**Design and Technology policy**

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**Intent**

**Our rationale for teaching Design and technology**

Design and technology is often one of a child’s favourite subjects, children like making decisions for themselves and doing practical work. They love creating products they can see, touch- and even taste for themselves. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. Design and technology bring learning to life, it is a motivating context for discovering literacy, mathematics, science, computing, PSHE and art. Pupils learn how to take and manage risks, becoming resourceful, innovative, enterprising and capable citizens. Design and technology gives young people the core skills and abilities to engage positively with the designed and made world as adults and to harness the benefits of technology. They learn how products and systems are designed and manufactured and how to make creative use of a variety of resources including digital technologies, to improve the world around them. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation and therefore is taught thoroughly by all teachers at Flixton Primary, giving it the time and weighting in the curriculum it requires.

**Excellence in design and technology is typified by:**

-Children who are able to design purposeful, functional, appealing products for themselves and other users based on design criteria. As they grow older they will 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.

-Children who are able to generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. As they grow older they will generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

-Children who are able to select from and use a range of tools and equipment to perform practical tasks. As they grow older they will select from and use a wider range of tools and equipment to perform practical tasks accurately.

-Children who are able to select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. As they grow older they will 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.

-Children who are able to explore and evaluate a range of existing products. As they grow older they will investigate and analyse a range of existing products.

-Children who are able to evaluate their ideas and products against design criteria. As they grow older they will evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

-As children grow older they will understand how key events and individuals in design and technology have helped shape the world.

-Children who are able to build structures, exploring how they can be made stronger, stiffer and more stable. As they grow older they will apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

-Children who are able to explore and use mechanisms in their products. As they grow older they will understand and use mechanical systems in their products, understand and use electrical systems in their products and apply their understanding of computing to program, monitor and control their products.

-Children who make rapid and sustained progress and teachers who recognise their children’s individual starting points and plan accordingly.

-Children who are engaged and enthusiastic and enjoy learning in design and technology and who can talk confidently about the design, make and evaluate process, demonstrating their technical knowledge.

-Children who have excellent educational experiences in D&T and these ensure that they are very well equipped for the next stage of their education. They will be well informed about their current work and future projects.

**Implementation**

Delivery

Design and technology is usually taught as a discreet subject, but there are plenty of opportunities for cross curricular links, particularly with maths. The key maths objectives have been incorporated into the skills progression.

In KS1 and 2 design and technology is taught weekly or fortnightly and the production of products may be taught in a block. KS1 and KS2 classes each have two or three projects to cover over the course of a year. Each topic will be taught following a design, make and evaluate process and each part of the process will be equally as important as the others.

The Early Years Foundation Stage has areas of continuous provision with a design and technology focus, these include but are not limited to, the making area, small construction, large construction and the malleable area.

In addition to the standard curriculum the children from each year group will partake in food technology with Mrs Tatham and grounds work with Mr Moulton. Both will provide further opportunity to learn/ practise the skills from the Flixton Primary School design and technology skills progression. Parents will be invited to assist children with the production of products in class where learning opportunities will be increased with more than one adult present.

Recording

Years 1 – 6 have a design and technology book. This is used as a working document for pupils to design and evaluate their work. Evidence of the making process can also be collected and recorded visually via images taken throughout the lesson, these can also be included in the book. Products are placed on display through out the school.

The EYFS will observe design and technology in their environment and make judgements using their knowledge of the child.

Planning

Teachers plan their design and technology lessons based on the school’s long-term design and technology plan. Each year group covers a wide range of topics to provide in depth and broad coverage of the national curriculum and the Flixton Primary School design and technology skills progression. The subject coordinator is available to assist with planning when support is needed.

Continuity and progression

Continuity and progression are ensured by using a breadth of topics which are linked to the Flixton Primary School design and technology skills progression. This ensures that all necessary skills are covered in each year group and that the skills become more complex as the children get older. Curriculum maps have a direct link to the skills progression.

Assessment

Work in design and technology may be assessed through judgements of recorded work but a large proportion of assessment is involved with practical application and language development involving discussion, description and explanation skills. Evidence may be seen in books, on 2-D displays and most commonly through 3-D models and photographs of children’s work. Information on a child’s progress in design and technology will be communicated to parents in a written report at the end of each academic year.

Equality, diversity and inclusion We value the diversity of individuals within our school and do not discriminate against children because of ‘differences’. We believe that all our children matter and we value their families too. We give our children every opportunity to achieve their best by taking account of our children’s range of life experiences when planning for their learning.

Resources. There is a selection of class-based and centrally-stored materials and tools to ensure that all children have the necessary resources to access the subject and to make informed choices. The DT budget covers the costs of materials and the replacement of tools, although we do occasionally ask children to bring some materials from home if they can. The school will provide resources to any children who are unable to do this so as to allow all children to have the same opportunities.

Food Hygiene and Safety Issues We enable pupils to have access to the full range of activities involved in learning design and technology. Where children are to participate in activities outside the classroom we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

Teachers teach the safe use of tools and equipment and insist on good practise prior to starting the making part of a task. However, safety issues do arise when teaching this subject. These include:

* The use of electrical equipment such as glue guns and electric drills.
* The handling of food stuffs.
* The use of cooking appliances, including ovens and hobs
* Contact with sharp objects including wood, nails, needles, saws etc.
* Awareness of personal safety (jewellery, hair, eye protection)

It is the duty of all staff to:

* Recognise and assess the hazards and risks to themselves and others when working with food and other materials.
* Take action to control these risks and hazards. Teachers should be aware of the following:
* Saws and other sharp objects (nails, needles, craft knives, etc) must be used under direct supervision. The teacher will make a judgement on the undertaking of activities involving sharp and / or potentially dangerous equipment depending on the age / ability of the children in his / her class. Some activities may be undertaken by an adult or in a small group or one to one situation as appropriate.
* Perishable foodstuff must be stored sensibly and refrigerated if necessary. Care must be taken to ensure food is not used after the given sell by / use by date.
* Teachers and adult support staff must oversee that cupboards, table tops, cooker etc, are clean and in working order.
* Children must wash their hands before and after any contact with food and other potentially harmful substances.
* Teachers must take into account possible food allergies to food such as nuts and should be aware of the location of any medication for the allergy.

Staff training

Audits of staff skills and confidence with the teaching of design and technology are used to inform the subject lead. There is a questionnaire to complete at the end of each topic which allows teachers to air any problems before it is taught again. Focussed training can be provided by the subject lead to support staff with particular difficulties.

Impact

The impact of teaching in design and technology will be monitored regularly by the subject lead. This will be in the form of book/ work scrutinies, pupil voice, monitoring of topic questionnaires and having a presence in both the infant and junior building to discuss design and technology with both teachers and children alike. As a result our children will be confident students who love and excel in design and technology.

**Impact:**

The impact of this policy on outcomes for children is measured against our Excellence Statements for Design and Technology.

The Design and Technology subject leader monitors the impact of this policy through:

-       Book scrutiny

-       Pupil interview / survey

-       Data analysis

-       Teacher interview / survey

Leadership team monitoring is also fed to the Design and Technology lead.