

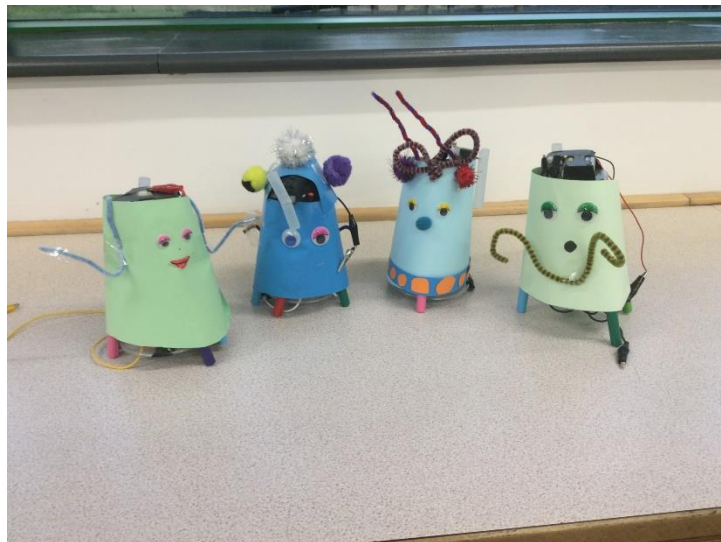


# HAZEL LEYS ACADEMY

'Be Inspired'

'Placing our pupils at the heart of everything we do'

## **Design and Technology Policy**



## **DESIGN & TECHNOLOGY POLICY**

At Hazel Leys, we believe that a comprehensive design and technology curriculum is a knowledge rich curriculum. This curriculum aims to inspire students to think about the important and integral role which design and the creation of designed products play in our society. Wherever we look, evidence of design is all around us. From chairs to hospital equipment, from clothes to websites, from advertisements on the side of a bus to playground equipment, everything has been designed

The curriculum fulfils the requirements of the National Curriculum for England. This course of study seeks to show how design and technology shapes the world around us. The curriculum is split into three different areas: 'cook', 'sew' and 'build'. It is designed so that each year group will complete a unit of work in these three different areas once a year. Two different 'aspects' of design are interwoven into the three areas of study: the environment and sustainability, and enterprise and innovation. These 'aspects' acknowledge enduring and contemporary concerns of modern design.

The DT policy follows whole school guidance on the curriculum and how it is managed, organised, delivered, assessed and evaluated. It also reflects agreed approaches to the whole school issues, i.e. teaching and learning strategies, adaptive teaching, behaviour and discipline, special educational needs and equal opportunities.

The National Curriculum for Design and Technology aims to ensure that all pupils:

- 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.

### **Subject content**

#### **Early Years Foundation Stage (EYFS)**

Through Expressive Arts and Design children are encouraged to explore different media, explore how media can be combined to create different effects and develop a range of skills and techniques experimenting with colour, design, texture, form and function. Children are given daily access to a range of creative opportunities and enjoy our carefully planned and well-resourced creative areas both indoors and out. Children are encouraged to create on both small and large scales and our outdoor environment supports this well. Staff encourage the children to develop their communication and language skills through talking about their creations and sharing these with others to build confidence and raise self-esteem. From an early age they are encouraged to give opinions on their own and others work and to talk about what they could do next to enhance their own work or the work of others.

Every unit of work covers all of the Early Learning Goals (ELG's) within the Early Years Framework. With children having opportunities to return to skills in order to develop mastery within Design and Technology.

#### **Key Stage 1**

##### **Design**

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.

- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

### **Make**

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

### **Evaluate**

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

### **Technical Knowledge**

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products

## **Key Stage 2**

### **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, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

### **Make**

- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
- Select from and use a wider 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 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 [for example, gears, pulleys, cams, levers and linkages]
- Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- Apply their understanding of computing to program, monitor and control their products

### **Objectives**

Design and Technology at Hazel Leys will:

- Provide a range of stimulating and creative opportunities which create a framework for success and enjoyment,
- Develop pupils' visual perception, awareness, curiosity and sensitivity to the natural and built environment, through working from observation and direct experience
- Develop the pupils' capability in developing and expressing ideas through design by visual investigation
- Encourage pupils to evaluate and review their work and that of others, both individually and in groups
- Encourage the pupils to respond to, and articulate opinions on design and technology using specialist vocabulary when describing their work and ideas.

### **Principles of Teaching and Learning:**

#### **Adaptive teaching and special needs**

Teaching in DT should address the fact that all children will develop their ability to design, make, evaluate and apply skills at different rates. Adaptive teaching is therefore a key component to ensure learning will be open ended and planned to ensure all children can access the lesson objectives. Individual children will be supported by relevant questions and modelling from the staff. These interventions from the staff to individuals will increase their thinking, extend the range of options that may be considered and raise individual standards. All approaches need to be used to ensure that all children, including the least and most able, can be working to their full potential in all art lessons.

Design Technology activities are taught in a variety of ways, sometimes in blocks of taught time, as part of a termly learning focus, or in short skills-based activities where necessary. Design Technology has relevance across the curriculum and links with other subjects throughout the Academy. For example, the majority of our Design Technology has been incorporated into long-term planning of History and Geography topics.

#### **Breadth and balance:**

We will ensure that in any key stage the activities of drawing, painting, printmaking, collage, sculpture, textiles, 3D design and digital media are covered. We will ensure that pupils will develop their creative ideas in both expressive and craft design contexts and that their work will be informed by visual investigation from direct observation and other reference materials.

The study of the work of artists, craftspeople and designers from the locality, the past and present and a variety of cultures will be an integral part of practical art and design activities.

#### **Use of DT books**

DT books are used from year 1 through to year 6 to regularly record, collect and explore ideas and images and other information relevant to current and ongoing work. The DT book is an essential and personal record although teachers will teach children when it is appropriate to use them and for what purposes including reviewing the contents to ensure the purpose of the books at frequent intervals. It is also essential that all children use a DT book that is similar in format.

The contents of the DT book could include:

- Evidence of the design process
- Notes, annotated photographs, drawings, diagrams and photographs of prototypes and finished work,
- Students' evaluation of the projects which they undertake.
- A record basic skills development

DT books are an essential record of an individual child's experiences and ideas throughout a year and key stage and will be seen as evidence for assessment and reporting purposes. These will be passed onto the next teacher each year.

In Early Years, 'My Learning Journey' books are used to record DT work along with a written record of the child's voice on work that they have completed.

### **Progression in Design and Technology**

Progression in DT will be achieved by:

- Increasing the range of experience, materials and processes, building upon previous knowledge and understanding
- Ensure skills are revisited to ensure opportunities for continued progression
- Each year group has a clear set of skills to teach which build upon the previous years learning and readily prepares them for future learning
- Increasing the level of challenge and expectation of achievement
- Continually developing the quality of performance and opportunities for pupils to select materials and techniques appropriately in order to realise their ideas and intentions
- Portfolios of DT work will be collected by each teacher and these will be used to demonstrate progress over time as well as in using different media.

### **Cross-curricular skills and links**

Pupils will engage in learning through Design and Technology and about DT through cross-curricular topics and some stand-alone sessions.

Through art and design activities opportunities will be provided to develop pupils':

- Creative skills
- Knowledge and understanding of the world around them
- Understanding of a sense of time and place
- Awareness of the ideas, attitudes and beliefs of others

### **Equal opportunities**

All pupils will have an equality of access to a broad and balanced art curriculum irrespective of gender, ethnicity or special educational needs. An appropriate time for art will be provided for all pupils in order to meet the requirements of the National Curriculum programmes of study.

Pupils will be introduced to works of art from a wide range of cultures and traditions from around the world and consider the contexts and purposes underpinning their images and artefacts. Emphasis will be given to reinforcing the value of cultural diversity; developing understanding and an appreciation of the different ideas, values and beliefs encountered within a multicultural society.

### **Health and safety**

Pupils will be taught to use materials, tools and equipment safely. Pupils will be required to wear protective clothing when working with wet media such as glues, paint, hammers, nails and saws and taught to clear away practical materials responsibly. Teaching staff are responsible for the supervision of activities that involve cutting, use of hot materials, DT tools such as hammers and saws. Any faulty equipment must be reported to Health and Safety Contact.

### **Role of the Teacher**

The teacher is responsible for using the curriculum to plan engaging lessons that develop skills, deepen knowledge and provide children with a rich and varied involvement in art in all its forms. Teachers will:

- Use cross curricular links and themes to introduce and/or deepen skills and abilities in using DT. For example modelling in EYFS using playdough, junk modelling to make dinosaurs to Year 6 choosing materials to create their meals.
- Ensure that planning includes using indoor and outdoor materials to create.
- Ensure that they are building on skills from prior years by using assessment information and DT books to inform next step planning.
- Ensure that they are prepared – resources, skills and knowledge to deliver an effective and successful DT curriculum.
- Plan a timetable of art which will include either weekly lessons, block sessions or art days to ensure full coverage of the DT curriculum.

### **Assessment and recording:**

Assessment is based on a combination of teacher assessment, peer assessment and pupil self-assessment. Each term, all pupils' records are updated and this should be used to inform the End of Year Reports, which give a numbered grade for 'Effort' and 'Achievement'.

Assessment for the Early Years children will include fine and gross motor skill (physical development) for example showing accuracy in using scissors, drawing against a ruler. For older children this will include craft knives.

Self and peer evaluation will be planned where children can make informed judgements and comments when evaluating their own and the work of others. Teachers will use verbal feedback on how to improve and what they would change and why.

The subject coordinator will keep a photographic portfolio of drawings, pictures and finished products. This will be used for moderation, monitoring and assessment.

The subject coordinator will be responsible for whole academy displays – promoting class displays as well as exhibitions of work (Academy library).

Staff meeting time to be used to review and agree the curriculum map, ensure breadth and progression are in place and to agree assessment levels.

**Review:**

Curriculum plans, samples of pupils' work, classroom displays and discussions with staff will be used by the Design Technology Leader to evaluate the quality of the design and technology curriculum in the Academy.

Subject Coordinator will lead the development of their subject by:

- Providing guidance to others and sharing clearly the intent for teaching and learning in this subject
- Maintaining up to date knowledge and awareness of local, national and global developments
- Review and monitor success and the impact of planned work
- Be responsible for the implementation of this subject ensuring planning is broad and purposeful, resources are available and used effectively, skills and knowledge of all teaching staff enables success and that the coordinator enthuses and engages all staff and children in this subject