## D \& T

## EYFS

Through continuous provision Children in Reception will:
Communication and Language:
*Develop language and create own narratives using small world toys
*Talk about their own mark-making, drawing, painting and other creative tasks
*Develop their listening skills
*Play, share and perform a wide variety of music and songs from different cultures and *Play, share and
historical periods
*Notice features in the natural world - define colours, shapes, textures and smells in their own words *Discuss what they see
Personal, Social and Emotional Development
*Develop a 'can-do' attitude
*To explore and show feelings through art
*Opportunities to work collaboratively with others
*Become resilient learners
Physical Development:
*Develop their fine-motor skills so that they can use a range of tools competently and safely *Handle a pencil effectively
*Develop independence
Literacy:
*Use different mark-making tools with confidenc
Mathematics
Understanding the World:
Expressive Arts and Design
*Use a range of tools and be able to use tools with care and precision
*Explore different materials freely, to develop their own ideas
*Explore different materials freely, to develop their own
*Join different materials and explore different textures
*Explore colour and colour mixing
*Explore different artists - Wassily Kandinsky, Vincent Van Gogh
*Show different emotions in their drawings and paintings
*Draw with increasing complexity and detail
*Use drawing to represent ideas like movement or loud noises
*Explore, use and refine a variety of artistic effects to express their ideas and feelings *Return to and build on previous learning, refining ideas and developing their ability to represent them
*Create collaboratively, sharing ideas, resources and skills
*Watch and talk about dance and performance art, expressing their feelings and responses *Listen carefully, move to and talk about music, expressing their feelings and responses *Sing songs
*Develop storylines in their play

Continuous provision areas and activities that support learning and skill development that relate to this subject are:

## Writing area:

*Explore different mark-making tools

## Small World area:

*Play alongside others in creating imaginative and complex small worlds

## Reading area:

*Explore 'feely books' and talk about different textures
Listen to stories about artists

## Creative area:

*Use oil pastels and other media
Still life drawings of plants
Recreate pictures from around the world
*Painting
Using different materials to create collages
${ }^{*}$ Use malleable materials to create own models, people, animals
Junk modelling and using natural materials

## Outside area:

Explore and observe the environment - draw what they can see

| Autumn 1 <br> Baseline/Settling <br> in/Travel | Autumn 2 <br> Toys | Spring 1 <br> Dinosaurs | Spring 2 <br> Family/Animals | Summer 1 <br> Space | Summer 2 <br> Sea |
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Moving Pictures - SPRING 1
This 'Moving Traditional Tale Pictures' unit gives children opportunities to develop their understanding of mechanisms. Children listen to and role play different Traditional Tales and then learn how sections of the stories can be made into a moving picture. Following instructions on how to make different types of mechanisms, such as levers, wheels and sliders, gives children experience and information to draw on when developing their own ideas. They sketch a design based on their ideas and then create their moving picture centred on the story of 'The Three Billy Goats Gruff.' Children evaluate their finished product.

Content:

- Explore an existing product.Evaluate how well a product works.Answer in detail a range of questions about an existing product to help explore and evaluate it.
- Draw a simple design. Draw a simple design and add annotations.Add detail and annotations to a design to show how different components move.
- Make a picture which has at least one moving mechanism. Make a picture which aims to have two moving mechanisms.Make a picture which uses a slider, wheel and lever mechanism to make it move.
- Start to understand what design criteria is used for. Evaluate what they did well on their product.
- Use design criteria to help guide the making and evaluation process. Incorporate the main features of design criteria into their product and evaluate their product in detail against design criteria.


## Skills: Design

- use their knowledge of existing products and their own experience to help generate their ideas;
- design products that have a purpose and are aimed at an intended user
- explain how their products will look and work through talking and simple annotated drawings;
- understand and follow simple design criteria;

This unit will teach children about peeling, zesting, cuttin safely and applying these skills when preparing healthy dishes. Children will learn key information about healthy eating and where their food comes from. They will gain some practical ideas about ingredients that can be combined to make interesting and healthy salads.

Content

- To discuss and make lists of as many fruits and vegetables as they can. They will pick their favourite and then find out the most popular in class, presenting this data in a pictogram.
- to look closely at a variety of different fruits and vegetables. They will use their senses to describe the different features of the fruits and vegetables as well as their sense of taste. The children will also discuss safety and hygiene in relation to food.
- discuss and think about food preparation. They will be practising using different tools safely, and using the appropriate language associated with food preparation.
- to look at variety of different foods and the importance of eating more fruit and vegetables than certain other groups of foods. They will be challenged to design some new recipes only using fruits and vegetables, making sure they are colourful, tasty and healthy.
- to recap and evaluate all they have learnt about fruits and vegetables. They will be recreating their recipe designs making sure they are being safe and hygienic.


## Skills: Make

- with support, follow a simple plan or recipe;
- begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer;
learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;
- assemble, join and combine materials, components or ingredients;
- cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;

This Fabric Bunting unit will teach children about working with fabric. It starts with children evaluating a range of existing bunting with a theme around counting. Children are then set a design criteria. They will learn how to use a graphics program to create a design and template for their bunting. Working with felt, children will cut out a bunting shape and use a simple running stitch. Children will be given the chance to explore different fabrics that they could use to enhance their designs. Using techniques such as sewing, stapling and gluing, children will decorate their felt flag. Finally, children will evaluate their product.

## Content:

- Judge existing products on a simple scale.Say what they like and dislike about the design of existing products.Suggest improvements to existing products.
- Use a graphics program to create a simple design.Use a graphics program to repeat and fill images to create an appealing design.Experiment with images and layout using a computer generated design.
- Work with support to cut out a fabric shape.Demonstrate some accuracy when cutting around a fabric shape. Precisely cut around a fabric shape.
- Start to demonstrate how to create a basic stitch.Create a seam using a running stitch.Use smaller stitches to create a tighter seam.
- Decorate a piece of fabric.Choose appropriate fabric to add decoration. Carefully select fabrics to add decoration.


## Skills: Design

- design models using simple computing software;
- plan and test ideas using templates and mock-ups;
- work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment.
Skills: Make
- select from a range of materials, textiles and components according to their characteristics;

|  | - work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment. <br> Skills: Make <br> - with support, follow a simple plan or recipe; <br> - begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer; <br> - select from a range of materials, textiles and components according to their characteristics; <br> - Practical skills and techniques <br> - use a range of materials and components, including textiles and food ingredients; <br> - assemble, join and combine materials, components or ingredients; <br> Skills: Evaluate <br> - explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations; <br> - explain positives and things to improve for existing products; <br> - talk about their design ideas and what they are making; <br> - as they work, start to identify strengths and possible changes they might make to refine their existing design; <br> - evaluate their products and ideas against their simple design criteria; <br> Skills: Technical Knowledge <br> - talk about and start to understand the simple working characteristics of materials and components; <br> - explore and create products using mechanisms, such as levers, sliders and wheels. | Skills: Evaluate <br> - explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations; <br> - explain positives and things to improve for existing products; <br> Skills: Cooking and Nutrition <br> - explain where in the world different foods originate from; <br> - understand that all food comes from plants or animals; <br> - understand that food has to be farmed, grown elsewhere (e.g. home) or caught; <br> - name and sort foods into the five groups in the Eatwell Guide; <br> - understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why; <br> - use what they know about the Eatwell Guide to design and prepare dishes. | - learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures; <br> - cut, shape and score materials with some accuracy; <br> - demonstrate how to cut, shape and join fabric to make a simple product; <br> - use a basic running stich; <br> Skills: Evaluate <br> - explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations; <br> - explain positives and things to improve for existing products; <br> - talk about their design ideas and what they are making; <br> - as they work, start to identify strengths and possible changes they might make to refine their existing design; <br> - evaluate their products and ideas against their simple design criteria; <br> - talk about and start to understand the simple |
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| Key Vocabulary | Moving, picture, book, story, traditional tale, lever, slider, pivot, wheel, push, pull, direction, up, down, left, right, evaluate, product. <br> Moving, mechanism, slider, evaluate, assemble, fix. | Fruit, vegetable, plant, root, cauliflower, cabbage, strawberries, beetroot, onions, apples, plums, broad beans, blackberries, rhubarb, marrow, gooseberries, celery, lettuce, carrots, tomatoes, radishes, runner beans, turnips, potatoes. | Evaluate, product, bunting, existing. Design, program, graphics, computer. Template, felt, trace, accurately, skill. Needle, thread, running stitch, seam, starting off, finishing off. Materials, fabrics, join, select, properties. |



## Skills: Design

- explain how their products will look and work through talking and simple annotated drawings;
- plan and test ideas using templates and mock-ups;
- understand and follow simple design criteria;

Skills: Make

- begin to select from a range of hand tools an equipment, such as scissors, graters, zesters, safe knives, juicer;
- select from a range of materials, textiles and components according to their characteristics;
- learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;
- cut, shape and score materials with some accuracy;
- assemble, join and combine materials, components or ingredients;
- demonstrate how to cut, shape and join fabric to make a simple product;
- manipulate fabrics in simple ways to create the desired effect;
- use a basic running stich;


## Skills: Evaluate

- explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;
- explain positives and things to improve for existing products;
- explore what materials products are made from;
- evaluate their products and ideas agains their simple design criteria;

Skills: Technical Knowledge

- talk about and start to understand the simple working characteristics of materials and components;
example imaginary, story-based, home, school and the wider environment.


## Skills: Make

- with support, follow a simple plan or recipe
- begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer;
- select from a range of materials, textiles and components according to their characteristics;
- learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;
- use a range of materials and components, including textiles and food ingredients;
- assemble, join and combine materials, components or ingredients;
- cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;


## Skills: Evaluate

- explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;
- explain positives and things to improve for existing products;
- talk about their design ideas and what they are making;
- as they work, start to identify strengths and possible changes they might make to refine their existing design;
- evaluate their products and ideas against their simple design criteria;

Skills: Cooking and Nutrition

- explain where in the world different foods originate from;
- name and sort foods into the five groups in the Eatwell Guide;
- understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why;
- use what they know about the Eatwell Guide to design and prepare dishes.
- use their knowledge of existing products and their own experience to help generate their ideas;
- design products that have a purpose and are aimed at an intended user
- understand and follow simple design criteria;
- work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment.

Skills: Make

- begin to select from a range of hand tools an equipment, such as scissors, graters, zesters, safe knives, juicer;
- select from a range of materials, textiles and components according to their characteristics;
- learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;
- assemble, join and combine materials, components or ingredients;
- begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.


## Skills: Evaluate

- explore and evaluate existing products mainl through discussions, comparisons and simple written evaluations;
- explain positives and things to improve for existing products;
- explore what materials products are made from;
- as they work, start to identify strengths and possible changes they might make to refine their existing design;
- evaluate their products and ideas against their simple design criteria;
- start to understand that the iterative process sometimes involves repeating different stage of the process.

Skills: Technical Knowledge

- build simple structures, exploring how they can be made stronger, stiffer and more

|  |  |  | stable; <br> taklabound start to understand the simple <br> working characterisics of materials and <br> components; |
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- Draw on their understanding of the
characteristics and properties of foods to select appropriate ingredients.
- Work accurately to make bread products that match the sensory properties required
- have implemented improvements as the design developed.
- Evaluate how successful their product is with reference to their original design criteria.


## Skills: Design

- use annotated sketches and cross-sectiona drawings to develop and communicate their ideas;
- when designing, explore different initial ideas before coming up with a final design;
- develop and follow simple design criteria;
- work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.

Skills: Make

- with growing confidence, carefully select from a range of tools and equipment, explaining their choices;
- learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;
- cut, shape and score materials with some degree of accuracy;


## Skills: Evaluate

- explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;
- explore what materials/ingredients products are made from and suggest reasons for this;
- consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their
- product;
- evaluate their product against their origina design criteria;
- Evaluate what they did well on their product and things they could improve.Use design criteria to help guide the evaluation process.Evaluate their product in detail against design criteria.


## Skills: Design

- identify the design features of their products that will appeal to intended customers;
- use their knowledge of a broad range of existing products to help generate their ideas;
- explain how particular parts of their products work;
- use annotated sketches and cross-sectional drawings to develop and communicate their ideas;
- when planning, start to explain their choice of materials and components including function and aesthetics;
- test ideas out through using prototypes;
- develop and follow simple design criteria;
- work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.


## Skills: Make

- with growing confidence, carefully select from a range of tools and equipment explaining their choices
- select from a range of materials and components according to their functional properties and aesthetic qualities;
- learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;
- use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components;
- cut, shape and score materials with some degree of accuracy;
- assemble, join and combine material and components with some degree of accuracy;
- begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital
electrical components of a product.
- Write their own simple design criteria.Develop design criteria to inform the design of innovative products considering the purpose and target group/individual.
- Make a product which contains a working circuit to light a bulb.Make a well finished product considering the aesthetic and functional qualities.Carefully select materials and finishing techniques to ensure a high quality finish. Base design criteria around the needs of the design brief and prioritise the specifications
- Use a series of given questions to evaluate their product.Use design criteria to help develop their own questions and use the answers to help guide the evaluation process.Evaluate their product in detail against the design criteria.


## Skills: Design

- design innovative and appealing products that have a clear purpose and are aimed at a specific user;
- use annotated sketches and cross-sectional drawings to develop and communicate their ideas;
- develop and follow simple design criteria;
- work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.


## Skills: Mak

- with growing confidence, carefully select from a range of tools and equipment, explaining their choices;
- select from a range of materials and components according to their functional properties and aesthetic qualities;
- learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;
- use a wider range of materials and components, including construction material and kits, textiles and mechanical and electrical components;
- join textiles with an appropriate sewing technique;
- begin to select and use different and

|  | skills: Cooking and Nutrition <br> - understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically; <br> - use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking; <br> - measure and weigh ingredients to the nearest gram and millilitre; <br> - start to independently follow a recipe; | graphics. <br> Skills: Evaluate <br> - explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose; <br> - consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product; <br> - evaluate their product against their original design criteria; <br> Skills: Technical Knowledge <br> - understand and demonstrate how mechanical and electrical systems have an input and output process; <br> - explain how mechanical systems such as levers and linkages create movement; <br> - use mechanical systems in their products. | appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics. <br> Skills: Evaluate <br> - evaluate their product against their original design criteria; <br> - evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world. <br> Skills: Technical Knowledge <br> - understand that materials have both functional properties and aesthetic qualities; <br> - make and represent simple electrical circuits, such as a series and parallel, and components to create functional products; |
| :---: | :---: | :---: | :---: |
| Key Vocabulary | Pioneer, design, brand, industry. Product, market research. texture, appearance, flavour. <br> Product, market research, design criteria, shape, knot. <br> Design criteria, original. <br> Design criteria, annotated. <br> Ingredients, yeast, knead, dough, rise. | Design brief, recycle, mechanism, mechanical system, moving, lever, linkage, design brief, pivot, input, output. Mechanism, lever, linkage, design brief, generate, loose/fixed pivot, guide/bridge, system, input, output. <br> Mechanism, lever, linkage, design brief, annotated sketch, generate, design criteria, adapt. <br> High-quality, finish, techniques, select, accuracy, tools, equipment, materials, components, replicate. <br> Evaluate, improve, function, lever, linkage, input, output, design criteria. | STEM, science, design and technology, engineering, mathematics, chronological, events, individuals, changing, inventors. Mains, battery, operated, energy, electricity, conductor, insulator, connect, series, fault, parallel, circuit, components, symbol, electrical systems, design brief. Mains, battery, operated, energy, path, current, electricity, conductor, insulator, switch, turn switch, micro switch, connect, circuit, components. <br> Design criteria, specification, prioritise, decoration, shape, materials, annotate, sketch, cross-sectional, original, innovative, purpose. <br> Select, materials, components, switch, make. <br> Functional, aesthetic, finished, quality, assemble, evaluate, specification, design criteria. |

Let's go fly a kite - AUTUMN 1
This Let's Go Fly a Kite unit gives children opportunities to develop their understanding of frame structures and how they can be strengthened and stiffened. Children will discover information about a key event involving a kite that helped shape the world. Children will gain knowledg and understanding about the parts and shapes of kites. This will help them when designing and making their own kites. Finally, children will test and evaluate their kites against design criteria they have created.

## Content:

- Explain how Homan Walsh used a kite to help build the Niagara Falls Bridge. Explain how a small event led to a larger significant event in Design and Technology which helped shape the world.Explain how different events involving kites in design and technology have helped shape the world.
- Use research into the shape and parts of kites to develop simple design criteria. Use research to create ideas and refine them to develop design criteria. Use research to help prioritise ideas to create detailed design criteria.
- Build simple frame structures. Build and join strong frame structures and stiffen materials.Use a variety of materials and joining methods to strengthen and stiffen more complex structures.
- Apply their understanding of where and how kites need stiffening.Apply a detailed understanding of how to strengthen and stiffen e.g. that the central area of a kite needs stronger strengthening and the outside edges need lighter stiffening.


## Skills: Design

- identify the design features of their products that will appeal to intended customers;
- use their knowledge of a broad range of existing products to help generate their ideas;
- use annotated sketches and cross-sectional drawings to develop and communicate their ideas;
- develop and follow simple design criteria;

Sandwich snacks - SPRING 2
This unit provides an opportunity for children to learn about the nutritional content of a variety of sandwiches and fillings, and consider how grouping food can help us plan for a healthy diet. Children will discuss the process of creating and following a recipe, evaluating their own process as well as their finished product.

## Content:

- To learn that food can be divided into different groups and that sandwiches can form part of a healthy diet.
- To taste a variety of different breads and sandwiches and examine flavours and textures.
- To design and plan a sandwich for a particular purpose.
- To be able to create a healthy sandwich.
- To be able to evaluate a finished product.

Skills: Make

- with growing confidence, carefully select from a range of tools and equipment, explaining their choices;
- learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;


## Skills: Cooking and Nutrition

- start to know when, where and how food is grown in the UK, Europe and the wider world;
- understand how to prepare dishes safely and hygienically;
- use a range of techniques such as grating,slicing and cutting,
- explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles
- when planning and cooking dishes;
- understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;
- prepare ingredients using appropriate cooking utensils;
- start to independently follow a recipe;


## Juggling balls - SUMMER 2

This Juggling Balls unit will teach your class how to make juggling balls. They will start by exploring and evaluating different juggling balls.
Children are then given a design brief, asking them to design and make a circus themed juggling ball. A hemming and overcast stitch will
be introduced during this unit. Children will learn about decoration techniques; getting the chance to use tie-dye and fabric paints. Finally,
when they have completed the making of their juggling ball, children will evaluate their product against design criteria.

## Content:

- Investigate a range of existing products.Analyse and test a range of existing products. Explain how analysis of products has influenced their design making decisions.
- Develop a design based around a design criteria.Develop a design aimed at particular individuals or groups.Evaluate and refine their own ideas against a design criteria, considering the views of others.
- Use appropriate techniques to decorate fabric.Explain why different fabric decoration techniques have been chosen.Identify different techniques used for the decoration of fabrics and explain why they would, or would not be appropriate to use to decorate their juggling balls.
- With support create a hem using a running stitch and join fabrics using an overcast stitch. With some independence, use a running stitch and an overcast stitch explaining why these methods are suitable for the task.Name and understand the use of different stitches.


## Skills: Design

- identify the design features of their products that will appeal to intended customers;
- use their knowledge of a broad range of existing products to help generate their ideas;
- with growing confidence, carefully selec from a range of tools and equipment, explaining their choices;
- select from a range of materials and components according to their functiona properties and aesthetic qualities;
- learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;
- use a wider range of materials and components, including construction material and kits, textiles and mechanical and electrical components;
- with growing independence, measure and mark out to the nearest cm and millimetre;
- cut, shape and score materials with some degree of accuracy;
- assemble, join and combine material and components with some degree of accuracy;
- begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.


## Skills: Evaluate

- explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose
- explore what materials/ingredients products are made from and suggest reasons for this;
- consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their
- product;
- evaluate their product against their original design criteria;
- evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.

Skills: Technical Knowledge

- understand that materials have both functional properties and aesthetic qualities;
- apply their understanding of how to
- start to understand seasonality.
ative and appealing products that have a clear purpose and are aimed at a specific user;
- when designing, explore different initial ideas before coming up with a final design
- test ideas out through using prototypes;
- work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.

Skills: Make

- with growing confidence, carefully select from a range of tools and equipment, explaining their choices;
- learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;
- use a wider range of materials and components, including construction material and kits, textiles and mechanical and electrical components;
- select from a range of materials and components according to their functiona properties and aesthetic qualities;
- join textiles with an appropriate sewing technique;
- begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.


## Skills: Evaluate

- consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product;
- evaluate their product against their original design criteria;

|  | strengthen, stiffen and reinforce more <br> complex structures in order to create more <br> useful characteristics of products; |  |  |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  | Key events, design and technology, ideas, <br> kite. <br> Parts, function, bridle, line, tow point, <br> keel, sail, spars, tail. <br> Kite, shape, delta, diamond, rokkaku, sled. <br> Design criteria, prioritise, decoration, shape, <br> materials. <br> Structur, frame, strength, stiffen. <br> Bridle, line, tail, design criteria, test, <br> evaluate. | sandwich,healthiest, survey, unbalanced,flavours, <br> textures, granary, naan, pitta, baguette,food <br> pyramid, |

## Programming adventures_AUTUMN 2

Children will apply their understanding of computing to program a floor robot. They will explore a range of adventure maps and use these to
create original designs. As a group, they will research how floor robots move along different types of materials and use this knowledge to create obstacles squares. Children will use appropriate joining methods to make a scale adventure map. They will test and evaluate the effectiveness of another group's obstacle squares.

## Content:

- Apply their understanding of computing to program monitor and control their products by understanding what floor robots are, how they are programmed and controlled.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams prototypes, pattern pieces and computer-aided by designing an adventure map.
- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups by exploring how different materials affect the movement and control of floor robots
- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or roups by planning an adventure map.
- Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according
to their functional properties and aesthetic qualities by creating an adventure map using materials selected for their properties.
- Apply their understanding of computing to program, monitor and control their products by programming and monitoring floor robots on finalised adventure map.


## Skills: Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communcate their ideas through discussion, annotated sketches, crosssectional and exploded diagrams, prototypes, pattern pieces and computer-aided design


## Skills: Make

- select from and use a wider range of tools and


## Benin - African Instruments- SPRING 1

## Content:

- To investigate and analyse African musical instruments.
- To explore kalimbas, howthey work and how they can be recreated.
- To select suitable tools and materials to create a kalimba.
- To investigate and design a strengthened body of an African percussion instrument
- To create an African-inspired percussion instrument
- To use our products in a performance and evaluate their effectiveness

Skills: Design

- identify the design features of their products that will appeal to intended customers;
- use their knowledge of a broad range of existing products to help generate their ideas;
- use annotated sketches and cross-sectional drawings to develop and communicate their ideas;
- develop and follow simple design criteria;

Skills: Make

- with growing confidence, carefully select from a range of tools and equipment, explaining their choices;
- select from a range of materials and components according to their functional properties and aesthetic qualities;
- learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures
- use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components;
- with growing independence, measure and mark out to the nearest cm and millimetre;
- cut, shape and score materials with some degree of accuracy;
- assemble, join and combine material and components with some degree of accuracy;
- begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as


## Global Food - SUMMER 1

This Global Food unit will give your children the chance to discover the exciting and diverse choice of food available around the world. The first part of the unit provides an opportunity for children to learn where in the world a variety of ingredients flourish. They will then build on their understanding of the eatwell plate, placing different ingredients into the correct food groups. This will develop a deeper understanding that although food can be extremely varied, it still comes under the same basic food groups. Children will then have the chance to learn some basic and advanced cooking techniques, they will apply these skills when making some traditional dishes from different countries.

## Content:

- Name some varied ingredients and say which part of the world they come from
- Explain the different food groups on the eatwell plate.
- Follow a simple recipe
- Use some basic food skills, such as grating and chopping, which enable them to prepare a variety of simple savoury dishes
- Explain how eating different ingredients helps to give us a healthy and varied diet and understand the benefits of this
- Explain nutritional similarities between different types of food eaten around the world and say why this is important.
- Accurately follow a recipe.
- Use a wide variety of basic food skills such as peeling, juicing and dicing and some advanced skills such as baking, which enable them to prepare some more complex savoury dishes.
- Say how an ingredient from a different part of the world might be prepared and used.
- Think about some varied foods they eat/know and place them into the correct food group on the eatwell plate.
- Understand the importance of correct storage and heating of rice using knowledge of spores, bacteria and how these cause food poisoning.
- Work independently to accurately follow a recipe

| ( | equipment to perform practical tasks accurately |
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hemming, tie-dye, fabric paints and digital graphics.

## Skills: Evaluate

- explore and evaluate existing products explaining the purpose of the product and whether it is designed well to meet the intended purpose;
- explore what materials/ingredients products are made from and suggest reasons for this;
- consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve thei
- product;
- evaluate their product against their original design criteria
- evaluate the key events, including
technological developments, and designs of individuals in design and technology that have helped shape the world
kills: Technical Knowledge
- understand that materials have both
functional properties and aesthetic qualities;
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;
- Use a wide range of advanced cooking technique such as checking that food is cooked correctly and adjusting temperatures on the hob and oven which allow them to prepare a variety of complex savoury dishes
- learn to use a range of tools and equipmen safely and appropriately and learn to follow hygiene procedures;

Skills: Cooking and Nutrition

- know, explain and give examples of food that is grown (such as pears, wheat and potatoes) reared (such as poultry and cattle) and caugh (such as fish) in the UK, Europe and the wider world;
- understand about seasonality, how this may affect the food availability and plan recipes according to seasonality;
- demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;
- demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;
- explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;
- measure accurately and calculate ratios of ingredients to scale up or down from a recipe
- independently follow a recipe

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| Key Vocabulary | programme, monitor, control, floor robot, generate, <br> devop, model, diagram, prototype, function, appealing, <br> components, | instrument, sound, pitch, percussion, Africa, culture, <br> society, genre, life, movement, rhythm, vocal, complex <br> polyrhythmic patterns, djembe (jem-bay) drum, shekere <br> (shay-ker-ay), caxixis (ka-shee-shee), vuvuzela (voo-voo- <br> zay-luh), kalimba, | Ingredient, climate, taste, prepare, <br> sensory, world, global, flourish. <br> Diet, food groups, eatwell plate, <br> protein, dairy, carbohydrates, starchy fruit, <br> fat, vegetables. <br> Mexican, skills, techniques, basic, fry, <br> grate, dice, chop, slice, hygiene, salsa, <br> guacamole, quesadillas. |
| Rece, boil, hob, heat source, recipe, |  |  |  |

This Marbulous Structures unit gives children opportunities to develop their understanding of more complex free standing structures and how they can be strengthened and reinforced. Children will gain knowledge and understanding about how to join and shape
materials. Children will then apply these skills, using an iterative design process, to create their marble runs. Finally, children will test and evaluate their marble runs against design criteria.

## Content:

- Explore existing free standing structures and explain what gives them strength, reinforcement and stability.
- Select tools and equipment to join card together.
- Design and build a simple marble run.
- Improve their work
- Apply their understanding of free standing structures to help build them
- Use a wider range of tools and equipment to perform practical tasks accurately.
- Use appropriate cutting and shaping techniques that include cuts within the perimeter of the material such as slots.
- Select appropriate joining techniques.
- Design and build a marble run which ncorporates some varied bends.
- Consider the aesthetics when building a marble run
- Consider the views of others to improve their work. Build tall free standing structures that are strong and stable.
- Cut materials with accuracy and precision and refine the finish with appropriate tools such as a craft knife.
- Pay close attention to aesthetics when creating joins.
- Demonstrate a clear ability to be creative and imaginative with their ideas when

This 'Super Seasonal Cooking' unit of work children will be taught about the importance of buying seasonal food. The first part of the unit provides an opportunity for children to learn where, when and how a variety of ingredients are grown, reared, caught and processed.
Children will then have the chance to sample some spring seasonal food before designing their own balanced seasonal meal. They will learn how to cook with the seasonal ingredients following their own recipes and using a wide range of preparation and cooking techniques. Finally, children will evaluate their product against their design criteria. Children will learn appropriate hygiene rules for handling meat and fish and safe preparation skills.

## Content:

- Understand what seasonality means.
- Name some foods which are grown, reared caught and processed.
- Design simple seasonal recipes.
- Prepare a range of ingredients hygienically.
- Prepare, assemble/cook ingredients.
- Know when different fruit and vegetables are in season in the United Kingdom.
- Explain where and how a variety of ingredients are grown, reared, caught and processed.
- Generate a range of ideas for balanced seasonal recipes.
- Prepare ingredients hygienically and understand how to store and handle meat and fish correctly
- Use a wide range of preparation and cooking techniques.
- Describe when most foods are in season in the United Kingdom including fruit, vegetables, meat and fish.
- Know where and how ingredients are grown, reared, caught and processed and that some regions of the UK specialise in specific ingredients.


## Felt Phone Cases - SUMMER 2

This Felt Phone Cases unit will teach children about how to write their own design criteria. They will design products with the user in mind thinking about aesthetics and functionality. Annotated designs will be used to communicate ideas as well as step by step plans. Children will learn how to make a paper template and how to sew a running stitch, backstitch, whip stitch and blanket stitch. Finally, when they have made their felt phone case, children will learn how to write a detailed evaluation.

## Content:

- Develop their own design criteria.
- Use backstitch.
- Create simple patterns.
- Aim the design criteria at a target market.
- Use at least two different types of stitches.
- Create an accurate paper template.
- Measure and mark a sewing and cutting line.
- Prioritise the most important points from the design criteria.
- Use a combination of different stitches.
- Create accurate paper templates for both the phone case and decoration.
- Demonstrate precision when measuring and cutting.


## Skills: Design

- use research to inform and develop detailed design criteria to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market;
- design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user;
- use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to
designing and building a marble run.
- Improve their work to ensure it has a high quality finish.


## Skills: Make

- with growing confidence, select from a wide range of tools and equipment, explaining their choices;
- select from a range of materials and components according to their functional properties and aesthetic qualities;
- learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures;
- use a full range of materials and components, including construction material and kits, textiles, and mechanical components;
- cut a range of materials with precision and accuracy;
- shape and score materials with precision and accuracy;
- assemble, join and combine materials and components with accuracy;


## Skills: Evaluate

- complete detailed competitor analysis of other products on the market;
- critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make;
- evaluate their ideas and products against the original design criteria, making changes as needed.

Skills: Technical Knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;
- Create, evaluate and refine seasonal recipes which include a balance of ingredients.
- Understand the importance of correct storage and handling of meat and fish using knowledge of cross contamination and bacteria.
- Use and evaluate a wide range of preparation and cooking techniques including adjusting: cooking times, ingredients, methods and temperatures.


## Skills: Design

- use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas;


## Skills: Make

- learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures;


## Skills: Evaluate

- evaluate their ideas and products against the original design criteria, making changes as needed.

Skills: Cooking and Nutrition

- know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;
- understand about seasonality, how this may affect the food availability and plan recipes according to seasonality;
- understand that food is processed into ingredients that can be eaten or used in cooking;
- demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;
- demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;
- explain that foods contain different substances, such as protein, that are needed
develop and communicate their ideas;
- generate a range of design ideas and clearly communicate final designs;

Skills: Make

- independently plan by suggesting what to do next;
- select from a range of materials and components according to their functional properties and aesthetic qualities;
- create step-by-step plans as a guide to making;
- learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures;
- independently take exact measurements and mark out, to within 1 millimetre;
- shape and score materials with precision and accuracy;
- demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product;
- join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch

Skills: Evaluate

- critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make;
- evaluate their ideas and products against the original design criteria, making changes as needed.


| Key Vocabulary | Free standing, structure, support, stiffen, sturdy, stable, reposition, strengthen, reinforce. <br> Accurate, join, shape, cut aesthetics, tools, equipment, functional. <br> Bend, skills, tools, equipment, cut, shape, join. <br> Existing, product.Aesthetic, functional, iterative process.Aesthetic, functional, iterative process. | Seasonality, spring, summer, autumn, winter, imported, ripe, sustainable. <br> Seasonal, reared, caught, processed.Seasonal, reared, caught, processed.Balanced, protein, eatwell plate.Blanch, fry, grill, griddle, chop, slice, peel, grate. | Key/New Words: Preparation: <br> Design criteria, aesthetics, functional, specification. <br> Key/New Words: Preparation: <br> Design criteria, aesthetics, functional, specification. <br> Pattern, template, precisely, accurately, scale, measurements, millimetre, centimetre. <br> Prototype, whipstitch, backstitch, running stitch, blanket stitch. <br> Plan, fastenings, decoration, felt, design process. <br> Fastenings, decoration, felt, design criteria, evaluate. |
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