



**NEWHALL**  
**JUNIOR SCHOOL**  
Lionheart Educational Trust

# N.J.S Design and Technology

Our  
Intent  
Implementation  
Impact



OUR INTENT – Design and Technology

## **AIM: To provide World Class teaching of Design and Technology.**

Design and Technology ensures that pupils make an essential contribution to the creativity, culture, wealth and well-being of the nation. Design and technology requires pupils to design and make products that solve real-life and relevant problems within a variety of contexts; allowing children to use their imagination and participate successfully in an increasingly technological world.

At Newhall Junior School our D&T curriculum provides pupils with opportunities to draw on prior knowledge including knowledge gained in mathematics, science, computing and art. Through a strategically planned curriculum, children will be exposed to new concepts, vocabulary, ideas and skills - the more you know the more you can learn (The Matthew Effect, Robert K Merton 1968). Children will then be able to make cognitive links to prior knowledge and build upon this to move from novice to expert learners.

Through our high-quality design and technology lessons pupils will learn how to become resourceful, innovative, enterprising, and capable citizens who contribute towards solving problems and have the skills to contribute to future design advancements. We want pupils to develop their confidence to take risks, through drafting design concepts, modelling, testing and being reflective learners who evaluate their work and the work of others.

At Newhall Juniors we believe learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Through design and technology lessons, we aim to help children understand how to cook through applying the principles of nutrition.

### **OUR IMPLEMENTATION – Design and Technology**

The teaching and implementation of the Design and Technology curriculum at Newhall Junior School is based on the National Curriculum, ensuring a broad experience of knowledge and skills are developed, then applied to a range of outcomes.

We follow the combined scheme from Kapow, consisting of three half-term units of work, carefully planned so that pupils' learning builds sequentially throughout KS2. In each unit children will meet the three main stages of the design process: 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. 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.

Through Kapow's Design and Technology scheme, children respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in six key areas:

- Mechanisms
- Structures
- Textiles
- Food

- Electrical systems
- Digital World

Lessons incorporate independent, paired and group work including practical hands-on, computer based and inventive tasks. At Newhall Junior School, we adapt the lessons to meet the needs of all our learners.

### NCJS Long-Term Plan

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	<b>Cooking and nutrition</b> Eating seasonally		<b>Digital World</b> Electronic Charm		<b>Structures</b> Constructing a castle	
Year 4				<b>Mechanical Systems</b> Making a slingshot car	<b>Structures</b> Pavilions	<b>Electrical Systems</b> Torches
Year 5	<b>Electronic Systems</b> Doodlers		<b>Cooking and nutrition</b> What could be healthier?		<b>Mechanical Systems</b> Making a pop-up book	
Year 6		<b>Textiles</b> Waistcoats		<b>Digital World</b> Navigating the world		<b>Structures</b> Playground

### THE IMPACT

After the implementation of Kapow Primary Design and technology, pupils should leave Newhall Junior School equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society

- Enriched cultural capital.
- Pupil's high-quality innovative outcomes (inc. models, prototypes, CAD) will showcase their skill, knowledge and understanding.
- Pupils will speak positively about their design and technology experiences.
- Pupils have an appreciation for key individuals, inventions and invents in history and of today that impact our world.
- Pupils can self-evaluate and reflect on learning at various stages and identify areas improved.

### Monitoring

Design and technology leader will carry out the following during the year to inform future planning and next steps:

- Planning scrutiny for unit
- Learning Walks
- Evidence of outcomes
- Pupil conferencing

- Staff conferencing

**Equal opportunities, Special Needs and Equality.**

All children should have access to the Design and technology Curriculum in line with the school's Equal Opportunities Policy, the SEND policy and Equality Policy. Teachers should aim to provide effective learning opportunities for all pupils by:

- Setting suitable learning challenges.
- Responding to pupils diverse learning, religious and cultural needs.
- Overcoming potential barriers to learning and assessment for individuals and groups of pupils.
- Adapt the curriculum where appropriate.

If necessary, the SENDCo and the Design and technology Co-ordinator will advise teachers on teaching activities relevant to pupils with special educational needs including more able pupils.

Design and Technology Leader, Charlotte Smith