**Long Term Overview for Design and Technology at Springfield**

|  |  |
| --- | --- |
| **INTENT**  | We offer a curriculum that is broad and balanced where the children are taught substantive knowledge for Design and Technology in a topic based approach at a level that is personalised to meet their level of development. |
| **IMPLEMENTION**  | At Springfield we plan a sequence of lessons using a topic based approach to ensure there is a clear sequence of lessons demonstrating progression throughout each unit of work. We use the long term overview substantive knowledge to ensure a wide range of coverage is included in our Medium Term Plans that is suited to the current cohort of children. Disciplinary knowledge (using our skills trackers) is also identified on the medium term plans and these link directly to the developmental stages of the current cohort of children. |
| **IMPACT**  | Children will make progress in developing their disciplinary knowledge and their substantive knowledge each year. Evidence will be found in children’s topic books and tracked on their skills trackers. |
| **Level expected of the end of EYFS**  |  We have selected the Early Learning Goals that link most closely to the Art and Design National Curriculum. For more detail about linked subject progression within the EYFS Framework.  **Expressive Arts and Design (Exploring and Using Media and Materials)** Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. **Expressive Arts and Design (Being Imaginative)** Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories. |
| **National Curriculum**  | **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.They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].Children design purposeful, functional, appealing products for themselves and other users based on design criteria. They generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology**.****Children can:****a** use their knowledge of existing products and their own experience to help generate their ideas;**b** design products that have a purpose and are aimed at an intended user;**c** explain how their products will look and work through talking and simple annotated drawings;**d** design models using simple computing software;**e** plan and test ideas using templates and mock-ups; **f** understand and follow simple design criteria;**g** work in a range of relevant contexts, for example imaginary, story-based, home, school 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.Children select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. They select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.**Children can:**Planninga 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 techniquesd 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;l cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups; m begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations. Evaluate 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 explore and evaluate a range of existing products. They evaluate their ideas and products against design criteria. **Children can:**a explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;b explain positives and things to improve for existing products;c explore what materials products are made from; d talk about their design ideas and what they are making; e as they work, start to identify strengths and possible changes they might make to refine their existing design;f evaluate their products and ideas against their simple design criteria;g start to understand that the iterative process sometimes involves repeating different stages of the process.**Technical knowledge** Children build structures, exploring how they can be made stronger, stiffer and more stable. They explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.**Children can:**a build simple structures, exploring how they can be made stronger, stiffer and more stable;b talk about and start to understand the simple working characteristics of materials and components;c explore and create products using mechanisms, such as levers, sliders and wheels.**Cooking and nutrition** Children use the basic principles of a healthy and varied diet to prepare dishes. They understand where food comes from.Children can:a explain where in the world different foods originate from; b understand that all food comes from plants or animals; c understand that food has to be farmed, grown elsewhere (e.g. home) or caught;d name and sort foods into the five groups in the Eatwell Guide;e understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why; f use what they know about the Eatwell Guide to design and prepare dishes. |

 |
| **National Curriculum Expectations** **Substantive Knowledge KS2**  | **Design** KS2 Design and Technology National Curriculum 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.They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].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.They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.**Children can:**a identify the design features of their products that will appeal to intended customers;b use their knowledge of a broad range of existing products to help generate their ideas;c design innovative and appealing products that have a clear purpose and are aimed at a specific user;d explain how particular parts of their products work;e use annotated sketches and cross-sectional drawings to develop and communicate their ideas;f when designing, explore different initial ideas before coming up with a final design;g when planning, start to explain their choice of materials and components including function and aesthetics;h test ideas out through using prototypes;i use computer-aided design to develop and communicate their ideas (see note on p. 1);j develop and follow simple design criteria;k work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food 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.Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.They 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.**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 techniquesd 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; i demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product;j join textiles with an appropriate sewing technique;k 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. **Evaluate** 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.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.**Children can:**a explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;b explore what materials/ingredients products are made from and suggest reasons for this;c 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;d evaluate their product against their original design criteria;e evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.**Technical knowledge** KS2 Design and Technology National Curriculum Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures. They understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. They understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].They apply their understanding of computing to program, monitor and control their products.**Children can:**a understand that materials have both functional properties and aesthetic qualities;b apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;c understand and demonstrate how mechanical and electrical systems have an input and output process;d make and represent simple electrical circuits, such as a series and parallel, and components to create functional products;e explain how mechanical systems such as levers and linkages create movement;f use mechanical systems in their products.**Cooking and nutrition**Children understand and apply the principles of a healthy and varied diet. They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.**Children can:**a start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world; b understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically;c with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven; d use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking;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;j start to understand seasonality.  |
|  | Autumn | Spring | Summer |
| Rabbits Class (2021-2022) | Marvellous MePainting3D modelling and paper mache Exploration of malleable materialsUse a range of toolsMake fruit faces  | Down in the GardenPainting – Colour mixing3D modelling Create hand puppetsUse a range of tools | Off on an AdventureMask makingExplore a range of mediaMake instrumentsCollageCreate clay model3D junk modelling |
| Rabbits Class 2(2022-2023) | Night and DayExplore a range of mediaBlow painting techniques and splatteringPrinting techniquesMixing different medias | Once upon a TimeJunk modellingUse of constructionPaintingCollageLook a shades of coloursUse a range of tools | Pirates and the SeasideBubble paintingLarge scale junk modellingDrawingExplore a range of mediaCutting and StickingUse a range of toolsMaking picnics  |
| Hedgehogs Class | Everyday Life Draw, collage paint self portraits Make cakes or biscuits  | Space Use paint techniques, create space pictures Create models of the planets  | Animals and Wildlife Draw, paint collage animals and scenes of natureCreate patterns with animal prints Create 3D models of the life cycle of a butterfly.  |
| Hedgehogs and Butterflies Class (2022-2023) | People Who Help Us Draw paint and collage people who help us Design and make uniforms for people who help us  | Fantasy Experiment with colour and texture  | Places Draw, paint, collage buildings cities and landscapes |
| Squirrels Class (2021-2022) | School Days SketchingSelf portraitsUsing colour to add detailDesign an ideal schoolBuild ideal school using recycled materials | Get Out of My SwampMud paintingNatural picturesExploring and using photographyCooking – make swamp soup  | Heroes Design and create a medalDesign mascots and logosMake and create a healthy a school dinner  |
| Squirrels Class 2(2022-2023) | Toys Portrait paintingsCollageDigital art software to create digital drawingsCreate animations Design and make own toy | Poles Apart Painting Creating dioramas of the poles  | Flight Design and create a paper mache hot air balloonJunk model rocket |
| Badgers Class  | The Victorian Times Draw and paint self-portraits in the style of Queen Victoria Victoria crafts Explore the work of William Morris  | Africa Print and create vibrant African fabrics Collage African art using mosaics Make African pottery  | Dinosaurs Draw and paint dinosaursMake models of dinosaurs Make dinosaur puppets  |
| Badgers Class (2022-2023) | Travel and Transport Draw and create pictures using collage of different forms of transport. Design and create a car with wheels  | Food Still life – foods Print with fruits and vegetables  | Castles and Knights Create models of castles Create costumes and weapons for knights.  |
| Blackbirds Class (2021-2022) | The Home Front Make propaganda posters Make rationed recipes  | Indian Spice Pattern (Rangoli)Make Indian foods  | North and South America Make models of rainforestsCreate own textiles and printing based on patterns from North and South America Draw, paint and collage animals native from South America  |
| Blackbirds Class 2 (2022-2023) | London’s Burning Design a monument | Wonder Women Beatrix Potter drawingsLarge scale castle models – Elizabethan period | Pioneers Famous Modern Art – BanksyPointillism – Georges Seurat Making a Victorian SouvenirBuild a model of the first ever aeroplane using wood  |
| Foxes Class (2021-2022) | The Great War Design and create own propaganda postersDesign and create your own ZeppelinMake rationed recipes  | China Design and make Chinese inspired clay dragonsDesign and make a Chinese dragon masks. Make and taste Chinese foods  | Record Breakers Design own Olympic logos and mascots. Draw and design ancient Greek buildings.  |
| Foxes Class 2 (2022-2023) | Meet the Flintstones Malleable materials - Design and make a pot or necklace – using archaeological findings.Create weapons – using moulds | A Journey Through Europe Famous art and architecture across Europe (Van Gogh, Da Vincy, Gaudi)2D or 3D creations of architecture | Extreme Survival Colours and Textures linked to Polar regions and desertsDesign and make energising snacks for extreme conditionsMake models of a desert or polar landscapeCreate a meal using non-perishable foods  |
| Enrichment Activities | Visit to school from a local artistLeek in Arts FestivalArt / D& T Wow day |