



***Head of School: Mr P. Coiffait***

# **School Policy**

## **Design and Technology**

**Co-ordinator: Jon Pointon**

**Governors adopted this policy on:**

**Signed by Chair:**

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## **Hawthorns Design and Technology Policy**

This policy outlines strategies for the effective teaching and assessment of Design and Technology at Hawthorns Special School. The school's policy is based on the skills and progression outlined in the 2014 new primary curriculum, alongside research undertaken to ensure inclusion for children with SEND when accessing design and technology lessons.

### **Aims and outcomes**

The National Curriculum 2014 states: *'Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in the process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:*

#### ***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.'

These outcomes can be further expanded and broken down into a skills progression from pre Key Stage 1 into Key Stage 1. (See 'Table of progression' *appendix 1*)

### **Inclusion**

Inclusion is at the heart of the provision at Hawthorns School. In terms of the implementation of the effective teaching of Design and Technology, it is paramount that learning is inclusive and relevant to all of our children. Opportunities need to be planned for pupils to develop:

- ✚ fine motor skills, dexterity, and competence in tool use
- ✚ gaining of materials knowledge through hands-on experience
- ✚ enhancing and broadening conceptual understanding
- ✚ social & behavioural targets

For design and technology, make **the process of creating something** as important as the end product.

### **General Strategies for Inclusion**

- Set suitable learning challenges
- Encourage understanding of language through modelling, repetition and visual support.
- Use key phrases to describe what is being done e.g., putting bricks together. These can then be used in different contexts to aid receptive understanding. Support children in new vocabulary through modelling and repetition.
- Use visual support such as 'first, next, last' to support steps in model making/ longer projects.
- Word mats may be a useful way to support the children acquire new vocabulary and in expressing their likes/ dislikes and choices about what they are going to do.
- Some children, for example those with sensory processing disorder, may not like certain textures. Try to introduce these textures gradually.
- Create displays to illustrate learning journeys. Ensure displays are accessible, engaging and informative.
- Promote independence with clearly labelled and accessible resources.
- Make use of iPads/computer technology to assist in design process.
- When evaluating products, make simple choice cards available with words and/or symbols e.g. like/dislike; ranking
- Break down the designing and making stages into small manageable steps and incorporate designing into 'mini-making' tasks with specific targets. Use a tick list to make clear what the children are working towards and how far they've got in relation to completing the project.

### **Planning**

- Learning challenges should be set which are appropriate to the ability and needs of the child.
- The sessions should be predominantly linked to half term topics/themes, providing opportunities to reinforce and enhance the learning being undertaken in class.
- Alongside the DT skills being developed in class, out of class DT sessions will be provided by a specialist Artist/Designer. The sessions are grounded in the subject area of Design and Technology, whilst also encompassing elements of Art and Science. Units of work, and specific skills to be focussed on, are planned through meetings between class staff and the specialist teacher. Specific skills are identified on Dashboard within the 'Resistant Materials' section.
- Children accessing the out of class sessions will have opportunities to work with a variety of materials including: wood; scrap/junk; clay; technology.

#### **Pre Key Stage 1**

**P4**

With help, pupils begin to assemble components provided for an activity, for example, placing bricks together. They contribute to activities by co actively grasping and moving simple tools, for example, a glue spreader. They explore options within a limited range of materials.

#### **P5**

Pupils use a basic tool, with support, for example, pushing a roller. They demonstrate preferences for products and materials.

#### **P6**

Pupils recognise familiar products and explore the different parts they are made from. They watch others using a basic tool and copy the actions, for example, preparing a surface with a glass paper block. They begin to offer responses to making activities, for example, suggesting the colour or shape of a product.

#### **P7**

Pupils operate familiar products, with support, and explore how they work. They use basic tools or equipment in simple processes, chosen in negotiation with staff, for example, in cutting or shaping materials. They begin to communicate preferences in their designing and making, for example, adding selected felt shapes to fabric.

#### **P8**

Pupils explore familiar products and communicate views about them when prompted. With help, they manipulate a wider range of basic tools in making activities, for example, joining components together to make their intended product. They begin to contribute to decisions about what they will do and how, for example, communicating their approval of certain features of a process.

### **KS1**

#### **Designing – Understanding contexts, users and purposes**

- work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment
- state what products they are making
- say whether their products are for themselves or other users
- describe what their products are for
- say how their products will work
- say how they will make their products suitable for their intended users
- use straightforward design criteria to help develop their ideas

#### **Designing - Generating, developing, modelling and communicating ideas**

- generate ideas by drawing on their own experiences
- use knowledge of existing products to help come up with ideas
- develop and communicate ideas by talking and drawing
- model ideas by exploring materials, components and construction kits and by making templates and mock-ups
- use ICT, where appropriate, to develop and communicate their ideas

### **Making - Planning**

- plan by suggesting what to do next
- select from a range of tools and equipment, explaining their choices
- select from a range of materials and components according to their characteristics

### **Making – Practical skills and techniques**

- follow procedures for safety
- use a range of materials and components, including construction materials and kits, textiles, and mechanical components
- measure, mark out, cut and shape materials and components
- assemble, join and combine materials and components
- use finishing techniques, including those from art and design

### **Evaluating – Own ideas and products**

- talk about their design ideas and what they are making
- make simple judgements about their products and ideas against design criteria
- suggest how their products could be improved

### **Evaluating – Existing products**

- explore what products are and who or what they are for.
- explore how products work and how or where they might be used.
- explore what materials products are made from.
- explore what they like and dislike about products.

### **Technical knowledge – Making products work**

- know about the simple working characteristics of materials and components.
- know about the movement of simple mechanisms such as levers, sliders, wheels and axles.
- understand how freestanding structures can be made stronger, stiffer and more stable.
- know that a 3-D textiles product can be assembled from two identical fabric shapes.
- use the correct technical vocabulary for the projects they are undertaking.

## **Monitoring and Assessment**

To assist in the evaluation of children's needs and progress, a set of assessment strategies could be utilised. These include:

-  The capturing and recording of session activities via photo / video / audio.
-  Pupil's comments, observations, conversations
-  Pupil's paper-based work in a personal work/record book
-  Child-focused learning journey display boards in class
-  iPad app as a way of tracking progress over time.

Children are being assessed using the 'Resistant Materials' section on Dashboard (within 'Academic Progress').

## Health and Safety

-  Teachers must plan safe Design and Technology sessions and complete a risk assessment if necessary.
-  Staff need to be aware of health and safety procedures when using equipment.
-  Pupils must be aware of the need for personal safety and the safety of others during Design and Technology sessions.

### Strategies for developing skills and ensuring safety when using tools in DT

#### First Encounter

Having never used the tool before, the child requires complete physical guidance. After a suitable demonstration of the safety aspects and how the tool functions, the child is steered into position and posture, and their hands are placed in the correct manner on the tool. The adult takes a position and holds/covers the child's hands and starts to work the tool, maintaining full control of the force applied e.g. pushing and pulling the saw.

#### Close Control

Progress is made as the child becomes familiar with the action of the tool in the desired way, the adult allows the child more independent control of the force, and there is less physical guidance. The adult still has overall control in a 'hands-on' manner.

#### Under Observation

As the child demonstrates ability to control the tool in the desired manner the adult removes direct hand contact and maintains position to physically act quickly when adjustments are necessary. This stage is complete when the adult can stand away from the action and intercede less frequently.

#### Occasional advice

The adult can supervise one or more children using the tool. They maintain a proximity to the action and keep under observation; most support is now verbal.

#### Trusted

The tool is used always in the appropriate manner and returned to its 'best place' after use.