## DT



- Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.
- Use large-muscle movements to wave flags and streamers, paint and make marks.
- Choose the right resources to carry out their own plan.
- Use one-handed tools and equipment, for example, making snips in paper with scissors.


## - Explore how things work.

- Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.
- Explore different materials freely, to develop their ideas about how to use them and what to make.
- Develop their own ideas and then decide which materials to use to express them.
- Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
- Progress towards a more fluent style of moving, with developing control and grace.
- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.
- Use a range of small tools, including scissors, paintbrushes and cutlery.

|  | Expressive Arts <br> and Design | Creating <br> with Materials |
| :--- | :--- | :--- |

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used.

| Autumn 1 | Autumn 2 | Spring 1 | Spring 1 | Spring 2 | Summer 2 | Summer 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| People Who help Us <br> Scissor safety. <br> Scissor skills. <br> Fine Motor Control activities threading, manipulating , moving, balancing... | Sparkle \& shine <br> Construction <br> Using different materials/joini ng materials, make fireworks, diva lamps, cards, wrapping paper, stick puppets, | Superheroes <br> 2D to 3D <br> Design and make superhero capes and masks. <br> Using a range of resources/materials <br> Select tools for activity. Use colour, texture, shape, form and space in two or three dimensions to make a castle, lair or hiding place | Winter Wonderland <br> Design Process <br> Designing a sleigh Design winter clothing | Pets <br> Construction <br> Making pet homes using junk modelling. <br> Exploring colour mixing of paints to make a favourite pet and pet home. | Minibeasts <br> Designing and building - Bug Hotels. | Splash <br> Joining materials <br> Weaving sea and sand pictures Junk model sea creatures |


| Cycle A | Year 1/2 | Year 3/4 | Year 5/6 |
| :--- | :--- | :--- | :--- |
| Autumn A | Puppets | Seasonal stockings | Burgers |
| Spring A |  |  | Building Bridges |


| Summer A | Eat More Fruit and Veg | Story books | Fashion and textiles |
| :--- | :--- | :--- | :--- |
| Cycle B | Year 1/2 | Year 3/4 | Year 5/6 |
| Autumn B | Stable Structures | Seasonal Foods | Making Birdboxes |
| Spring B | Vehicles | Making Mini Greenhouses | Chinese Interventions |
| Summer B | Perfect Pizzas | Famous Inventors |  |

Cycle A Curriculum statements Autumn A

## Year 1/2

## Puppets - Designer focus - Jim Henson

- investigate a range of puppets and their features
- design and make a finger puppet using simple joining (gluing)
- develop and practise sewing skills - running stitch and overstitch
- design a glove puppet - planning joining with glue and sewing techniques (sewing a nose, mouth)
- follow the design of puppet plan
- self-evaluate and peer-evaluate the design

| Spring A | Moving Mini beasts - Pop up designer - Matthew Reinhart <br> - create a sliding mechanism <br> - using levers and pivots to create a moving mechanism <br> - create a wheel mechanism with the use of a pivot <br> - design a picture using a moving mechanism using the skills of the previous lessons to determine the most appropriate mechanism <br> - follow design process to make a mini beast moving picture <br> - evaluate design |
| :---: | :---: |
| Summer A | Eat more Fruit and Vegetable - Chef - Lorraine Pascal <br> - find out the favourite fruits and vegetable of the class using a pictogram <br> - examine taste and describe a variety of fruit and vegetables <br> - find out how to handle and prepare fruit and vegetables using grating, chopping and coring <br> - design a recipe to include fruit and vegetables <br> - make and evaluate a product using fruit and/or vegetables |
| Cycle B | Year 1/2 |
| Autumn B | Stable Structures - Designer - Ove Arup <br> - explore the features of stable structures, including toy car garages <br> - plan and design a stable structure <br> - explore a range of materials (wood, cardboard, paper) and make decisions based on end product <br> - follow design and make a product <br> - evaluate product |
| Spring B | Vehicles - Designer - Henry Ford <br> - investigate a variety of vehicles, their features and uses <br> - investigate wheels, axles and chassis <br> - investigate ways of creating and decorating the body of a vehicle <br> - design a vehicle with wheels that move axles and have a body <br> - make a vehicle based on a design <br> - evaluate a finished product |

- Find out what the favourite pizzas in the class are
- Explore what consists of a healthy diet
- Examine, describe and categorise a variety of bread-based products
- Examine, describe and categorise a variety of pizza toppings
- Explore the five different food groups
- Design a balanced menu
- Make and evaluate pizzas based on a design

| Cycle A |
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| Curriculum |
| statements |
| Autumn A |
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| Spring A |
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Year 3/4

Seasonal Stockings -

- Explore and analyse products - focus on joins and decoration
- Explore and practise fabric joining techniques
- Explore and practise fabric decoration techniques
- Design and make a seasonal stocking
- Evaluate design and function

Lightboxes - Inventor - Thomas Edison

- Discuss and explore illuminated signs
- Create a circuit with a lightbulb
- Draw and label a circuit diagram
- Understand LEDs can be used in a circuit
- Identify purpose and audience of illuminated signs
- Plan and design a lightbox
- Identify, select and use appropriate tools, equipment and materials to make a lightbox
- Construct a working circuit to fit inside the box with one or more light
- Test and review product

| Summer A | Storybooks - Designer focus - Robert Sabuda <br> - Investigate and evaluate linkage and lever products <br> - Experiment with techniques to create a range of moving mechanisms <br> - Explore and experiment with a range of fonts and graphics <br> - Plan and design a storybook <br> - Incorporate moving mechanisms <br> - Evaluate product |
| :---: | :---: |
| Cycle B | Year 3/4 |
| Autumn B | Seasonal Foods - Chef focus - Jamie Oliver <br> - Explore seasonal British foods <br> - Know how seasonal fruits and vegetables are grown and produced in Britain <br> - Know how seasonal meats and fish are processed and how they form part of a varied diet <br> - Know what a healthy and varied diet consists of <br> - Design and review a menu incorporating seasonal produce |
| Spring B | Making Mini-Greenhouses - Designer - Sir Joseph Paxton <br> - Explore existing greenhouses <br> - Investigate stable structures <br> - Investigate materials for mini- greenhouses <br> - Design a mini- greenhouse <br> - Make a mini- greenhouse <br> - Test, review, evaluate |
| Summer B | British Inventors - Alexander Graham Bell <br> - Investigate the invention of the telephone <br> - Investigate the invention of the World Wide Web <br> - Explore how reinforced concrete works <br> - Investigate the invention of the Mackintosh <br> - Reflect on the impact inventions have on our lives |


| Cycle A | Year 5/6 |
| :--- | :--- |


| Curriculum statements |  |
| :---: | :---: |
| Autumn A | Burgers - Creator - Janie and Jerry Murre <br> - Explore different types of burgers and compare nutrition facts <br> - Explore how to make burger patties <br> - Explore sauces and side dishes <br> - Explore buns and review suitability <br> - Plan and design a burger <br> - Make and evaluate |
| Spring | Building Bridges - Designer - Thomas Telford <br> - Explore ways in which pillars and beams span gaps <br> - Explore how trusses can strengthen bridges <br> - Explore ways in which arches strengthen bridges <br> - Explore how suspension bridges can span long distances <br> - Develop criteria and design prototype bridge for a purpose <br> - Analyse and evaluate products according to design criteria |
| Summer A | Fashion and Textiles -Designer - Vivienne Westwood <br> - Investigate and analyse items made using textiles, materials and how they are made <br> - Explore ways in which textiles are joined and decorated <br> - Design item using textiles and draw pattern pieces <br> - Use pattern pieces to measure, mark and cut fabric <br> - Join fabric pieces by hand sewing <br> - Sew, hem and add design details <br> - Review product |
| Cycle B | Year 5/6 |
| Autumn B | Making Birdboxes - Inventor - Edward Michel <br> - Explore purpose and appearance of birdboxes <br> - Investigate the materials and features of bird houses and how to draw diagrams <br> - To investigate and practise woodwork skills. <br> - To be able to design a bird house for a specific bird. <br> - To be able to make a bird house by following a plan <br> - To evaluate, make predictions and promote a completed bird house. |
| Spring B | Chinese Inventions - Inventors - Mozi and Lu Ban <br> - To understand how the four great inventions of China shaped the world <br> - To investigate water-powered machines <br> - To build and test prototype kites <br> - To design a kite based on design criteria. <br> - To make and evaluate a kite |

- To explain how computers and computer programs are used in a variety of products
- To develop ideas for a product with an embedded computer system that controls it.
- To develop, model and communicate ideas for an embedded system which monitors and controls a door, a room or both.
- To develop ideas for a product and start to write programs to monitor and control them.
- To model and communicate ideas, using either prototype models or computer-aided design
- To evaluate your design for a computer-controlled system and consider the views of others to improve your work


## Progression of Skills in Design Technology

| Skill <br> Progression | EYFS | KS1 | LKS2 | UKS2 |
| :---: | :---: | :---: | :---: | :---: |
| Design | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing. <br> -Children will build/create purposefully. <br> Children will to explore, use and refine a variety of artistic effects to express their ideas and feelings - <br> Children will return to and build on their previous learning, refining ideas and | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing. <br> Children design purposeful, functional, appealing products for themselves and other users based on design criteria. <br> They generate, develop, model and communicate their ideas through talking, drawing, templates, mockups and, where appropriate, information and communication technology. <br> Children can: <br> a use their knowledge of existing products and their own experience to help generate their ideas; <br> b design products that have a purpose and are aimed at an intended user; | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing. <br> Children 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. <br> They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computeraided design. <br> Children can: <br> a identify the design features of their products that will appeal to intended customers; <br> b use their knowledge of a broad range of existing products to help generate their ideas; | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing. <br> Children 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. <br> They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computeraided design. <br> Children can: <br> 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; |


|  | developing their ability to represent them. <br> Create collaboratively, sharing ideas, resources and skills | c explain how their products will look and work through talking and simple annotated drawings <br> d work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment. | design innovative and appealing products that have a clear purpose and are aimed at a specific user; <br> d explain how particular parts of their products work; <br> e use annotated sketches to develop and communicate their ideas; when designing, explore different initial ideas before coming up with a final design; <br> g when planning, start to explain their choice of materials and components including function and aesthetics; <br> h test ideas out through using prototypes <br> develop and follow simple design criteria; <br> work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment. | b use their knowledge of a broad range of existing products to help generate their ideas; design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user; <br> d explain how particular parts of their products work; use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas; <br> generate a range of design ideas and clearly communicate final designs; <br> g consider the availability and costings of resources when planning out designs; work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment. |
| :---: | :---: | :---: | :---: | :---: |
| Make | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making. <br> Children will develop their small motor skills so that they can use a range of tools competently, safely and confidently. | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making. <br> Children select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. <br> They select from and use a wide range of materials and | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making. <br> Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately. <br> They select from and use a wider range of materials and components, including | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of making. <br> Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. <br> They select from and use a wider range of materials and components, including |

Use a range of small tools, including scissors, paintbrushes and cutlery.

Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. -

Select and use activities and resources, with help when needed.

Share their creations, explaining the process they have used.
components, including construction materials, textiles and ingredients, according to their characteristics.

## Children can:

Planning
a with support, follow a simple plan or recipe;
b begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer;
c select from a range of materials, textiles and components according to their characteristics;
Practical skills and techniques
d learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures;
e use a range of materials and components, including textiles and food ingredients;
f with help, measure and mark out;
g cut, shape and score materials with some accuracy;
h assemble, join and combine materials, components or ingredients;
i demonstrate how to cut, shape and join fabric to make a simple product;
j manipulate fabrics in simple ways to create the desired effect;
k use a basic running stich;
I cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;
construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

## Children can:

Plan
a with growing confidence, carefully select from a range of tools and equipment, explaining their choices;
b select from a range of materials and components according to their functional properties and aesthetic qualities;
c place the main stages of making in a systematic order;
Practical skills and techniques
d learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures;
e use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components;
f with growing independence, measure and mark out to the nearest cm and millimetre;
g cut, shape and score materials with some degree of accuracy;
h assemble, join and combine material and components with some degree of accuracy;
demonstrate how to measure, cut, shape and join fabric with some accuracy to
construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.
Children can:
Planning
a independently plan by suggesting what to do next;
b with growing confidence, select from a wide range of tools and equipment, explaining their choices;
c select from a range of materials and components according to their functional properties and aesthetic qualities;
d create step-by-step plans as a guide to making;
Practical skills and techniques
e learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures;
f independently take exact measurements and mark out, to within 1 millimetre;
g use a full range of materials and components, including construction materials and kits, textiles, and mechanical components;
h cut a range of materials with precision and accuracy;
i shape and score materials with precision and accuracy;
j assemble, join and combine materials and components with

| Evaluate |  |  | begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations. | make a simple product; <br> 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. | accuracy; <br> k demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product; <br> join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch; refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Share their creations, explaining the process they have used. |  | KS1 Design and Technology National Curriculum <br> Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. <br> Children explore and evaluate a range of existing products. They evaluate their ideas and products against design criteria. Children can: <br> a explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations; <br> b explain positives and things to improve for existing products; <br> c explore what materials products are made from; <br> d talk about their design ideas | KS2 Design and Technology | KS2 Design and Technology |
|  |  |  |  | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. | Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. |
|  |  |  |  | Children investigate and analyse a range of existing products. | Children investigate and analyse a range of existing products. |
|  |  |  |  | products against their own design criteria and consider the views of others to improve their work. | They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. |
|  |  |  |  | They understand how key events and individuals in design and technology have helped shape the world. | They understand how key events and individuals in design and technology have helped shape the world. |
|  |  |  |  | Children can: <br> a explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose; <br> b explore what | the world. <br> Children can: <br> a complete detailed competitor analysis of other products on the market; <br> b critically evaluate the |




e 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;
f understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;
g prepare ingredients using appropriate cooking utensils;
h measure and weigh ingredients to the nearest gram and millilitre;
i start to independently follow a recipe;
start to understand seasonality.
prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;
e demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;
f 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;
g adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;
h alter methods, cooking times and/or temperatures;
independently follow a recipe.

