

Design & Technology



Ensure children produce products for specific users and for a purpose



Provide dedicated time for the development of skills which lead to high-quality final products



Build up children's cooking portfolio to create a wide range of healthy food products



Encourage children to know how to keep safe within Design & Technology

EYFS Design & Technology Learning Journey

Autumn 1

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|----------------------------|--|
| Fine motor skills | <ul style="list-style-type: none"> -Begin to cut paper, card, tissue paper and objects such as straw to help create a piece of work -With support, be able to weave fabric -Roll and stretch Playdough to create a piece of work -Draw lines and circles using gross motor movements -Hold pencil/paint brush beyond whole hand grasp -Begin to develop a more effective pencil grip |
| Expressive Arts and Design | <ul style="list-style-type: none"> -Use glue, sellotape or masking tape to produce a range of junk model pieces |
| | <ul style="list-style-type: none"> -Jelly tasting and exploring different flavours |

Autumn 2

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|----------------------------|--|
| Fine motor skills | <ul style="list-style-type: none"> -Continue to develop muscle tone in order to put pencil pressure on paper -Use tools to effect changes to materials -Engage children in structured activities: guide them in what to draw, write or copy |
| Expressive Arts and Design | <ul style="list-style-type: none"> -Be able to use chalk to create a drawing -Design and create Christmas stockings with a basic running stitch |
| | <ul style="list-style-type: none"> -Design and create Christmas salt dough decorations -Begin to create a weaving pattern |

Spring

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|----------------------------|---|
| Fine motor skills | <ul style="list-style-type: none"> -Handle tools, objects, construction and malleable materials with increasing control -Encourage children to draw freely -Developing use of scissors |
| Expressive Arts and Design | <ul style="list-style-type: none"> -Further develop colour mixing (painting) -Decorating dinosaurs by making different textures and patterns using colours |
| | <ul style="list-style-type: none"> -Design and create emergency vehicles -Be able to use split pins to create characters with moving parts -Fruit tasting with basic chopping |

Summer

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|----------------------------|--|
| Fine motor skills | <ul style="list-style-type: none"> -Use one hand consistently for fine motor tasks -Cut along a straight line with scissors -Start to cut along a curved line, like a circle -Draw a cross -Copy a square -Begin to draw diagonal lines, like in a triangle -Start to colour inside the lines of a picture -Start to draw pictures that are recognisable |
| Expressive Arts and Design | <ul style="list-style-type: none"> -Develop and build on collage skills from the Spring Term to create a character from a traditional tale |
| | <ul style="list-style-type: none"> -Create and bake gingerbread biscuits |

Year 1

Autumn

- Explore and evaluate a range of existing puppets
- Identify ways of joining material together
- Design a puppet thinking about how it will be made
- Create a template and a prototype of a puppet
- Be able to join material together making sure it is safe and secure
- Be able to evaluate my idea and product against the design criteria

Spring

- Compare different tastes and flavours
- Describe the texture and appearance of different fruits
- With support, slice, peel and chop
- Design a snack/smoothie taking into account knowledge of flavours which complement each other
- Evaluate my ideas and product against the design criteria

Summer

- Explain clearly what lever and slider means
- Construct leavers and sliders
- Design and create a moving story book
- Explain clearly what strong and stable means
- Design a stable structure
- Evaluate my idea and product against the design criteria

Sticky Knowledge

- Know what a puppet is
- Know how an adult can thread a needle
- Know different ways to join fabric together (stitching, stapling and gluing)
- Know how to, with some support, join fabrics using a simple running stitch
- Know what is meant by a product
- Know what is meant by a purpose
- Know what is meant by a user
- Know where some food comes from
- Know it is important to wash hands for good hygiene
- Know how to use a mixing bowl
- Know how to cut/chop ingredients safely
- Know a variety of fruits and vegetables
- Know what a smoothie is
- Know what is meant by a structure
- Know a lever helps us to lift or move objects
- Know a force is a push or pull

Key Vocabulary

| | |
|-----------------|--|
| Mechanisms | slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards, design, make, evaluate, user, purpose, ideas, design criteria, product, function |
| Structures | cut, fold, join, fix, structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic |
| Food Technology | names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard |
| Textiles | Template, join, sew |

Year 2

Autumn

- Recognise the importance of a well-balanced diet
- Use our senses to evaluate a variety of food products (This lesson is here due to missed learning during Covid pandemic. Will be removed in 2023)
- Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.
- Design a product using our knowledge of a balanced diet
- Combine foods from different food groups to create a healthy food product.
- Evaluate my final product
- Explore a range of fabrics
- Children to discuss needle safety
- Threading needles
- Practise running stitch
- Create a template for my textiles crayon/pouch
- Make and decorate a textiles crayon/pouch

Spring

- Understand how basic winding mechanisms work
- Know a range of techniques for making winding mechanisms
- Effectively plan and design a winding mechanism
- Evaluate the effectiveness of my winding mechanism

Summer

- Manipulate resources to make a stronger structure
- Know how to join and fix structures together securely
- Design and construct a structure which is strong and sturdy
- Evaluate my idea and product against the design criteria

Sticky Knowledge

- Know how to strengthen a simple structure
- Know how to make a winding mechanism to move part of a model
- Know how to thread a needle on my own
- Know what is meant by a seam
- Know what is meant by a template
- Know that food has to be grown, farmed or caught
- Know how to chop, peel and grate safely
- Know how to measure out ingredients
- Know foods that are considered healthy
- Know the importance of being hygienic

Key Vocabulary

| | |
|-----------------|---|
| Mechanisms | assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism |
| Structures | cuboid, cube, cylinder, function |
| Food Technology | flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing |
| Textiles | features, suitable, quality mock-up, design brief, design criteria, make, evaluate, user, purpose, function |

Year 3

Autumn

- Revisit the importance of a well-balanced diet from Year 2
- Use our senses to evaluate a variety of food products (lesson is here due to missed learning during Covid pandemic. Will be removed in 2023)
- Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.
- Design a product using our knowledge of a balanced diet
- Combine foods from different food groups to create a healthy food product
- Evaluate my final product

Spring

- Investigate a number of textile products and understand their purpose
- Experiment with a range of stitching techniques and materials
- Create a design of my final product
- Create my final product using effective stitching
- Know the difference between a fixed and a loose pivot
- Know a mechanism is a device to create movement in a product
- Know linkage is joining one or more levers to produce the type of movement required

Summer

- Know what prototype means
- Move from joining card to starting to join wood
- Know what rigid means
- Begin to understand what reinforcing structures means

Sticky Knowledge

- Know words to describe food (taste/smell)
- Know the principles of a healthy balanced diet
- Know what the food groups are
- Know how seasons effect food availability
- Know how to follow a basic recipe
- Know how to make tomato soup
- Know what a back stitch is
- Know how to add an extra piece of fabric as decoration
- Know what embroidery means
- Know what reinforcing a structure means

Rucstall Words (Year 3 and 4)

| | |
|-----------------|--|
| Mechanisms | Mechanism, Lever, Linkage, Pivot, Linear, Rotary, Oscillating, Prototype, Design criteria, Innovative, Appealing and Design brief |
| Structures | Shell structure, Net, Cube, Cuboid, Vertex, Edge, Face, Length, Width, Breadth, Capacity, Shaping, Joining, Assemble, Accuracy, Material, Stiff, Strong, Reduce, Reuse and Recycle |
| Food Technology | Utensil, Texture, Taste, Sweet, Sour, Hot, Spicy, Appearance, Smell, Preference, Greasy, Moist, Cook, Fresh, Savoury, Hygienic, Edible, Grown, Reared, Caught, Frozen, Tinned, Processed, Seasonal and Harvested |
| Textiles | Fabrics, Fastening, Compartment, Zip, Button, Strength, Weakness, Stiffening, Templates, Stitch, Seam and Seam allowance |

Year 4

Autumn

- Know what yeast does when cooking/baking
- Know how to knead dough
- Know what unleavened means
- Learn how to measure out ingredients

Spring

- Understand what is required to make an effective wooden structure
- Know how to create a sturdy structure
- Be able to accurately measure, cut and reinforce materials
- Know how to be safe when using tools in woodwork
- Experiment with a range of stitching techniques and materials (built on from Year 3) - sewing skills to become more accurate with close stitching so as to keep rice contained

Summer

- Investigate levers and linkages
- Create my own lever and linkage mechanism

Sticky Knowledge

- Know what is meant by fray/ing
- Know how to independently thread a needle
- Know what is meant by a quadrant
- Know how to join materials such as card and wood together
- Know what seasonal food is and how it is grown, reared, caught and processed
- Know how personal diets can be improved
- Know how to prepare ingredients using different utensils
- Know how to measure ingredients
- Know how to cook ingredients using an oven
- Know what yeast does when cooking/baking
- Know how to knead dough
- Know what unleavened means
- Know what is meant by a mechanism
- Know what a catapult is
- Know products and toys that use gear and pulley systems
- Know how different sized pulleys effect each other
- Know how gears impact speed and rotation

Rucstall Words (Year 3 and 4)

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| Structures | Shell structure, Net, Cube, Cuboid, Vertex, Edge, Face, Length, Width, Breadth, Capacity, Shaping, Joining, Assemble, Accuracy, Material, Stiff, Strong, Reduce, Reuse and Recycle |
| Food Technology | Utensil, Texture, Taste, Sweet, Sour, Hot, Spicy, Appearance, Smell, Preference, Greasy, Moist, Cook, Fresh, Savoury, Hygienic, Edible, Grown, Reared, Caught, Frozen, Tinned, Processed, Seasonal, Yeast, Dough, Unleavened and Harvested |
| Textiles | Fabrics, Fastening, Compartment, Zip, Button, Strength, Weakness, Stiffening, Templates, Stitch, Seam and Seam allowance |

Year 5

- Know where pizza originated from and make comparisons to modern times
- Be able to name the key ingredients needed to make a pizza base and explain how a pizza is made
- Understand how ingredients are used as toppings in different countries and for different purposes.
- Design a pizza using an understanding of ingredients which compliment each other
- Effectively evaluate my product
- Learn how to do blanket stitching

Sticky Knowledge

- Know the process of making a pizza
- Know what mass produced means
- Know how to adapt a recipe to change the appearance, texture and aroma
- Know how to sew a button onto material
- Know what is meant by a seam
- Know how to measure, cut and shape a range of materials
- Know how to saw safely
- Know how to drill safely
- Know how to measure and cut wood accurately
- Know what is meant by a prototype

Rucstall Words (Year 5 and 6)

| | |
|-----------------|--|
| Mechanisms | Pulley, Drive belt, Gear, Rotation, Spindle, Driver, Axle, Motor, Circuit, Switch, Circuit, Annotated drawings, Functionality, Innovation and Authentic |
| Structures | Frame structure, Stiffen, Strengthen, Reinforce, Stability, Temporary, Permanent, Refinement, Prototype and Aesthetics |
| Food Technology | Spice, Herbs, Fat, Sugar, Carbohydrate, Protein, Vitamins, Nutrients, Nutrition, Gluten, Dairy, Allergy, Intolerance, Savoury, Seasonality, Combine, Fold, Whisk, Beat, Simmer, sprinkle and crumble |
| Textiles | Wadding, Reinforce, Right side, Wrong side, Hem, Running stitch and Blanket stitch |

Year 6

Autumn

- Describe different types of shelters and explain their purposes
- Identify which parts support and strengthen structures
- Recognise techniques for reinforcing and strengthening structures
- Know how to join and combine materials effectively
- Plan and make a model of their shelter idea
- Evaluate their own and other children's shelters

- Know how to cook using a wok and hob
- Become more confident with a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, frying, stirring and folding
- Know that to be active and healthy, food and drink are needed to provide energy for the body
- Know that recipes can be adapted to change the appearance, taste, texture and aroma

Spring

- Understand that mechanical and electrical systems have an input, process and an output.
- Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.

Sticky Knowledge

- Know how to strengthen, stiffen and re-inforce structures
- Know what is meant by an effective shelter
- Know what is meant by sanding
- Know what is meant by aesthetics
- Know how to cook using a hob
- Know how to cook using a wok
- Know the difference between peeling, chopping, slicing, grating, mixing, spreading, frying, stirring and folding
- Know how to make fajitas
- Know a number of different stitches
- Know key chefs who have promoted seasonality and healthy eating

Rucstall Words (Year 5 and 6)

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| Structures | Frame structure, Stiffen, Strengthen, Reinforce, Stability, Temporary, Permanent, Refinement, Prototype and Aesthetics |
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| Textiles | Wadding, Reinforce, Right side, Wrong side, Hem, Running stitch and Blanket stitch |