

Below are the Design and Technology units that children will study across Year 5 and Year 6 at The Rydal Academy. They are split in to half terms or terms depending on the length of the unit. There is a brief explanation of each focus area and suggestions for activities that you can do with your child at home to support their learning.

Year 5		Year 6	
Autumn 1	<p><b>What are the different bridge structures?</b></p> <p>Children will learn about and develop a range of different bridge structures such as beam, truss and suspension.</p> <p>Go for a walk around or drive around Darlington to discover the different types of bridges you can see. Try locations such as the train station and South park. What is the purpose of the bridge you have found? Keep a record of the different bridges you find.</p>	<p><b>Why are shelters needed?</b></p> <p>Children will learn that about the range of different shelter structures, the materials used to create them and the purpose behind each product. They will also explore the importance of shelters during WW2.</p> <p>Mr Park is wanting to build a shelter for when Flick is at school. It needs to be waterproof as it will be outside and it also needs a door so she doesn't get wet if she is inside the shelter during rainy weather. There needs to be a place for her to sleep and somewhere for a food bowl. Have a go at designing this shelter, include the materials and tools needed as well as a detailed diagram of the inside and outside of the shelter.</p>	
Autumn 2	<p><b>I can make a bridge</b></p> <p>Children will use their knowledge of bridge structures from last half term to work in a team to design and construct a bridge, showing their understanding of how to strengthen a structure.</p> <p><a href="https://www.stem.org.uk/resources/elibrary/resource/35888/bridge-building">https://www.stem.org.uk/resources/elibrary/resource/35888/bridge-building</a> Read the task sheet which can be downloaded on the website and have a go at completing the bridge building challenge.</p>	<p><b>I can design an Anderson shelter</b></p> <p>Children will use their understanding of an Anderson shelter to design and build their own model version.</p> <p>Using the task from Autumn 1, have a go at creating a model of the shelter for Flick. Make sure you include a hinge mechanism for the door so it will open and close.</p>	
Spring 1	<p><b>When do we get different foods?</b></p> <p>Children will learn about Seasonality and how this impacts on the production of food throughout the year. They will discover the ways these issues are overcome through meat alternatives.</p> <p><a href="https://www.onepoll.com/innocent-seasonal-fruit-and-veg-survey/">https://www.onepoll.com/innocent-seasonal-fruit-and-veg-survey/</a> Have a go at completing the Seasonality quiz</p>	<p><b>How do different computer systems work?</b></p> <p>Children will learn about how electrical systems are incorporated into a range of products. They will understand how these systems work and begin to 'debug' programs.</p> <p><a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/zxjsfg8">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/zxjsfg8</a> Complete the lesson on Controlling Physical systems. It will help you understand further about how electrical systems allow us to control a variety of everyday products.</p>	
Spring 2	<p><b>I can make a dish using seasonal foods</b></p> <p>Children will use cutting, slicing, mixing and baking skills to create two different recipes which include Seasonal foods.</p> <p><a href="https://www.foodfactoflife.org.uk/recipes/11-14-l2c/apple-and-sultana-crumble/">https://www.foodfactoflife.org.uk/recipes/11-14-l2c/apple-and-sultana-crumble/</a> Have a go at making your own fruit crumble at home. Can you use <a href="https://www.bbcgoodfood.com/seasonal-calendar/all">https://www.bbcgoodfood.com/seasonal-calendar/all</a> (Seasonality Table) to amend the recipe to include ingredients which are available in the month you are cooking?</p>	<p><b>I can make an alarm system</b></p> <p>Children will use their understanding of circuits to design and make a working alarm system.</p> <p>Choose an electrical product from home which includes an alarm. Can you explain how this product works?</p>	
Summer 1	<p><b>How are different textiles made?</b></p> <p>Children will explore how different materials used in the furnishings industry and the techniques used to join these products together. They will practise a range of sewing stitches such as running, back, blanket, zig zag and overstitch.</p> <p>As many furnishing products included added details, follow the video: <a href="https://www.youtube.com/watch?v=Du6gq3ks0SQ">https://www.youtube.com/watch?v=Du6gq3ks0SQ</a> and have a go at adding different buttons to a piece of fabric.</p>	<p><b>How have trade links changes British food?</b></p> <p>Children will learn about how and why Britain trades with other countries in order to gain a more variety food selection. They will also learn about the importance of fairtrade and how this has improved the lives of farmers around the world.</p> <p><a href="https://schools.fairtrade.org.uk/resource/breaks-ladders-board-game/">https://schools.fairtrade.org.uk/resource/breaks-ladders-board-game/</a> Put yourself in the shoes of farmer and play this fairtrade version of snakes and ladders. Discuss some of the problems you may face and how these could be overcome.</p>	

**I can make a cushion cover**

Children will use the sewing skills from the previous half term to design and make their own cushion cover.

Using all the skills you have learnt, have a go at making your own stuffed pillow or toy. It could be any shape and decoration you want, i.e. an animal or an emoji.



**I can make a variety of British inspired dishes**

Children will use of cooking skills in order to make a corned beef pie and a fruit crumble. They will also be expected to follow a recipe to create fruity flapjack.

Have a go at making your own British classic at home. It can be anything from Bangers and Mash to a Victoria Sponge Cake. Try to choose a recipe where you are using a range of different cooking skills.