	Y1/2
	Talk about their ideas and say what will be done	Y1/2	Join two materials together, often with glue	Y1/2	Know how some moving objects work	Y1/2	Talk about their ideas and say what will be done	Y1/2
	Describe what they want to do using pictures and words	Y1/2	Use scissors or a knife to cut, sometimes with help	Y1/2	Use simple terms to talk about their own and others' work	Y1/2	Describe what they want to do using pictures and words	Y1/2
	Make lists of materials they will need	Y1/2	Make simple models, not necessarily with a purpose	Y1/2	Identify materials and mechanisms in familiar products	Y1/2	Make lists of materials they will need	Y1/2
			Use simple construction kits – e.g. Lego		Know the benefits of fruit and vegetables			
	Generate ideas, and plan what to do next, using their experience of materials and components	Y2	Begin to select tools for folding, joining, rolling	Y2	Talk about how moving objects work	Y2	Generate ideas, and plan what to do next, using their experience of materials and components	Y2
	Use their knowledge of some working characteristics of	Y2	Measure out and cut fabric	Y2	Describe how a commercial product works	Y2	Use their knowledge of some working	Y2
		Y2	Use a simple template for cutting out	Y2	Use like and dislike when evaluating or describing	Y2		Y2
		Y2	practice skills before using them	Y2		Y2		Y2

	<p>materials when designing</p> <p>Use wheels, slides and levers in plans</p> <p>Use plans to show how to put their ideas into practice</p> <p>Say how the product will be useful to the user</p> <p>Draw pictures with labels, with some text</p>	<p>Y2</p> <p>Y2</p> <p>Y2</p>	<p>Use simple finishing techniques</p> <p>Select tools and techniques appropriate to the job</p> <p>Follow basic safety rules</p> <p>Understand and use the terms ingredient and component</p> <p>Use simple scales or balances</p> <p>Understand main rules of food hygiene</p>	<p>Y2</p> <p>Y2</p>	<p>Explain why some products are useful</p> <p>Use digital photography to present design or finished work</p> <p>Recognise what they have done well and talk about what could be improved</p> <p>Seek out the views and judgements of others</p> <p>Predict how changes will improve the finished product</p>	<p>Y2</p> <p>Y2</p> <p>Y2</p>	<p>characteristics of materials when designing</p> <p>Use wheels, slides and levers in plans</p> <p>Use plans to show how to put their ideas into practice</p> <p>Say how the product will be useful to the user</p> <p>Draw pictures with labels, with some text</p>	<p>Y2</p> <p>Y2</p> <p>Y2</p>
	<p>Use others to help generate their ideas</p> <p>Use what they know about the properties of materials</p> <p>Plan their work to include a range of joins</p> <p>Ensure that plans are realistic and appropriate for the aim</p> <p>Show the order of working in plans</p> <p>Use models, pictures and words in designs</p> <p>Make increasing use of ICT to plan ideas</p> <p>Recognise that designs must meet a range of needs</p> <p>Say why something will be useful</p> <p>Apply what they know about mechanisms to</p>	<p>Y2/3</p> <p>Y2</p> <p>Y3</p>	<p>Measure and cut out using centimetres and weigh in grams</p> <p>Choose tools and equipment which are appropriate for the job</p> <p>Prepare for work by assembling components together before joining</p> <p>Use scoring and folding for precision</p> <p>Make holes using a punch and drill</p> <p>Work out how to make models stronger</p> <p>Alter and adapt materials to make them stronger</p> <p>Combine a number of components together in different ways</p> <p>Make the finished product neat and tidy</p>	<p>Y2/3</p> <p>Y3</p> <p>Y3</p> <p>Y3</p>	<p>Be clear about their ideas when asked</p> <p>Can alter and adapt original plans following discussion and evaluation</p> <p>Recognise what has gone well, but suggest further improvements for the finished article</p> <p>Suggest which elements they would do better in the future</p> <p>Identify where evaluation has led to improvements</p> <p>Understand safe food storage</p>	<p>Y3</p> <p>Y2</p> <p>Y2/3</p>	<p>Use others to help generate their ideas</p> <p>Use what they know about the properties of materials</p> <p>Plan their work to include a range of joins</p> <p>Ensure that plans are realistic and appropriate for the aim</p> <p>Show the order of working in plans</p> <p>Use models, pictures and words in designs</p> <p>Make increasing use of ICT to plan ideas</p> <p>Recognise that designs must meet a range of needs</p>	<p>Y2/3</p> <p>Y2</p> <p>Y3</p>

	create movement when planning and designing Investigate a range of products to see how they work		Begin to select their own ingredients when cooking or baking Make good presentation of food				Say why something will be useful Apply what they know about mechanisms to create movement when planning and designing Investigate a range of products to see how they work	
	Collect and use information to generate ideas Consider the way the product will be used Understand designs must meet a range of criteria and constraints Take users' views into account Understand how some properties can be used – e.g. waterproof Think ahead about the order of their work Add electricity to create motion or make light Produce step by step plans Make ongoing sketches and annotations	Y4 Y4 Y4 Y4 Y4 Y4 Y4 Y4	Increasingly model their ideas before making Measure accurately to centimetres and grams Combine materials for strength and to improve how the product looks Use permanent and temporary fastenings to join Join with a greater range of techniques – e.g. staples Strengthen joins and corners in a variety of ways Understand how wheels, axles, turning mechanisms, hinges and levers all work together	Y4 Y4 Y4 Y4 Y4 Y4	Talk about what they like and dislike, giving reasons Develop their designs through their own reflection and the evaluation of others Carry out tests before making improvements Evaluate food by taste, texture, flavour etc.	Y4 Y4 Y4 Y4	Collect and use information to generate ideas Consider the way the product will be used Understand designs must meet a range of criteria and constraints Take users' views into account Understand how some properties can be used – e.g. waterproof Think ahead about the order of their work Add electricity to create motion or make light Produce step by step plans Make ongoing sketches and annotations	Y4 Y4 Y4 Y4 Y4 Y4 Y4 Y4
	Make more complex designs to include belts and pulleys, and a combination of other mechanisms	Y5	Carry out tests to see if their design works Make improvements from design suggestions	Y5 Y5	Identify what is working well and what might be improved – and make	Y5 Y5/Y6	Make more complex designs to include belts and pulleys, and a combination of other mechanisms	Y5

	<p>Plan the order of work by thinking ahead</p> <p>Use sketches to show other ways of doing things – and then make choices</p> <p>Meet an identified need – e.g. a meal for an older person – by selecting ingredients or materials</p> <p>Use various sources of information and draw on them in design</p>	<p>Y5</p> <p>Y6</p>	<p>Work in a safe and hygienic way</p> <p>Measure and cut precisely to millimetres</p> <p>Make stable and strong joins to stand the test of time</p> <p>Use proportions when cooking, by doubling and halving recipes</p>	<p>Y5</p>	<p>choices from several alternatives</p> <p>Refine the quality of the finished product, including making annotations on the design</p> <p>Clarify ideas through drawing and modelling</p> <p>Increasingly use testing to improve models and finished products</p>	<p>Y5</p> <p>Y5</p>	<p>Plan the order of work by thinking ahead</p> <p>Use sketches to show other ways of doing things – and then make choices</p> <p>Meet an identified need – e.g. a meal for an older person – by selecting ingredients or materials</p> <p>Use various sources of information and draw on them in design</p>	<p>Y5</p> <p>Y6</p>
	<p>Keep cost constraints in mind when selecting materials in design</p> <p>Use their knowledge of – e.g.- science and art when designing</p> <p>Be aware of commercial aspects and incorporate these into their designs</p> <p>Design including hydraulics and pneumatics when where appropriate</p> <p>Draw scaled diagrams with increasing use of ratio Calculate the amount of materials needed use this to estimate cost</p>	<p>Y6</p> <p>Y6</p> <p>Y6</p> <p>Y6</p> <p>Y6</p>	<p>Measure and cut out in precise detail, and make sure that finished products are carefully finished</p> <p>Make separate elements of a model before combining into the finished article</p> <p>Understand how an article might be mass produced Produce a simple instruction manual or handbook for their product</p>	<p>Y6</p> <p>Y6</p>	<p>Research products using the internet</p> <p>Test and evaluate commercial products, understanding how this information supports their own designs</p> <p>Evaluate a range of different sources of information such as advertising and handbooks</p>	<p>Y6</p> <p>Y6</p>	<p>Keep cost constraints in mind when selecting materials in design</p> <p>Use their knowledge of –e.g.- science and art when designing</p> <p>Be aware of commercial aspects and incorporate these into their designs</p> <p>Design including hydraulics and pneumatics when where appropriate</p> <p>Draw scaled diagrams with increasing use of ratio Calculate the amount of materials needed use this to estimate cost</p>	<p>Y6</p> <p>Y6</p> <p>Y6</p> <p>Y6</p> <p>Y6</p>