



**CURRICULUM POLICIES | Lawdale Junior School**

# Design & Technology Policy

Lawdale Junior School

November 2024

## Design & Technology Policy

### **We are a Right Respecting School and this policy supports the following articles from the UN Convention on the Rights of a Child**

**Article 13: (Freedom of expression):** Every child has the right to share information in any way they choose, including by talking, drawing or writing as long as it does not harm others.

**Article 28: (Right to education):** Every child has the right to a primary education, which should be free. They should be encouraged to reach the highest level of education of which they are capable.

**Article 29: (goals of education)** Education must develop every child's personality, talents and abilities to the full. It must encourage the child's respect for human rights, as well as respect for their parents, their own and other cultures, and the environment.

**Article 31: (Leisure, play and culture):** Children have the right to relax and play, and to join in a wide range of cultural, artistic and other recreational activities.

#### Introduction:

Design and Technology helps to prepare children to actively participate in tomorrow's changing world. The subject encourages creative thinking and helps children to develop their skills as problem solvers. They are taught to identify needs and opportunities, regarding a wide range of subjects and issues, and are given opportunities to develop a variety of ideas and make a range of products. Design and Technology also allows the children to reflect upon and evaluate past and present design technology.

D&T Association: "Design and technology gives young people the skills and abilities to engage positively with the designed and made world and to harness the benefits of technology. They learn how products and systems are designed and manufactured, how to be innovative and to make creative use of a variety of resources including digital technologies, to improve the world around them. "

#### Teaching Design and Technology at Lawdale:

Design and Technology is taught within topics and is linked to other subjects wherever possible, but the subject integrity of D&T must be maintained. The teaching of Design and Technology is closely linked to the teaching of Art and both teaching staff and pupils are encouraged to identify and explore the links with other areas of the curriculum. The planning and teaching of D&T at Lawdale will entail and promote appropriate differentiation to ensure equal access of all learners, including children with SEND. Across the entirety of Key Stage 2, the knowledge, skills and understanding of the design and make process will be continuously enhanced and developed to ensure progression. All teaching of D&T will adhere to the school's Health & Safety policies.

#### Aims of Design and Technology:

- To develop children's understanding of past and present design technology and its impact on the world today.
- To develop an understanding of the process involved in Design and Technology.
- To develop children's creativity and innovation through designing and making a range of products.
- To teach children the safe and effective use of a range of tools, materials and components.
- To develop children's ability to evaluate and provide constructive feedback on their own and their peers' work.
- To foster enjoyment, satisfaction and purpose in designing and making.

#### The Design and Technology Process:

The design process is broken down into four sections and works as a continuous cycle of: product evaluation, designing, making and evaluation. In each section, children will be taught to:

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| <b>Product Evaluation:</b> <ul style="list-style-type: none"> <li>investigate and analyse existing products.</li> <li>use product research to create a design brief.</li> </ul>                                                                         | <b>Evaluate:</b> <ul style="list-style-type: none"> <li>evaluate own ideas and provide constructive feedback on others.</li> <li>to use the evaluation process to improve existing product/idea.</li> </ul> |
| <b>Designing:</b> <ul style="list-style-type: none"> <li>research and create their own range of ideas to complete a design brief.</li> <li>develop and communicate ideas through discussion, sketches, prototypes and computer-aided design.</li> </ul> | <b>Re-Making:</b> <ul style="list-style-type: none"> <li>implement evaluation feedback and adjust plans and products accordingly.</li> </ul>                                                                |
| <b>Making:</b> <ul style="list-style-type: none"> <li>select from and safely use a wide range of tools to cut, shape, join and finish.</li> <li>select from and use a wide range of materials, textiles and ingredients.</li> </ul>                     |                                                                                                                                                                                                             |

When do lessons take place?

At least 6 lessons should be timetabled every term to complete 3 topics each year with a development of skills and understanding from year 3- 6. Children should come off timetable for the whole day, in the week that they are teaching their D&T topic, as well as using other afternoon sessions to complete their D&T project.

### Planning and Teaching

The planning of teaching of D&T is closely linked to other subjects such as maths science and art and both teaching staff and pupils are encouraged to identify and explore the links with other areas of the curriculum. The planning and teaching of D&T at Lawdale will entail and promote appropriate differentiation to ensure equal access of all learners, including children with SEND. Across the entirety of Key Stage 2, the knowledge, skills and understanding of the design and make process will be continuously enhanced and developed.

What is taught?

The school uses the D&T Association's planning and resources to support planning.

|        | Autumn                                      | Spring                                   | Summer                                            |
|--------|---------------------------------------------|------------------------------------------|---------------------------------------------------|
| Year 3 | Food Technology - healthy and varied diet   | Mechanical systems - levers and Linkages | Structures -shell structures                      |
| Year 4 | Structures – shell structures using CAD     | Mechanical systems – pneumatics          | Electrical systems – simple circuits and switches |
| Year 5 | Textiles – combining different textiles     | Mechanical systems - pulleys and gears   | Structures – frame structures                     |
| Year 6 | Electrical systems – monitoring and control | Textiles – CAD in textiles               | Food Technology - culture and seasonality         |

|                                                                                                                                                  |                                                                                                          |
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| <b>Maintaining integrity</b><br><br><b>Check list: making really good links</b><br><br>Does the link make learning more motivating and engaging? | <b>Check list: maintaining integrity in D&amp;T</b><br><br>Does your D&T project include these elements? |
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| Does the link deepen children's understanding or provide opportunities to apply knowledge and skills? | User – who the products are for                                                   |
| Has the integrity of each of the subjects been maintained?                                            | Purpose – what tasks the products will perform                                    |
| Is there a natural overlap between the subjects being linked?                                         | Functionality – how the products will work                                        |
| Are the links made explicit to children?                                                              | Design Decisions – the opportunities children have to make choices                |
| Can the children see the purpose of making the link?                                                  | Innovation – the scope children have to be original with their thinking           |
| Does the link guarantee appropriate coverage and progression in the subjects involved?                | Authenticity – how believable/real/credible the products will be to the children? |
| Does medium-term planning dovetail learning between the subjects effectively?                         |                                                                                   |

### Progression

D&T topics are organised to support the development of skills and knowledge and have been designed using the D&T Association's advice and planning materials to ensure progression.

The school also establishes links with the local infant and secondary schools to ensure progression of subject knowledge and extension activities can be provided for children with an aptitude for D&T.

### Assessment

The assessment of the children's progression within the subject will be in line with the school's policy for assessment, recording and reporting. Children will be assessed as: working at, below or above the standard expected for their age against criteria for skills, knowledge and understanding in the NC programme of study. Pupils should be assessed at the end of each unit and at the end of the year D&T assessments should be recorded on O'Track and on the Annual report to parents. Children should be recorded as WTS, EXS or GDS.

### Safety

All teaching of D&T will adhere to the school's Health & Safety policies. Staff should have regard for all aspects of health and safety in relation to the use of food, sharp tools and electrical tools eg glue guns. Tools should be checked in and out and all accounted for at the end of a lesson. It is good practice to have a "tool station" that is supervised closely by an adult when tools such as knives and glue guns are in use.

### Professional Development

Professional development opportunities will be made available to all members of staff in the context of individual and school needs. The funds for staff professional development will be allocated through the School Development Plan (SDP).

### Evaluation

This policy will be reviewed in line with the SDP. The effectiveness of this policy will be monitored through planning review and the assessment of work produced by the children. End of term assessments and subsequent analysis of results will ensure and measure the effectiveness of the teaching programme. Where needed, support will be provided.