



## St Joseph's Catholic Primary School, Jarrow Design and Technology Curriculum Rationale 2022-23



### Intent

An inspiring, rigorous and practical subject, Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and collaboratively. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. At St Joseph's, we encourage children to use their creativity and imagination, to design and make purposeful products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. Children are given opportunities to reflect upon and evaluate past and present design technology, its uses and effectiveness. Concentrating on local and global themes from EYFS to Year 6, we aim to provide children with an exciting, relevant and challenging curriculum with a variety of enrichment opportunities. The knowledge and skills based curriculum offered encourages them to become innovators and risk-takers.

### Implementation

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing and making, making rich connections to the wider curriculum where possible. The children work in a range of relevant contexts (for example home, school, leisure, culture, enterprise, industry and the wider, global environment). Key knowledge and skills for D&T have been mapped across the school from EYFS to Year 6 to ensure progression between year groups. This also ensures that there is a context for the children's work in Design and Technology; that they learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study.

We aim to ensure that all pupils:

#### Design

- 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
- generate, develop, model and communicate their ideas through discussion using subject-rich vocabulary, annotated sketches, cross-sectional diagrams, prototypes, pattern pieces and computer-aided design

## Make

- select from and use a wide range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing) accurately
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

## Evaluate

- investigate and analyse a range of existing products
- evaluate their own and their peers ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

## Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products
- understand and use electrical systems in their products
- apply their understanding of computing to program, monitor and control their products.

## Impact

We believe our children will:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and purposeful products for a wide range of users and critique, evaluate and test their ideas and products and the work of others.
- understand and apply the principles of nutrition and learn how to cook.
- design and make a range of products. A good quality finish will be expected in all design and activities made appropriate to the age and ability of the child.
- become risk taking resourceful, innovative, enterprising and capable citizens.
- develop a critical understanding of D&T, its impact on daily life and the wider world through evaluation of past and present D&T.