Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Design and Technology at Kentish Town C of E - EYFS

Key Learning

EYFS: Children should …

Begin to investigate various construction materials, join materials together, and construct with a purpose in mind.

Identify and use different construction tools, select appropriate tools for working with different materials including simple food preparation equipment, and talk about the sensory qualities of materials.

Begin to use evaluative language to share their thoughts about materials, objects and experiences with products—talking about their favourite foods, toys, clothes etc. and explaining why they have these preferences.

Work collaboratively to build, test and improve products, and communicate and record their ideas in different ways, including drawing and making models.

Questioning should draw on children's experiences and preferences, and support comparative and evaluative discussion of products and materials.

Children should talk about how and why certain materials are used, and ways in which products could be adapted and improved to suit their preferences.

Enrichment:

- Food tech skills
- Trips which incorporate design-focused activities and discussion
- Whole-school design project to share skills and celebrate achievements.

Key Vocabulary: Build, Make, Test

Tools: Sellotape, Glue Stick, Masking Tape, Paper Clip, Plasticine, Ruler, Straws

Textiles: Bead, Button, Fabric, Felt, Scissors, Sew

Food: Apron, Chop, Cut, Equipment, Fork, Knife, Mix, Spoon

Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Key Learning

Year 1 (Ash): Children should …

Begin to understand the development of existing products: What they are for, how they work, which materials are used and why.

Start to suggest ideas and explain what they are going to do, and begin to develop their ideas through talk, making mock-ups, and drawing.

Use different tools to measure, shape, assemble and join materials and components, and explore simple mechanisms, i.e. wheels and levers.

Begin to build structures, exploring how they can be made stronger, stiffer and more stable.

Use simple finishing techniques to improve the appearance of products.

Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.

Safely use food preparation equipment and measure food amounts.

Questioning should draw on children's experiences and preferences, and support comparative and evaluative discussion of products and materials. Discussion should begin to include reference to the intended users and audiences for products. Inquiry-based, problem solving projects should support collaborative work and evaluation from discussion.

Design and Technology at

Kentish Town C of E - KS1

Enrichment:

- Food tech skills in the pupil's kitchen and STEAM room
- IT skills using Chromebooks and design software
- Trips including design activities or discussion, including CLC visits
- Whole-school design project to share skills and celebrate achievements.

Key Vocabulary: Design, Plan, Product

Materials: 2-D, 3-D, Clay, Cut, Material, Metal, Plastic, PVA glue, Wire, Wood

Textiles: Centimetre/metre, Needle, Pattern, Pin, Ribbon, Stitch, Tape measure, Thread, Velcro, Wool, Zip

Food: Amount, Bake, Chop, Ingredients, Measure, Recipe, Scales, Weigh

Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Key Learning

Year 2 (Willow): Children should…

Look at a range of existing products, explaining what they like and dislike about them and why, with reference to design processes.

Begin to develop their design ideas through discussion, observation, drawing and modelling.

Identify a purpose for what they intend to design and make, and begin to understand how to identify a target group for what they intend to design and make based on a design criteria.

Select tools and materials; use correct vocabulary to name and describe them.

Build structures, exploring how they can be made stronger, stiffer and more stable.

With help, measure, cut and score with accuracy and learn to use hand tools safely and appropriately.

Evaluate their work as successful against their design criteria.

Questioning should draw on children's experiences and preferences, and support comparative and evaluative discussion of products and materials. Discussion should begin to include reference to the intended users and audiences for products. Inquiry-based, problem solving projects should support collaborative work and evaluation from discussion.

Design and Technology at Kentish Town C of E - KS1

Enrichment:

- Food tech skills in the pupil's kitchen and STEAM room
- IT skills using Chromebooks and design software
- Trips including design activities or discussion, including CLC visits
- Whole-school design project to share skills and celebrate achievements.

Key Vocabulary: Design, Plan, Product

Materials: 2-D, 3-D, Clay, Cut, Material, Metal, Plastic, PVA glue, Wire, Wood

Textiles: Centimetre/metre, Needle, Pattern, Pin, Ribbon, Stitch, Tape measure, Thread, Velcro, Wool, Zip

Food: Amount, Bake, Chop, Ingredients, Measure, Recipe, Scales, Weigh

Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Design and Technology at

Kentish Town C of E - KS1

End of KS1 outcomes:

Children will design purposeful, functional, appealing products for themselves and other users based on design criteria, and evaluate their ideas and products against design criteria.

Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Design and Technology at Kentish Town C of E - KS2

Key Learning

Year 3 (Cedar): Children should …

Start to order the main stages of making a product, identify a purpose for a successful product, and understand how well products have been designed by evaluating materials and construction techniques used.

Investigate individual inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products, and how they have helped shape the world.

Begin to disassemble and evaluate familiar products and consider the views of others to improve them.

Begin to plan a product by generating ideas and making labelled drawings.

Start to understand whether products can be recycled or reused by discussing and exploring properties of materials

Select from a wider range of tools and techniques for making their products, and explain their choice of tools in relation to the materials they will be using. Work safely with a range of tools, and measure and cut materials with more accuracy.

Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose

Start to understand that mechanical and electrical systems have an input, process and output, and that mechanical systems such as levers and linkages or pneumatic systems create movement.

Questioning should make specific reference to intended users of products, and their design needs. Inquiry-based, problem solving projects should support collaborative work and evaluation from discussion.

Enrichment:

- Food tech skills in the pupil's kitchen and STEAM room
- IT skills using Chromebooks and design software
- Trips including design activities or discussion
- Whole-school design project to share skills and celebrate achievements.

Key Vocabulary:

Analyse, Combine, Construct, Criteria, Evaluate, Health and safety, Parameters, Requirements

Textiles: Cotton thread, Cross stitch, Hook and eye, Running stitch, Seam, Sewing machine, Thimble

Food: Grams/Kilograms, Hygiene, Ladle, Millilitre/Litre, Spatula, Temperature, Whisk

Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Design and Technology at Kentish Town C of E - KS2

Key Learning

Year 4 (Sycamore): Children should …

Consider the views of others, including intended users, to improve their work and start to generate ideas to design with purpose.

Disassemble and evaluate familiar products and consider the views of others to improve them.

Make labelled drawings from different views showing specific features.

Explain choice of materials and components according to function and aesthetic.

Select a wider range of tools and techniques for making their product safely.

Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.

Join and combine materials and components, and reinforce structures, in temporary and permanent ways.

Know how mechanical systems such as cams or pulleys or gears create movement, and being to understand how more complex electrical circuits and components can be used to create functional products.

Begin to use finishing techniques to strengthen and improve the appearance of their product.

Evaluate their products carrying out appropriate tests.

Questioning should make specific reference to intended users of products, and their design needs. Inquiry-based, problem solving projects should support collaborative work and evaluation from discussion.

Enrichment:

- Food tech skills in the pupil's kitchen and STEAM room
- IT skills using Chromebooks and design software
- Trips including design activities or discussion
- Whole-school design project to share skills and celebrate achievements.

Key Vocabulary:

Analyse, Combine, Construct, Criteria, Evaluate, Parameters, Requirements

Tools: Accurate, Compass, Disassemble, Dowel, Drill, File, G-Clamp, Gears, Goggles, Hammer, Hole Punch, Junior Hacksaw, Marking, Millimetre, Nails, Pliers, Pulley, Safety glasses, Sand paper, Saw, Screwdriver, Screws, Snips, Stapler, Wheel, Vice

Food: Grams/Kilograms, Hygiene, Ladle, Millilitre/Litre, Spatula, Temperature, Whisk

Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Design and Technology at Kentish Town C of E - KS2

Key Learning

Year 5 (Chestnut): Children should …

Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose.

Start to generate, develop and communicate their ideas through discussion, annotated sketches, diagrams and prototypes.

Begin to use research to develop their own design criteria.

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.

Weigh, measure and prepare materials including ingredients accurately.

Measure, cut and join materials using a variety of tools with growing confidence to achieve a good quality of finished project.

Understand how mechanical systems such as cams or pulleys or gears create movement, and know how more complex electrical circuits and components can be used to create functional products.

Apply finishing techniques with growing confidence to strengthen and improve the appearance of a product.

Evaluate a product against the original design specification and criteria and by carrying out tests, and seek evaluation from others.

Questioning should make reference to design challenges, problem solving and intended use of a product. Potential constraints on design should be considered. Inquiry-based, problem solving projects should support collaborative work and evaluation from discussion.

Enrichment:

- Food tech skills in the pupil's kitchen and STEAM room
- IT skills using Chromebooks and design software
- Trips including design activities or discussion
- Whole-school design project to share skills and celebrate achievements.

Key Vocabulary:

Analyse, Combine, Construct, Criteria, Evaluate, Parameters, Requirements

Tools: Accurate, Compass, Disassemble, Dowel, Drill, File, G-Clamp, Gears, Goggles, Hammer, Hole Punch, Junior Hacksaw, Marking, Millimetre, Nails, Pliers, Pulley, Safety glasses, Sand paper, Saw, Screwdriver, Screws, Snips, Stapler, Wheel, Vice

Food: Grams/Kilograms, Hygiene, Ladle, Millilitre/Litre, Spatula, Temperature, Whisk

Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Design and Technology at Kentish Town C of E - KS2

Key Learning

Year 6 (Beech): Children should …

Evaluate the key designs of individuals working in design and technology, and how they have helped shape the world.

Start to generate, develop and communicate their ideas through discussion, annotated sketches, diagrams and prototypes.

Use research and develop their own criteria to inform the design and achievement of a quality, functional product.

Consider sustainability, potential costs and impact beyond intended use that material choices will have.

Plan the order of their work, choosing appropriate materials, tools and techniques,.

Confidently measure and prepare materials, and safely use a wide range of tools to achieve outcomes.

Construct products using permanent joining techniques, demonstrate function and make modifications as they work.

Understand that mechanical and electrical systems have an input, process and output.

Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.

Record evaluations using drawings with labels, suggest alternative methods of making if the first attempts fail, and identify the strengths and areas for development in their ideas and products.

Questioning should make reference to design challenges, problem solving and intended use of a product. Potential constraints on design should be considered. Inquiry-based, problem solving projects should support collaborative work and evaluation from discussion.

Enrichment:

- Food tech skills in the pupil's kitchen and STEAM room
- IT skills using Chromebooks and design software
- Trips including design activities or discussion
- Whole-school design project to share skills and celebrate achievements.

Key Vocabulary:

Analyse, Combine, Construct, Criteria, Evaluate, Parameters, Requirements

Tools: Accurate, Compass, Disassemble, Dowel, Drill, File, G-Clamp, Gears, Goggles, Hammer, Hole Punch, Junior Hacksaw, Marking, Millimetre, Nails, Pliers, Pulley, Safety glasses, Sand paper, Saw, Screwdriver, Screws, Snips, Stapler, Wheel, Vice

Systems: Battery, Battery Holder, Bulb Holder, Cam, Crocodile Clip, Gear, Light Bulb, Pulley, Shaft, Switch, Wire

Intent: Using creativity and imagination, children design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values . Children understand design as a *process*, making iterative improvements to their ideas and critically analysing their work. Different working skills will support progress towards this goal.

Design and Technology at

Kentish Town C of E - KS1

End of KS2 outcomes:

Children will understand design as an iterative, collaborative process that makes use of varied construction materials and techniques and purposeful evaluation to make quality, functional products.