St Botolph's C of E Primary School

DESIGN AND TECHNOLOGY CURRICULUM ROADMAP

'Striving to be the best we can'

St Botolph's Quarrington

YEAR 6

- I can evaluate my design against design criteria and consider the views of others.
- I know how to use exploded diagrams, cross sections and prototypes to create a design.
- I can develop design criteria suitable for purpose and audience.
- I know how to investigate and analyse a range of existing products.
- I know the importance of accuracy when joining and finishing a model.
- I know how to saw wood using accurate measurements.
- I can use a drill accurately.
- I know which materials to select for a design based on their properties.
- I know how to integrate an electrical circuit into a design.
- I know how Steve Jobs has shaped the world of technology.
- I can apply my understanding of computing to program, monitor and control a product.
- I know the purpose and technique for kneading and proving bread.
- I know how to measure ingredients accurately.

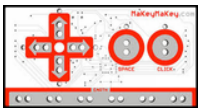
Can I make a Block-Bot using Woodwork skills? (Woodwork) — Can I make a Fit Bit using a circuit? (Electronics) — Can I use different processes to make bread? (Food)

YEAR 5

- I can name the 6 main types of CAM mechanism.
- I know how to investigate and analyse a range of products.
- I know how to use CAD, cross sections and prototypes to create a design.
- I can evaluate against my design criteria and consider the views of others.
- I know how Lucienne Day has shaped the world of textiles.
- I know why specific dimensions are needed when planning a Computer Aided Design.
- I know the purpose of each CAM mechanism.
- I can develop design criteria suitable for purpose and audience.
- I can create a Computer Aided Design on Tinkercad.
- I can measure, cut and stitch accurately when creating a seam allowance.
- I can select a suitable material for a cushion based on its properties and aesthetics.
- I know how to join textiles with a range of stitching techniques.

Can I make a product that employs a seam allowance? (Textiles) — Can I use Tinkercad to create a product? (Electronics) — Can I make a moving CAMS toy? (Mechanics)

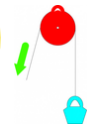
YEAR 4

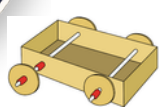


- I know how to create a stable, free-standing structure with secure joins.
- I can join two pieces of wood accurately.
- I know how to measure accurately and saw at an angle.
- I can explain where my ingredients have come from.
- I know that some foods grow better in different seasons.
- I know how to create a circuit using a Makey Makey kit.
- I can use a range of cooking techniques to make a pizza.
- I know how to investigate a range of existing products.
- I can develop design criteria.
- I can evaluate my product using my design criteria.
- I know how to use sketches and prototypes to create a design.
- I know how Heston Blumental has shaped the world of food innovation.

How can I create an instrument using a circuit? (Electronics) — Can I design and make my own pizza? (Food) — How can I make a free-standing photo frame? (Woodwork)

YEAR 3





- I can evaluate my product against design criteria.
- I know how to design a product based on design criteria.
- I can explore and evaluate a range of existing products.
- I can peel, chop and cut fruit to make a smoothie.
- I know where fruits come from and which fruits grow in this country.
- I can name some healthy foods and their food groups.
- I can make a vehicle with a working mechanism, wheels chassis and axles.
- I know the function of wheels and axles.
- I know how Christopher Wren has shaped the world of architecture.
- I know how to screw into wood.
- I know how to hammer a nail into wood.
- I can understand and apply the importance of making healthy food choices.
- I know how to mix, set and cool ingredients to make a cereal bar.
- I know the function of a bridge and how they are strengthened.
- I know different ways to strengthen a structure.
- I know where my ingredients come from and to which food group they belong.
- I can make a mechanical system using a pulley.
- I know how to investigate a range of existing products.
- I can develop design criteria.
- I know how to use sketches and prototypes to create a design.
- I can evaluate my product against my design criteria.
- I know how John Bradfield has shaped the world of architecture.
- I know what a pulley is and how it works.

Can I make a healthy drink? (Food) — How can I use wheels and axles to make a vehicle? (Mechanics) — Can I use wood skills to make a product? (Woodwork)

YEAR 2

- I can join two pieces of material together.
- I know that Charles Wicksteed invented the swing and slide.
- I can use a running stitch.
- I can attach decorations to material to finish a product.
- I can say some of the things I like and don't like about my product.
- I can cut, tear, curl and fold paper to build a structure.
- I can explore a range of existing products.
- I know how to design a product based on design criteria.
- I can select appropriate materials and use them to make a lever.
- I know what a lever is and that they can move up and down, and side to side.

How can I make a moving picture? (Mechanics) — Can I join templates together using a stitch? (Textiles) — Can I make a structure sturdy? (Construction)

YEAR 1

- I can use a pincer grip or tweezers to pick up small objects.
- I can talk about ways to make my models stronger.
- I can explore a wide range of materials and fabric.
- I can build with a range of construction materials.
- I can use utensils to chop and peel.
- I can name some fruits and vegetables and know they are healthy.
- I know how to use scissors, tape, glue and card to make structures.
- I know some ways to join materials.
- I can talk about what I like and don't like about my models.
- I know how to draw and make a simple design.

Can I create a healthy fruit kebab for the Lighthouse Keeper? (Food) — Can I make a split pin Easter card? (Materials) — Can I create a new sleigh for Santa? (Construction)

EYFS

Design & Technology

Respect · **Thankfulness** · **Perseverance** · **Truthfulness** · **Friendship** · **Compassion**