Design and Technology at Wylde Green Primary

In Wylde Green, Design and Technology is taught as a cross curricular subject linking into each year group's half termly or termly topics when possible. It encourages children to learn to think creatively to solve problems both as individuals and as members of a team. They are taught to design and develop a range of ideas and make a range of products. The children are also given opportunities to reflect upon and evaluate past and present products, its uses and its effectiveness and are encouraged to become innovators in creating and evaluating their own products. They are given the opportunity to explore and make healthy dishes and understand where certain types of food comes from. To ensure there is sufficient focus on the subject, teachers teach each unit for 6 weeks.

EYFS Coverage

In reception, through the strand 'Expressive Arts and Design', children use and explore a variety of materials, tools and techniques. They share their creations and explain they process they used to make these. From the Physical Development area of children, children are encouraged to develop their fine motor skills safely through the use of a range of tools e.g. scissors, split pins, cutlery and hammers.

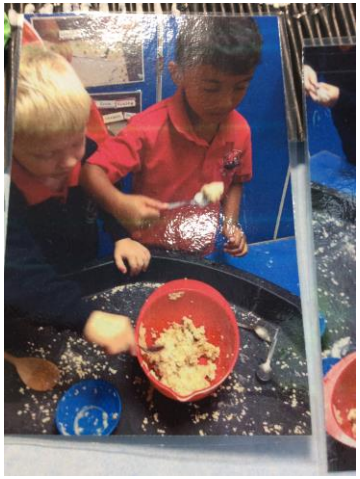
KS1 Coverage

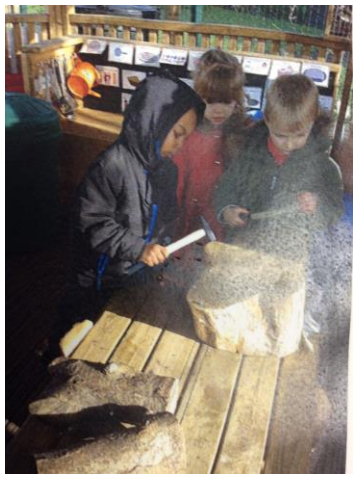
In Year 1 and 2, children design purposeful products based on design criteria. They do this through discussions and drawings. The children use a range of tools and materials to make their products. In Year 1 children evaluate existing products whilst in year 2, they evaluate their products against their design criteria. Children develop their technical knowledge by building stable structures and begin to use mechanisms in their products in Year 2. In Year 1, they explore how to make healthy dishes and then in Year 2 they understand where food comes from. Our Forest school pupils are given opportunities to develop and apply their technical skills by using a variety of tools and equipment.

KS2 Coverage

In KS2 children use research to develop their design in creating innovative and functional products aimed at individuals or groups. They generate ideas through annotated sketches, exploded diagrams and pattern pieces. The children use a wider range of equipment to perform practical tasks, including construction materials, textiles and ingredients based on their functional and aesthetic qualities. During evaluation, the children investigate and analyse a range of existing products and evaluate their products against their design criteria. They also learn how to improve their work based on the views of others. They develop their technical knowledge by exploring how to strengthen more complex structures and begin to explore using mechanical and electrical systems. For cooking and nutrition, they prepare and cook a variety of savoury dishes using a range of techniques and know how a variety of ingredients are grown, reared, caught and processed.

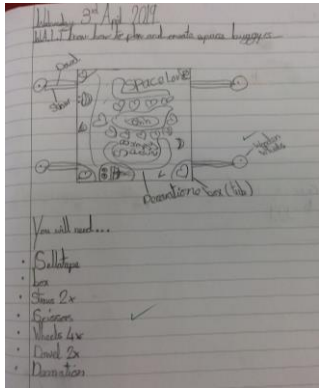
In Reception, the children have learnt how to make a range of food such as, pancakes and porridge and decorating biscuits. They have used simple cooking skills to mix, pour and handle tools carefully. During Forest school, children have explored using and handling saws and hammers carefully.

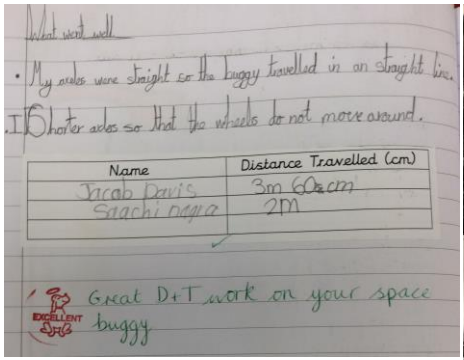


In Year 1, based on the topic 'School Days', the children designed, made and evaluated a playground. They explored how to make their features on their playground stable and strong. They have also learnt how to make a healthy animal on toast using a variety of fruits.

In Year 2, during their topic on 'Pioneers', the children designed, made and evaluated moon buggies. They also learnt how to sew two pieces of fabric together to make a Christmas stocking for a member of their family.





In Year 3, the children designed and created a stiff and durable photograph frames. They have also explored how pneumatics work and used this technical knowledge to create a moving monster.

Linked with their Science topic on 'electricity', Year 4 designed and made a torch. They explored how electrical circuits work and used this technical knowledge to create a circuit to light up their torch. They have also designed, made and evaluated a purse for their friends. The children used different types of stitches to sew their purses and attach buttons and strings to their purses. They have also made a variety of savoury dishes.

As part of their topic based on 'Bridges', Year 5 made suspension bridges based on their design criteria. They explored different ways on how to hold their suspension bridges and used weights to see if their final bridge was able to stand. They have also explored Cam mechanisms and used this technical knowledge to make a moving toy.

In Year 6, the children have researched, designed, made and evaluated slippers. They created prototypes of their slippers using templates of their feet before they joined different materials together. They have also explored designing and creating a fairground ride using electrical circuits.

Design and Technology is also encouraged within pupils' Power project homework. The children thrive on showing their creativity in making models that are linked with their termly topics. Here are only a few of these amazing projects from throughout the school.

D & T Topics Overview

	Autumn Term	Spring Term	Summer Term
EYFS	Structure Make a bridge using different materials	. Food Make porridge	Mechanisms Use split pins to make body parts move
Year 1	Structure - Playground Make a swing or a playground equipment	Mechanisms – Moving Pictures Use sliders in moving pictures 	Food Preparing fruit & vegetables (healthy & varied)
Year 2	Textiles – Sew a stocking Templates and joining techniques Design on laptop	Mechanisms - Vehicles Use wheels, axles, levers, sliders Make a vehicle or a moon buggy	Food Preparing fruit & vegetables Understand where food comes from
Year 3	Structure Photograph frames.	Mechanisms Explore and use pneumatic system Make a moving monster/animal	Food Healthy & varied diet Make a healthy sandwich
Year 4	Textiles – Money container Make and sew a purse/wallet	Food Cook a variety of savoury dishes e.g. pasta, fajitas, muffins	Mechanisms (electrical) – Torch/lighthouse Make a torch – use series circuits incorporating switches, bulbs, buzzers and motors in their products.
Year 5	Structure Building bridges (linked to Rivers unit)	Mechanisms Use cams to create moving toys	Food – Mexico/biscuits Tacos, burritos
Year 6	Mechanisms Fairground ride use CAD design.	Textiles Slippers	Food Celebrating culture & seasonality – burgers

Things to do at home:

As Design and Technology is about exploring their creativity and developing their ideas. Here are a few ideas that children can do at home.

Cooking and Nutrition

- Making healthy snacks or dishes and recording and uploading it on to our Twitter website.
- Why not become a TV chef. The child can ask someone to record them cooking while they talk through how to make a food dish.
- Become a Junior Masterchef - Invent your own recipe by exploring different types of ingredients.

Recommended websites

https://www.bbc.co.uk/cbeebies/curations/easy-cooking-with-kids-recipes

https://kidshealth.org/en/kids/recipes/#catvegetarian

https://www.ukschooltrips.co.uk/directory/design-and-technology.html

Visits

- Visit Lego discovery Centre in Birmingham
- Visit Think Tank in Millennium Point
- British Motor Museum at Gaydon
- If you visit London, you can visit Stanley Kubrick: The Exhibition – Design Museum

Creative Tasks

- Build a mini model of your local area
- Design your own city – label your designs and then can you create your own city out of Lego or pieces of construction.
- Invent your own landmark – where would you like your landmark to be?
- Build your own bridge for Sutton Park.
- Create an electrical game with circuits.