

# Design and Technology Curriculum



## **Whole School Overview - Intent:**

At Kin Craig Primary School, Design Technology forms an important part of the broad and balanced curriculum for our children. By following a clear set of objectives, we seek to provide pupils with a range of skills, concepts and knowledge necessary to express their ideas and experiences to create a range of products. Activities should develop children's imagination and be a means of personal expression. They should promote a positive attitude and build on children's self-esteem and confidence. Whilst the subject is essentially, practical it should provide opportunities for reflection and pupils should develop the ability to make informal critical responses to their own work and that of others.

In Design Technology children will explore, describe and evaluate a range of products and use their creativity and imagination to design and make their own products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They will learn to select and combine materials and components and create high quality finishes, exploring structures, mechanisms, mouldable materials, electronics, textiles and food. They will be encouraged to be innovators and risk-takers and reflect on why some ideas and techniques work well or otherwise for a particular product and how they can make changes and keep improving.

In line with the Early Years Foundation Stage (EYFS) and National Curriculum, we will ensure all children have the opportunities to:

### **EYFS:**

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (EAD)
- Share their creations, explaining the process they have used. (EAD)
- Use a range of small tools including scissors and paintbrushes. (PD)
- Begin to show care and accuracy when drawing (PD)

### **National Curriculum:**

- 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 products for a wide range of users.
- 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.

## **Year Group Overviews – Implementation:**

Design Technology (DT) forms part of the Creative Curriculum and provides a clear and comprehensive scheme of work that shows progression of skills across the whole school within different strands of DT. These include structures, mechanisms, food, textiles, electronics and mouldable materials. The children are immersed in opportunities to present their ideas through a design, make and evaluate process; developing their technical knowledge and understanding. Key skills and key knowledge for DT have been mapped across the school to ensure progression between year groups. Through our creative curriculum design, DT is taught on a weekly basis or alternatively in a block depending on the topic and link to the theme. Opportunities for DT are entwined within the EYFS through their continuous provision and adult led planning, giving children the freedom to express themselves and explore. Teachers across school plan their art curriculum following the 6 step progress; recording each

stage within the child's sketch book. These show the design process and steps the children have taken to achieve their chosen outcome and the skills taught.

Within each age range we will focus on the skills outlined below, to ensure a consistent and embedded approach, that shows a clear progression of skills.

**Toddlers/Rising 3s:** children will experiment with a range of different construction materials; making simple models and expressing their ideas. Children will explore and manipulate materials using their senses to investigate and see what they can do with them.

**Pre-School:** Children will experiment with a range of blocks and complex construction kits, building, balancing and joining pieces together. Children will be able to join a variety of construction pieces together, using different tools, making props to support play and to capture experiences and their responses to the world; developing their own ideas and making decisions.

**Reception:** Children will safely use and explore different materials, tools and techniques to make items that represent their ideas, thoughts and feelings, thinking about the uses and purposes of what they make.

**Year 1:** Children will use junk modelling to create structures, a simple mechanism, textiles and weaving and make a healthy food product.

**Year 2:** Children will use a range of joins in structures, create a product that uses movement, use textiles for a puppet and make food using baking.

**Year 3:** Children will make products using scoring and folding, mechanical and electronic components, quilting, clay and vegetables.

**Year 4:** Children will make products using permanent and temporary fastenings, gears, cams and pulleys, weaving, Modroc and a range of cooking techniques.

**Year 5:** Children will make products using woodwork, hydraulics, pneumatics, slat dough, glazing, textiles in jewellery and a food product with packaging.

**Year 6:** Children will make informed choices to create products with care and precision that meet the intended outcomes using a variety of components including balsa wood, electronics, textiles and food.

### **Impact:**

The impact of this curriculum design will lead to outstanding progress over time across key stages, relative to a child's individual starting point. Children will therefore be expected to leave Kinraig Primary School reaching at least age-related expectations for Design Technology. Through developing children's confidence to take risks, be resourceful, innovative and enterprising, children will be able to perform everyday tasks successfully in an increasingly technological world. They will have gained a wide range of skills in order to design, make and produce products, evaluating and adapting these to suit their needs or requirements and testing them on others. They will have a deeper understanding of the principles of nutrition and health eating and through evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world; identifying significant figures who have influenced and changed the design process over time.

