



New Brighton Primary School

D&T

Curriculum 2022-2023



Intent:

At New Brighton Primary School we aim to provide all children with a broad and balanced curriculum which prepares them for life beyond primary education. We encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We actively encourage our children to be critical thinkers, forward planners and effective problem solvers. We also teach our children to be able to work as capable individuals and as part of a valuable, productive team. Resilience is a key theme running through our DT curriculum, and the children are encouraged to become innovators and risk-takers.

Implementation:

Our Design and Technology projects are well sequenced to provide a coherent subject scheme that develops children's designing, planning, making and evaluating skills. Each project is based around a Design and Technology subject focus of structures, mechanisms, cooking and nutrition or textiles. The Design and Technology curriculum's electronic systems and IT monitoring and control elements are explicitly taught in our science projects to ensure the links between the subjects are highlighted. Where possible, meaningful links to other areas of the curriculum are made. For example, the cooking and nutrition project Eat the Seasons is taught alongside the geography project Sow, Grow and Farm. All the projects follow a structure where children are introduced to key concepts and build up knowledge and skills over time, using a more comprehensive range of equipment and building, cutting, joining, finishing and cooking techniques as they progress through school. All projects contain focused, practical tasks in the 'develop' stage to help children gain the knowledge and skills needed to complete their Innovate tasks independently.

Throughout EYFS, Key Stages 1 and Key Stage 2, children build up their knowledge and understanding of the iterative design process. They design, make, test and evaluate their products to match specific design criteria and ensure they fit their purpose.

Impact:

When pupils leave New Brighton Primary School they will be critical thinkers, forward planners and effective problem solvers. They will have learned to show resilience when faced with challenges and be able to take calculated risks and be innovative in their approaches.

Pupils in Foundation Stage will be independent and confident investigators. They will be able to use resources based on topics and projects within the focus of the classroom and will be able to design and develop ideas independently.

Pupils in KS1 will build on these skills and design purposeful, functional, appealing products for themselves and other users based on design criteria. They will be able to generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. Pupils will have confidence to select and use a range of tools and equipment to perform practical tasks. Pupils will explore and evaluate a range of existing products and begin to develop their own skills in evaluating their ideas and products against design criteria

Through a variety of creative and practical activities, KS2 pupils will be able to 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 will generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Pupils will be able to select the tools and equipment to perform practical tasks accurately, articulating why they are most suitable for the job. Pupils will have built on their developing KS1 skills to evaluate by investigating and analysing a range of existing products. They will be able to evaluate their own ideas and products against their own design criteria and consider the views of others to improve their work. Pupils will have a clear understanding of key events and individuals in design and technology have helped shape the world.



New Brighton Primary School

D&T

Curriculum 2022-2023



Key Skills: EYFS

- Develop their small motor skills so that they can use a range of tools competently, safely and confidently. *Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons.*
- Explore collections of materials with similar and/or different properties.
- Talk about what they see, using a wide vocabulary.
- Explore how things work.
- Talk about the differences between materials and changes they notice.
- 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.
- Join different materials and explore different textures.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.
- 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.
- Use a range of small tools, including scissors, paint brushes and cutlery.
- Choose the right resources to carry out their own plan.
- Use one-handed tools and equipment.

Vocabulary.

- **Dangerous Dinosaurs/Marvellous Machines (Mechanisms):** design, model, construction, unique
- **Once Upon a Time (Textiles):** bridge, building, wheel, transport,
- **Sunshine & Sunflowers/ Ready, Steady, Grow (Cookery):** pour, mix, combine harvester, harvest
- **Creep, Crawl, Wriggle (Structures):** squash, stretch, roll, model

Key Skills: YR1

Design:

- Create a design to meet simple design criteria.
- Select the appropriate tool for a simple practical task.

Make:

- Follow the rules to keep safe during a practical task.
- Select and use a range of materials, beginning to explain their choices.
- Cut and join textiles using glue and simple stitches. (ART)
- Use glueing, stapling or tying to decorate fabric, including buttons and sequins. (ART)

Evaluate:

- Talk about their own and each other's work, identifying strengths or weaknesses and offering support.
- Describe the similarities and differences between two products.
- Describe why a product is important.

Technical:

- Use wheels and axles to make a simple moving model.
- Construct simple structures, models or other products using a range of materials.
- Name and explore a range of everyday products and describe how they are used.

Cooking and Nutrition:

- Measure and weigh food items using non-standard measures, such as spoons and cups.
- Select healthy ingredients for a fruit or vegetable salad.
- Sort foods into groups by whether they are from an animal or plant source.

Vocabulary.

- **Shade and Shelter (Structure):** purpose, function, temporary, permanent
- **Taxi (Mechanisms):** axle, chassis, vehicle, transport
- **Chop, Slice & Mash (Cookery):** chop, grate, peel, slice, tear, mash



New Brighton Primary School

D&T

Curriculum 2022-2023



Key Skills: YR2

Design:

- Generate and communicate their ideas through a range of different methods.
- Select the appropriate tool for a task and explain their choice.
- Explain why a designer or inventor is important.

Make:

- Work safely and hygienically in construction and cooking activities.
-
- Use different methods of joining fabrics, including glue and running stitch.
- Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect.
- Add simple decorative embellishments, such as buttons, prints, sequins and appliqué.

Evaluate:

- Explain how an everyday product could be improved.
- Explain how closely their finished products meet their design criteria and say what they could do better in the future.
- Compare different or the same products from the same or different brands.

Technical:

- Use a range of mechanisms (levers, sliders, wheels and axles) in models or products.
- Explore how a structure can be made stronger, stiffer and more stable.

Cooking & Nutrition:

- Work safely and hygienically in construction and cooking activities.
- Prepare ingredients by peeling, grating, chopping and slicing.
- Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal.
- Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables).

Vocabulary.

- **Remarkable Recipes (Cookery):** ingredient, preparation, recipe, method
- **Beach Hut (Structures):** construct, stable, stiff, joint, structure
- **Cut, Stitch and Join (Textiles):** embellishment, textile, stitch, applique
- **Push and Pull (Mechanisms):** component, pivot, force, lever, linkage, mechanism

Key Skills: YR3

Design:

- Explain how an existing product benefits the user.
- Develop design criteria to inform a design.
- Plan which materials will be needed for a task and explain why

Make:

- Use appliances safely with adult supervision.
- Use tools safely for cutting and joining materials and components.
- Cut and join wools, threads and other materials to a loom.

Evaluate:

- Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.
- Explain the similarities and difference between the work of two designers.
- Describe how key events in design and technology have shaped the world.

Technical:

- Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products.
- Create shell or frame structures using diagonal struts to strengthen them.

Cooking & Nutrition:

- Prepare and cook a simple savoury dish.
- Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars).
- Identify and name foods that are produced in different places.

Vocabulary.

- **Cook well, Eatwell (Cookery):** bake, boil, barbecue, roast, nutrition, nutrient
- **Making it Move (Mechanisms):** automaton, axle, component, cam, lever, linkage, rotation
- **Greenhouse (Structures):** reinforce, biome, cloche, strut, conservatory, stability



New Brighton Primary School

D&T

Curriculum 2022-2023



Key Skills: YR4

Design:

- Investigate and identify the design features of a familiar product.
- Use annotated sketches and exploded diagrams to test and communicate their ideas.
- Choose from a range of materials, showing an understanding of their different characteristics.

Make:

- Work safely with everyday chemical products under supervision, such as disinfectant hand wash and surface cleaning spray.
- Select, name and use tools with adult supervision.
- Hand sew a hem or seam using a running stitch.
- Create detailed decorative patterns on fabric using printing techniques.

Evaluate:

- Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements.
- Create and complete a comparison table to compare two or more products.
- Explain how and why a significant designer or inventor shaped the world.

Technical:

- Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products.
- Prototype shell and frame structures, showing awareness of how to strengthen, stiffen and reinforce them.
- Incorporate circuits that use a variety of components into models or products.

Cooking & Nutrition:

- Identify and use a range of cooking techniques to prepare a simple meal or snack.
- Design a healthy snack or packed lunch and explain why it is healthy.
- Identify and name foods that are produced in different places in the UK and beyond.

Vocabulary.

- **Fresh Food, Good Food (Cookery):** recycle, reuse, prototype, compostable
- **Functional & Fancy Fabrics (Textiles):** versatile, embellish, fraying, hem, pinking shears, trellis
- **Tomb Builders (Structures):** fulcrum, inclined plane, pulley, wedge, compound machine

Key Skills: YR5

Design:

- Explain how the design of a product has been influenced by the culture or society in which it was designed or made.
- Explain the functionality and purpose of safety features on a range of products.

Make:

- Name and select increasingly appropriate tools for a task and use them safely.
- Build a framework using a range of materials to support mechanisms.
- Combine stitches and fabrics with imagination to create a mixed media collage.
- Select and combine materials with precision.
- Use applique to add decoration to a product or artwork.

Evaluate:

- Test and evaluate products against a detailed design specification and make adaptations as they develop the product.
- Survey users in a range of focus groups and compare results.
- Describe the social influence of a significant designer or inventor.

Technical:

- Use mechanical systems in their products, such as pneumatics.
- Use pattern pieces and computer-aided design packages to design a product.

Cooking & Nutrition:

- Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish.
- Evaluate meals and consider if they contribute towards a balanced diet.
- Describe what seasonality means and explain some of the reasons why it is beneficial.

Vocabulary.

- **Moving Mechanisms (Mechanisms):** iterative process, prototype, pneumatic, brace, actuator, compressor, reservoir
- **Eat the Seasons (Cookery):** nutritional value, saturated fat, kilocalorie, kilojoule puree, saute, simmer,
- **Architecture (Structure):** computer-aided design, baroque, corinthian/doric column, gothic, postmodern, renaissance



New Brighton Primary School

D&T

Curriculum 2022-2023



Key Skills: YR6

Design:

- Analyse how an invention or product has significantly changed or improved people's lives.
- Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways.

Make:

- Select appropriate tools for a task and use them safely and precisely.
- Pin and tack fabrics in preparation for sewing and more complex pattern work.
- Choose the best materials for a task, showing an understanding of their working characteristics.
- Use different methods of fastening for function and decoration, including press studs, Velcro and buttons.
- Explain and use mechanical systems in their products to meet a design brief.

Evaluate:

- Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others.
- Create a detailed comparative report about two or more products or inventions.
- Present a detailed account of the significance of a favourite designer or inventor.

Technical:

- Select the most appropriate materials and frameworks for different structures, explaining what makes them strong
- Understand and use electrical circuits that incorporate a variety of components (switches, lamps, buzzers and motors) and use programming to control their products.

Cooking & Nutrition:

- Follow a recipe that requires a variety of techniques and source the necessary ingredients independently.
- Plan a healthy daily diet, justifying why each meal contributes towards a balanced diet.
- Explain how organic produce is grown.

Vocabulary.

- **Food for Life (Cookery):** modification, convenience, processed, additive, labour intensive, pesticide, organic
- **Engineer (Structures):** annotated/exploded diagram, stability, concertina, truss/suspension/beam/arch bridge
- **Make Do and Mend (Textiles):** repurpose, garment, embroidery, toggle, whip stitch