



## SUMMARY OF APPROACH TO Design and Technology NEW END PRIMARY SCHOOL



### Intent

At New End Primary School our vision is to give children a Design and Technology curriculum which develops the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. We aim the children to build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. We aim the children to be able to critique, evaluate and test their ideas and products and the work of others. Also, for children to understand and apply the principles of nutrition and learn how to cook. Design and technology scheme of work aims to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation.

At New End we aim all children to;

- produce creative work, exploring their ideas and recording their experiences
- To become proficient in the three main stages: design, make and evaluate.
- Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical and technical understanding, required for each strand.
- We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others.

### Implementation

We teach a skills-based Design and Technology curriculum, which allows the children to express their creative imagination as well as providing them with the opportunities to practise and develop mastery in the key processes of D&T.

Our D&T lessons are linked where possible to our termly topics and these include studying different techniques. Through a well-planned and wide range of different activities, children develop their own style and work on their control and use of materials using creativity through experimentation. Skills progress with each year and lessons build on prior learning whilst giving the children chance to trial new techniques. We use Kapow's Design and Technology scheme to ensure that skills are developed in the six key areas of the National Curriculum:

**Mechanisms – Structures – Textiles – Cooking and nutrition (food) – Electrical systems (KS2) – Digital world (KS2)**

We have adopted a spiral curriculum to ensure skills are re-visited.

We supplement the Kapow activities with tried and tested lessons. Through our D&T provision, the three main stages of the design process - design, make and evaluate – are developed. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each of the five strands of the National Curriculum. Cooking and nutrition\* has a separate section, with a focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality.

Topics are usually delivered half-termly, sharing curriculum time with Art & Design throughout the year.


## **Impact**

Teaching the full scheme ensures that by the end of Year 6, children in New End will have met the statutory objectives of the National Curriculum...

- Understand the functional and aesthetic properties of a range of materials and resources.
- Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.
- Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Self-evaluate and reflect on learning at different stages and identify areas to improve.
- Meet the end of key stage expectations outlined in the National curriculum for Design and technology.

## **Appendix 1**

### **Curriculum Overview**

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6	Stand alone lessons  (Including Seasonal Cards & Art Exhibition, Xmas strings)
EYFS	<b>A&amp;D</b> <b>Drawing</b>  <b>Painting</b>	<b>D&amp;T</b> <b>Cooking</b> -Understand the importance of cooking -Creating recipes -Role playing Cooking -Making a range of foods -Experiencing the taste of a range of foods	<b>A&amp;D</b> <b>Elements: Colour</b>  <b>Elements: Shape</b>	<b>D&amp;T</b> <b>Shapes</b> -Cutting and sticking -Making shape pictures -Improving techniques <b>Animals</b> -Making animals using Play Doh -Thinking about scale	<b>A&amp;D</b> <b>Elements: Line</b>  <b>Elements: Pattern</b>	<b>D&amp;T</b> <b>Habitats</b> -Making habitats -Plan and make using a range of resources explaining their choices <b>Scientific enquiry</b> -Making boats -Selecting materials to make boat -Connecting materials together	Local artists near the school: Burgh House and Hampstead Museum
Year 1	<b>D&amp;T</b> <b>Growing Greenhouses.</b> Children to research, design and create a greenhouse made from recycled materials. Children to cut, join and assemble green house and test effectiveness of design by growing seeds.	<b>A&amp;D</b> <b>Drawing: Make your mark</b>  <b>Painting: colour splash</b>	<b>D&amp;T</b> <b>Snappy Snacks</b> Chn to investigate different recipes and healthy foods. Children will produce healthy snacks using oats, honey and various fruits.	<b>A&amp;D</b> <b>Sculpture and 3D Paper play</b>	<b>D&amp;T</b> <b>Pop up Pictures.</b> Children to investigate a variety of different pop up books and ways of making pictures move eg: hinges, springs, etc. Children to create own pop up card based around a popular fairy tale.	<b>A&amp;D</b> <b>Craft and Design: Embellishments</b>	<b>D&amp;T</b> <b>Cooking without a kitchen</b>
Year 2	<b>A&amp;D</b> <b>Drawing: Tell a story</b>  <b>Craft and design: Map it out</b>	<b>D&amp;T</b> <b>Sandwich making</b> Children will research, design and make a healthy sandwich for a packed lunch. They will start to inform design with audience research	<b>A&amp;D</b> <b>Painting and mixed media: Beside the seaside</b>	<b>D&amp;T</b> <b>Pretty packaging</b> Children will research variety of existing products. They will design and create a container for a new chocolate bar, including net and design of branding	<b>A&amp;D</b> <b>Sculpture and 3D: Clay houses</b>	<b>D&amp;T</b> <b>Perfect puppet</b> Children to design and create their own hand puppet. Children will create a prototype pattern, then cut and sew fabrics pieces joining together using stitching/ gluing.	<b>D&amp;T</b> <b>Cooking without a kitchen</b>

Year 3	<b>A&amp;D</b> <b>Painting and mixed media: prehistoric</b>	<b>D&amp;T</b> <b>Castles</b> Designing a castle with key features to appeal to a specific person/purpose; Drawing and labelling a castle design using 2D shapes; Making facades from a range of recycled materials; Evaluating own work and the work of others	<b>A&amp;D</b> <b>Drawing: Growing artists</b>	<b>D&amp;T</b> <b>Whizzing Wheels</b> Children to design and make their own car propelled by a balloon. Children will explore axles and wheels. Children will measure/ saw and join wood to create wooden frame.	<b>A&amp;D</b> <b>Craft and Design: Ancient Egyptian scrolls</b>	<b>D&amp;T</b> <b>Simple Salads</b> Children to research different recipes and salads from around the world, Focus on food preparation eg: chopping, grating peeling, slicing, mixing and spreading and food hygiene.	<b>D&amp;T</b> <b>Cooking without a kitchen</b>
Year 4	<b>A&amp;D</b> <b>Sculpture and 3D: Mega materials</b> <b>Drawing: Power prints</b>	<b>D&amp;T</b> <b>Pizza Parlour</b> Chn design and create recipe for a pizza. Investigate pizza menus and choose selection of different toppings to add to base based on market research. Children will consider the nutritional values of foods and their intended audience when designing.	<b>A&amp;D</b> <b>Painting and mixed media: Light and dark</b>	<b>D&amp;T</b> <b>Emergency Shelters</b> Children will create an emergency shelter in response to a natural disaster. They will create a design brief and a set of criteria to work to and test their shelters to see how effective they are.	<b>A&amp;D</b> <b>Craft and design: Fabric of nature</b>	<b>D&amp;T</b> <b>Building Bridges</b> Research on the bridges and shapes within them. Children to make choices around materials and techniques to strengthen and test a bridge. Build a bridge to hold a weight.	<b>D&amp;T</b> <b>Cooking without a kitchen</b>
Year 5	<b>A&amp;D</b> <b>Painting and mixed media: portraits</b>	<b>D&amp;T</b> <b>Musical Instruments</b> Children will make and create a musical instrument. They will research instruments from around the world and how the shape, design and function changes the pitch, tone and frequency of sounds.	<b>A&amp;D</b> <b>Drawing: I need space</b>	<b>D&amp;T</b> <b>Baking Bread</b> Chn to use salt dough when making their proto-type. Investigate various recipes and alter recipe according to different ingredients and influences from world recipes.	<b>A&amp;D</b> <b>Sculpture and 3D: interactive installation</b>	<b>D&amp;T</b> <b>Renewable Energy</b> Children will research and develop a mechanical prototype for a renewable energy source. They will create a design brief, select their own materials and evaluate their design against the criteria.	<b>D&amp;T</b> <b>Cooking without a kitchen</b>

Year 6	<b>A&amp;D</b> <b>Art and Design Skills</b>  <b>Painting and mixed media: artist study</b>	<b>D&amp;T</b> <b>International Recipes</b> Children will gain an understanding of where food comes from and how it is produced. They will research design a meal based on a world cuisine and seasonality.	<b>A&amp;D</b> <b>Drawing and Sculpture: Make my voice heard</b>	<b>D&amp;T</b> Controllable Cars Chn to design and create electronic car, Research different cars design and different electrical systems on a car. Chn to create framework using wood and join. Create an electric motor.	<b>A&amp;D</b> <b>Still Life: Making memories</b>	<b>D&amp;T</b> Fun Funfairs Research different fairground rides. Children to design and create fairground rides using model kits and recycled materials. They will look at mechanisms that use cams, pulleys, handles, axles and springs to create movement	<b>D&amp;T</b> <b>Cooking without a kitchen</b>