2022 Edward Francis Primary - DT Curriculum Map

KS1

<table>
<tr><th>Subject</th><th>Y1 autumn term</th><th>Y1 spring term</th><th>Y1 summer term</th><th>Y2 autumn term</th><th>Y2 spring term</th><th>Y2 summer term</th></tr>
<tr><td>Design and Technology</td><td colspan="6">
Evaluate (Existing designs)
NC- Explore and evaluate a Range of existing products
● Explain what a product is used for (Function) - What problem does it solve?
● Name the materials used to make it
● Suggest how materials have been joined and what tools would have been used
Technical Knowledge
NC - Build structures, exploring how they can be made stronger, stiffer and more stable

- Explore and use mechanisms e.g levers, sliders, wheels and axles in their designs
● Discuss how any mechanisms in the design might work.
● Explore how to strengthen materials
● Model ideas with kits or junk modelling.
Design
NC - Design purposeful, functional, appealing products for themselves and other users based on design criteria

- Generate, develop, model and communicate their ideas through talking, drawing templates, mock-ups and, where appropriate, information and communication technology
● Follow verbal instructions
● Explain what they are making and why? (Name and function)
● Use pictures, annotated drawings and discussion to convey what they want to design and make
● Use ICT for designing if appropriate
● Explain the steps needed to make their design: First……Next……Last….
● Make a prototype and make changes to design if necessary
Make
NC - Select from and use a wide range of materials and components including construction materials, textiles and ingredients according to their characteristics.
- Select from and use a range of tools and equipment to perform practical tasks e.g cutting, shaping, joining and finishing.
● Select materials from a limited range that will meet the design criteria
● Select and name the tools needed to work the materials
● Discuss their work as it progresses
</td></tr>
<tr><td></td><td>
Food - Sweet/Savoury
Make fruit Kebabs/Sandwiches for Diwali
• Develop a food vocabulary using taste ,smell, texture and feel
• Group familiar food products e.g. fruit and vegetables
• Cut, peel, chop a range of ingredients
• Work safely and hygienically
• Understand where food comes from
• Understand a healthy and varied diet
</td><td>
Textiles(Cutting & Joining Fabric)
Peg Dolls /Alien Underpants
• Cut out shapes which have been created by drawing round a template onto the fabric
• Join fabrics by glue, staples tape
• Decorate fabrics with buttons, beads, sequins, braids, ribbons
</td><td>
Sheet materials (Card & paper)
Unders the Sea or Minibeasts
• Fold, tear and cut paper and card
• Roll paper to create tubes
• Cut along lines, straight and curved
• Curl paper
• Use hole punch
• Insert paper fasteners for card linkages
• Create hinges
• Use simple pop ups
• Investigate strengthening sheet materials
• Investigate joinings temporary, fixed and moving
</td><td>
Construction (Axles & Wheels)
Toy cars
• Make vehicles with construction kits which contain free running wheels
• Use a range of materials to create models with wheels and axles e.g. tubes,dowel, cotton reels
• Attach wheels to a chassis using an axle
• Create body template on Purple Mash (ICT CC) and cut out
• Join appropriately for different materials and situations e.g. glue, tape,
• Cut strip wood/dowel using hacksaw and bench hook
• See glue gun used by an adult
</td><td>
Food - Savoury
Vegetables & Dips
• Develop a food vocabulary using taste ,smell, texture and feel
• Group familiar food products e.g. fruit and vegetables
• Cut, peel, grate, chop a range of ingredients
• Work safely and hygienically
• Understand where food comes from
• Understand a healthy and varied diet
• Measure and weigh food items, non statutory measures e.g. spoons, cups
</td><td>
Textiles(Cutting & Joining Fabric)
Fairy Tale Wooden Spoon Puppet
• Cut out shapes which have been created by drawing round a template onto the fabric
• Join fabrics by using running stitch, glue, staples ,over sewing, tape
• Decorate fabrics with buttons, beads, sequins, braids, ribbons
</td></tr>
<tr><td></td><td colspan="6">
Evaluate (Final Design)
NC - Evaluate their ideas and products against design criteria
● Say what they like and do not like about items they have made
● Say what went well/what they would change
● Talk about changes made during the making process
● Discuss how closely their finished products meet their design criteria
</td></tr>
</table>

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Lower KS2

<table>
<tr><th>Subject</th><th>Y3 autumn term</th><th>Y3 spring term</th><th>Y3 summer term</th><th>Y4 autumn term</th><th>Y4 spring term</th><th>Y4 summer term</th></tr>
<tr><td>Design and Technology</td><td colspan="6">
Evaluate (Research)
NC- Investigate and analyse a range of existing products
- Understand how key events and individuals in Design and Technology have helped to shape the world
● Investigate similar products to the one to be made to give starting points for a design- What problem does it solve?
● Name the materials used to make it
● Suggest how materials have been joined and what tools would have been used
Technical Knowledge
NC - Apply their knowledge of how to strengthen, stiffen and reinforce more complex structures

- Understand and use mechanical systems in their products e.g gears, pulleys, cams, levers and linkages
● Discuss how any mechanisms in the design might work.
● Model ideas with kits or junk modelling.
- Understand and use electrical systems in their products e.g series circuits, incorporating switches, bulbs, buzzers and motors.
● Discuss how simple circuits work
● Investigate simple circuits using batteries, bulbs and buzzers using practical equipment

Design
NC - Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at a particular group or individuals.

- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
● Outline the purpose of the design and identify the end user
● Draw/sketch products and make prototypes to discuss with the end user
● Think ahead about the order of their work and decide upon tools and materials
● Plan a sequence of actions to make a product
● Record the plan by drawing (labelled sketches) or writing
● Develop more than one design or adaptation of an initial design following prototypes and discussions

Make
NC - 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
- Select from and use a wider range of tools and equipment to perform practical tasks e.g cutting, shaping, joining and finishing accurately.
● Select materials from a wider range that will meet the design criteria
● Select and name and use accurately, the tools needed to work the materials
● Discuss their work as it progresses

<table>
<tr><th>Y3 autumn term</th><th>Y3 spring term</th><th>Y3 summer term</th><th>Y4 autumn term</th><th>Y4 spring term</th><th>Y4 summer term</th></tr>
<tr>
<td>Food - Carrot Cake
NC - Understand and apply the principles of a healthy diet
- Understand seasonality
• Select and prepare foods for a particular purpose
• Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing.
• Weigh and measure using scales
• Cut and shape ingredients using appropriate tools and equipment e.g. grating
• Decorate appropriately
• Work safely and hygienically
• Show awareness of a healthy diet from an understanding of a balanced diet</td>
<td>Sheet materials/ Blue Planet Creatures
• Use lolly sticks/card to make levers and linkages
• Use linkages to make movement larger or more varied.
• Create nets</td>
<td>Sheet materials/ Chariots
• Create nets
• Create shell or frame structures, strengthen frames with diagonal struts
• Make structures more stable by giving them a wide base
• Prototype frame and shell structures
• Measure and mark square selection, strip and dowel accordingly to 1cm</td>
<td>Textiles/ Super Hero Badge
• Understand seam allowance
• Join fabrics using running stitch, over sewing, back stitch
• Use appropriate decoration techniques e.g. appliqué (glued or simple stitches)
• Create a simple pattern
• Understand the need for patterns</td>
<td>Construction/ Viking Pictures
• Incorporate a circuit with a bulb or buzzer into a model
• Use glue gun with close supervision (one to one)
• Use and explore complex pop ups
• Cut slots
• Cut internal shapes</td>
<td>Food - Bread Design
NC - Prepare and cook a variety of predominantly savoury dishes Weigh and measure using scales
• Cut and shape ingredients using appropriate tools and equipment e.g. grating
• Decorate appropriately
• Work safely and hygienically
• Show awareness of a healthy diet from an using a range of cooking techniques
•Select and prepare foods for a particular purpose
• Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing.
• understanding of a balanced diet</td>
</tr>
</table>
Evaluate (End product)
NC - Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
• Identify the strengths and weaknesses of their design ideas
• Discuss how well the finished product meets the design criteria and how well it meets the needs the needs of the user
.• Consider the opinions of the end user and explain how the finished product could be improved.
</td></tr>
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Upper KS2

<table>
<tr><th>Subject</th><th>Y5 autumn term</th><th>Y5 spring term</th><th>Y5 summer term</th><th>Y6 autumn term</th><th>Y6 spring term</th><th>Y6 summer term</th></tr>
<tr><td>Design and Technology</td><td colspan="6">
Evaluate (Research)
NC- Investigate and analyse a range of existing products
- Understand how key events and individuals in Design and Technology have helped to shape the world
● Investigate similar products to the one to be made to give starting points for a design- What problem does it solve?
● Name the materials used to make it
● Suggest how materials have been joined and what tools would have been used
Technical Knowledge
NC - Apply their knowledge of how to strengthen, stiffen and reinforce more complex structures
- Understand and use mechanical systems in their products e.g gears, pulleys, cams, levers and linkages
● Discuss how any mechanisms in the design might work.
● Model ideas with kits or junk modelling.
- Understand and use electrical systems in their products e.g series circuits, incorporating switches, bulbs, buzzers and motors.
● Discuss how simple circuits work
● Investigate simple circuits using batteries, bulbs and buzzers using practical equipment
NC - Apply their understanding of computing to program, monitor and control their products (Year 6)
● Use kits and computer controlled mechanisms to develop their designs e.g coding and Lego
Design
NC - Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at a particular group or individuals.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
● Outline the purpose of the design and identify the end user
● Draw/sketch products and make prototypes to discuss with the end user
● Think ahead about the order of their work and decide upon tools and materials
● Plan a sequence of actions to make a product
● Record the plan by drawing (labelled sketches) or writing
● Develop more than one design or adaptation of an initial design following prototypes and discussions
Make
NC - 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
- Select from and use a wider range of tools and equipment to perform practical tasks e.g cutting, shaping, joining and finishing accurately.
● Select materials from a wider range that will meet the design criteria
● Select and name and use accurately, the tools needed to work the materials
● Discuss their work as it progresses
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<tr><td></td><td>Textiles/ South America - rainforest animals
• Create 3D products using pattern pieces and seam allowance
• Explore fastenings and recreate some e.g. sew on buttons and make loops
• Prototype a product using J cloths
• Understand pattern layout
• Decorate textiles appropriately often before joining components
• Pin and tack fabric pieces together
• Join fabrics using over sewing, back stitch, blanket stitch or machine stitching (closer supervision)
• Combine fabrics to create more useful properties
• Make quality products</td><td>Construction/ Bridges
• Use bradawl to mark hole positions
• Use hand drill to drill tight and loose fit holes
• Cut strip wood, dowel, square section wood accurately to 1mm
• Join materials using appropriate methods
•Understand how to strengthen materials</td><td>Food - South America Theme - Soup
NC - Understand and apply the principles of a healthy diet
- Understand seasonality
• Prepare food products taking into account the properties of ingredients and sensory characteristics
• Select and prepare foods for a particular purpose
• Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing.
• Weigh and measure using scales
• Cut and shape ingredients using appropriate tools and equipment e.g. grating
• Join and combine food ingredients appropriately e.g. beating, rubbing in
• Decorate appropriately
• Work safely and hygienically
• Show awareness of a healthy diet</td><td>Food - Savoury. Hot Pasta
NC - Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
• Prepare food products taking into account the properties of ingredients and sensory characteristics
• Select and prepare foods for a particular purpose
• Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing.
• Weigh and measure using scales
• Cut and shape ingredients using appropriate tools and equipment e.g. grating
• Join and combine food ingredients appropriately e.g. beating, rubbing in
• Decorate appropriately
• Work safely and hygienically
• Show awareness of a healthy diet</td><td>Project in conjunction with Primary Engineer & Ford Motor Company
• Use a cam to make an up and down mechanism.
• Build frameworks using a range of materials e.g. wood, card corrugated plastic to support mechanisms
• Use glue gun with close supervision
• Cut slots
• Cut accurately and safely to a marked line
• Join and combining materials with temporary, fixed or moving joinings
• Use craft knife, cutting mat and safety ruler under one to one supervision if appropriate
• Choose an appropriate sheet material for the purpose
Incorporate an eclectic circuit using a motor</td><td>Computer games/ Remote controlled lego
• Control a model using an ICT control programme</td></tr>
<tr><td></td><td colspan="6">Evaluate (End product)
NC - Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
• Identify the strengths and weaknesses of their design ideas
• Discuss how well the finished product meets the design criteria and how well it meets the needs the needs of the user
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