

Below are the Design and Technology units that children will study across Year 3 and Year 4 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 3		Year 4	
Autumn 1	<p>How do levers, pulleys and gears work?</p> <p>Children will learn about the mechanisms of a lever, a pulley and a gear. They will explore how these systems work within different everyday objects.</p> <p>Make your own lever system at home and have a go at lifting a variety of objects. You could even weigh the item and make a record of the heaviest item you have managed to lift.</p>	Autumn 1	<p>Where do different foods come from?</p> <p>Children will learn that about where in the world different foods come from and why they are grown in these countries, whether this is due to the type of land or differences in climate.</p> <p>https://www.foodafactoflife.org.uk/7-11-years/where-food-comes-from/videos/ Choose one of the videos to watch which show the process different foods go through. Discuss the different stages, then show your learning in a story map.</p>
Autumn 2	<p>I can make an Iron Age Well</p> <p>Children will learn about how the lever, pulley and gear system is used to collect water from a well. They will design and create their own well, adding in a working pulley system.</p> <p>https://www.youtube.com/watch?v=yxmiN9YoHCs Follow the video instructions to make your own colourful wishing well at home. Could you use the skills you have learnt in school to adapt it to make the bucket move up and down?</p>	Autumn 2	<p>I can make bread</p> <p>Children will explore the different types of bread, before making their own sweet and savoury bread recipe.</p> <p>https://www.exploratorium.edu/cooking/bread/activity-yeast.html As we are using yeast in our bread making, have a go at the science experiments suggested on the link. Discuss what reaction is happening with the yeast and how this works within bread.</p>
Spring 1	<p>How can I have a healthy diet?</p> <p>Children will learn about the Eat Well plate and how to eat a balanced diet. They will also discover how food gives us nutrients and energy.</p> <p>Keep a food diary for a week with the categories: Breakfast, Lunch, Dinner, Snacks and Drinks. At the end of the week check to see if you have managed to eat your 5 a day. Have you managed to have a balanced diet each day?</p>	Spring 1	<p>How do different light sources work?</p> <p>Children will use their understanding from their science 'Electricity' learning to understand how different light sources work and how they have changed over time. They will also explore the parts of a torch ready for next half term's project.</p> <p>http://www.crickweb.co.uk/ks2dt.html Recap on the different parts of the torch and discuss how each component works together to make the bulb shine.</p>
Spring 2	<p>I can make healthy pizzas</p> <p>Children will use cutting, slicing, chopping and grating skills to design and make their own pizza, choosing a range of healthy toppings.</p> <p>https://www.foodafactoflife.org.uk/recipes/11-14-l2c/pizza-toast/ Follow the recipe to create your own pizza at home.</p>	Spring 2	<p>I can make a torch</p> <p>Children will design and make a working light source by developing a torch which will encase a working electrical circuit.</p> <p>Have a go at designing a brand new portable light source. Remember to think about the purpose of your product, who it is aimed at and what you would need in order to make it. Create a prototype of what your product would look like.</p>
Summer 1	<p>What are different fabrics and textiles?</p> <p>Children will explore the range of fabrics used within the textile industry and identify products made from these fabrics. They will learn how different fabrics are joined together i.e stapled, sewn, glued, pinned etc.</p> <p>Choose 10 textile products from the house and record the type of fabric they are made from. Can you identify the joining techniques used? Are similar products made from the same textiles? Compare any similarities and differences in the materials.</p>	Summer 1	<p>What are accessories and how have they changed?</p> <p>Children will learn about the fashion side of the textile industry and focus on how accessories differ around the world. They will explore the types of materials used and how a range of accessories are made.</p> <p>https://www.bbc.co.uk/bitesize/clips/zgsmhyc Watch the video to discover how different materials are tested. Choose three different fabrics i.e. denim, leather and cotton and have a go at your own textile testing.</p>

I can make a mini beast shaped bean bag

Children will use sewing skills to design and create their own bean bag in the shape of a chosen mini beast. They will focus on using running stitch and back stitch.

https://www.youtube.com/watch?v=rZ_wVC84UmM Watch the video and have a go at creating a row of backstitches. Are you able to follow a straight line?

I can make a pencil case

Children will use a range of sewing stitches – running, back and blanket – to design and create a pencil case.

<https://www.youtube.com/watch?v=Wcf9iJHST94> Showcase your sewing skills. Watch the video to help understand how to create a blanket stitch. Can children follow a straight line on a piece of fabric using a running stitch?

Have a look in the shops at the different designs which you see on pencil cases. Take a note of any designs or accessories that are included e.g. buttons, zips and patterns. Could you design your own at home?