Procedures for Design Technoogy

Walton-on-Trent CE (C) Primary and Nursery School

At Walton-on-Trent CE (C) Primary and Nursery School our policies and procedures have been written to comply, appropriate, with the General data Protection Regulations – GDPR 2018. Further information regarding GDPR is available on the school website.

This procedure will be reviewed during the Summer Term 2024 and presented to governors.

Living, learning, laughing in God's Love

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Introduction

This document outlines the teaching, learning and organisation of how DT is taught at Walton-on-Trent CE Primary and Nursery School.

The document has been written as a result of staff discussion and its implementation is the responsibility of all teaching staff. The responsibility of monitoring and review is with the DT subject leader.

The main purposes of this document are:

- To establish and entitlement for all pupils
- To establish expectations for children and staff for the subject
- To promote, progression, continuity, and coherence across the school.

DT is a foundation subject within the National Curriculum. The aims of teaching DT at Walton-on-Trent are consistent with our school philosophy and take account of the National Curriculum expectations of DT.

Vision statement 2020

To be a vibrant learning community aspiring to celebrate God's love and the uniqueness of each individual. This means offering kindness, honesty and respect to our local and global community and demonstrating courage, perseverance and ambition in order to flourish in the joy and hope of 'life in all its fullness' (John 10.10)

Values

Honesty

Respect

Ambition

Perseverance

Kindness

Courage

Motto

Living, learning, laughing in God's love

Safeguarding and Child Protection

We seek to safeguard children and young people by:

- valuing them, listening to them and respecting them;

• adopting child protection guidelines through procedures and a code of conduct for staff and volunteers;

• recruiting staff and volunteers safely, ensuring all necessary checks are made;

• sharing information about child protection and good practice with children, parents, staff and volunteers;

• sharing information about concerns, with agencies who need to know, and involving parents and children appropriately;

• providing effective management for staff and volunteers through supervision, support and training. See Safeguarding and Child Protection Document for further information.

Intent

At Walton-on-Trent Primary School Design Technology should be fully inclusive to every child. We fulfil the requirements of the National Curriculum for Design and Technology, provide a broad and balanced curriculum, ensure the progressive development of knowledge and skills, to learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens through evaluation of past and present design and technology, develop a critical understanding of its impact on daily life and the wider world, to participate successfully in an increasingly technological world using the language of design and technology.

The aims of teaching Design and Technology in our school are:

- Develop creative, technical, and imaginative thinking in children and to develop confidence to participate successfully in an increasingly technological world.
- Enable children to talk about how things work and to develop their technical knowledge,
- Apply a growing body of knowledge, understanding and skills in order to design and make prototypes and products for a wide range of users.
- Encourage children to select appropriate tools and techniques when making a product, whilst following safe procedures.
- Develop an understanding of technological processes and products, their manufacture, and their contribution to our society.
- Foster enjoyment, satisfaction, and purpose in designing and making things.
- Critique, evaluate and test their ideas and products, and the work of others.
- Understand and apply the principles of nutrition and to learn how to cook.
- Understand how key events and individuals in design and technology have helped shape the world.

- Children to be inspired to design and make items inside and outside of school.
- All children no matter their needs will have access to the History curriculum, including SEND, and EYFS.

Implementation

To ensure high standards of teaching and learning in Design Technology, we implement a curriculum that is progressive, engaging, broad and balanced throughout the whole school, including a variety of teaching approaches. At Walton-on-Trent, we ensure that Design Technology is given the same importance as the core subjects, as we feel this is important in enabling all children to gain 'real-life' experiences.

The DT curriculum at Walton-on-Trent Primary School is based upon the 2014 Primary National Curriculum in England, which provides a broad framework and outlines the knowledge and skills and taught in each Key Stage. Teachers plan lessons for their class using our progression of knowledge and skills document alongside the topic guidance on Curriculum Maestro. Teachers can use this document to plan their art and design lessons suitable to their class's interests, topic and outcomes. The progression document ensures the curriculum is covered and the skills and knowledge taught is progressive from year group to year group. The teachers use creative and cross-curricular approaches as well as teaching the subjects independently. As we have mixed classes, we provide suitable learning.

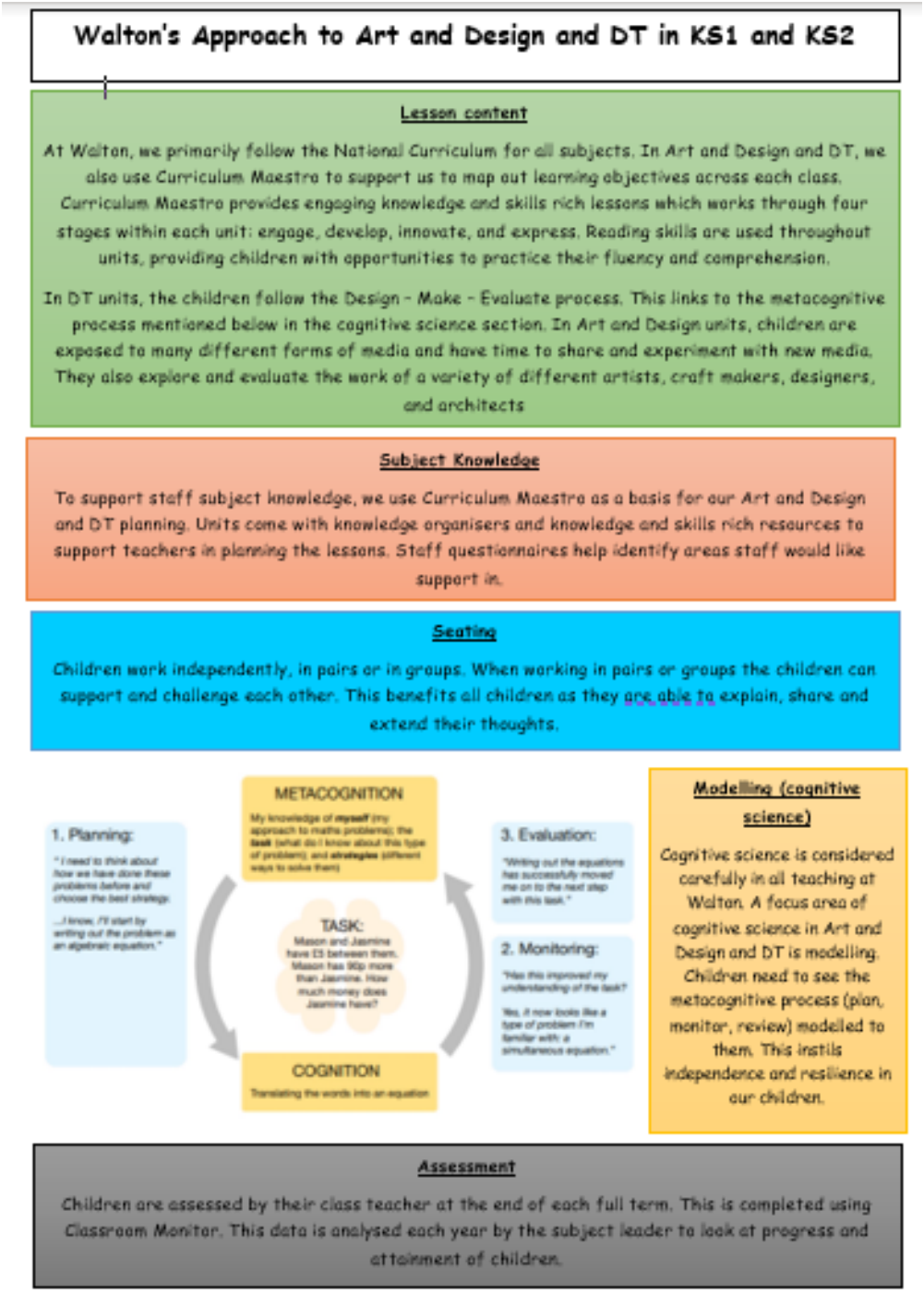
We give children the opportunity to work by themselves and in collaboration with others, on projects in two and three dimensions, and at different scales. We ensure that children are given the opportunities to investigate, explore and develop ideas as well as evaluate, revisit and improve their work. Children also have the opportunity to use a wide range of materials and resources, including computer technology and cooking.

Planning and evaluation of work take place in weekly plans, medium and long-term plans. The Humanities subject leader will complete a book scrutiny to ensure curriculum coverage is consistent. People with an interest in or expertise in a particular topic or area of history and/or may be invited into school to work with the children. Such visitors may include parents, grandparents, other family members, neighbours and the local community. School trips are also a part of the curriculum delivery to enable children to have a wider experience of a topic.

Cognitive science

This has been proven helpful in helping children remember information and transfer it too their long-term memory. In DT, the aspect we have decided to focus on is modelling. This is an important part of the Art and DT curriculum and will allow the

children to see and understand the processes. Modelling from staff will enable children to see that everyone has their own interpretation, and this is fine.



Impact

Within Design Technology, we strive to prepare children to take part in the development of tomorrow's rapidly changing world. We aim to encourage children to become creative problem-solvers, both as individuals and as part of a team. Through the study of design and technology, children combine practical skills with an understanding of aesthetic, social and environmental issues, as well as of functions

and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses, and its impact. Our Design and Technology curriculum is high quality and is planned to demonstrate progression. We focus on progression of knowledge and skills and discreet vocabulary progression also form part of the units of work.

Supporting pupils in Design Technology, including pupils with SEND

We recognise that in all classes' children have a wide range of ability in DT, and we seek to provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. However, findings into what makes an effective DT curriculum provides some suggestions regarding effective support for pupils with SEND.

All pupils are entitled to a broad design and technology curriculum. Any adaptations made to support pupils' learning in design & technology usually should not be to the overall curriculum content but rather to how the content is taught. In the case of pupils with the most complex learning needs, there may be occasions when it is appropriate to modify the curriculum. However, this will be the exception. Wherever practicable, provision will be made for pupils with special educational needs, where it affects their ability to take part in art and designs lessons. This may include children with sensory difficulties, physical difficulties, cognitive limitations and/or emotional and behavioural disorders. It is the responsibility of the Class Teacher to ensure that any special equipment needed for a lesson is available. If teachers require any special design and technology equipment other than left-handed scissors they must bring this to the attention of the art subject lead and the SENCO.

Key skills promoted in art and design

Through our teaching of design & technology, we provide opportunities for pupils to develop key skills in the following areas:

- Food
- Materials
- Textiles
- Electricals and electronics
- Construction
- Mechanics
- Electricals

EYFS

Early years explore design & technology content through the 'Expressive Arts and Design, Understanding the World and Physical Development,' strands of the EYFS curriculum.

This involves guiding children to make sense of their physical world and their community through opportunities to:

•develop a curiosity and interest in the world through investigating, talking and asking questions about familiar products.

•develop confidence and enthusiasm through continuous exploration.

•develop construction skills to build and construct objects, and provide activities for exploring joining, assembling and shaping materials to make products.

•extend their vocabulary through talking about and explaining their designing and completed pieces of work.

•recognising the differences

•recognising that a range of technology is used in places such as homes and schools

• safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

• use what they have learnt about media and materials in original ways, thinking about uses and purposes; represent their own ideas, thoughts and feelings. Design & Technology is also encouraged through the 'Characteristics of Learning' specified in the EYFS framework– playing and exploring, active learning, creating and thinking critically

Key stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative 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.

Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

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.

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Planning and resources

We use the National Curriculum scheme of work as the basis for our planning in history. We also use Curriculum Maestro as a basic topic DT plan, teacher are then free to use the ideas as they like. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge. We plan progression so that the children are increasingly challenged as they move through the school. We carry out curriculum planning in history in three phases (long term, medium term and short term). The long-term plan maps the history topics studied in each term during each key stage. The class teacher writes the lesson plans for each history lesson (short-term plans). These plans list the specific learning objectives and expected outcomes

for each lesson. The class teacher keeps these individual plans, although he or she and the subject leader often discuss them on an informal basis. Plans are stored on the staff shared drive for monitoring purposes and ease of access for the teachers and history subject leader. There are sufficient resources for teaching all history units in the school. There are a plenty of resources for teaching all art and design units in the school, they are located in the resources room (printer room).

Cross Curricular opportunities

Staff are encouraged to develop cross-curricular links with design and technology and other subjects to provide a relevant and meaningful curriculum for pupils.

English

Design and Technology contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. Children are encouraged to ask and answer questions about the starting points for their work. They have the opportunity to compare ideas, methods and approaches in their own work and that of other children, and to say what they think and feel about them. They develop their writing by composing facts about designers, artworks and evaluation skills throughout a unit of work.

Mathematics

The teaching of design and technology contributes to children's mathematical understanding in a variety of ways. These include measurements, ratio, symmetry, reflection, shape, perspective, parallel, tessellation, angles, horizontal and vertical lines, geometrical patterns.

Personal, Social and Health Education (PSHE) and Citizenship

Design and technology contributes to the teaching of elements of personal, social and health education and citizenship. The children discuss how they feel about their own work and the methods and approaches used by others.

Computing

We use computing to support art and design teaching when appropriate. Children use software to explore shape, colour and pattern in their work. Children collect visual information to help them develop their ideas by using iPads, and use digital media to record their observations. Children use the internet to research famous designers and pieces of work.

Assessment, Recording and Reporting

In assessing children's abilities and achievements, we consider the knowledge and understanding of the subject, the ability to use a variety of sources, the appreciation of different interpretation of history and the ability to communicate. Assessment is made by the teacher continuously and in particular by identifying specific activities

which target the key elements. Classroom monitor is used to record these assessments.

- Observing children at work, individually, in pairs, in a group and in class during whole class teaching.
- Using differentiated, open-ended questions that require children to explain and unpick their understanding.
- Providing effective feedback, including interactive marking through green pen questions where appropriate, to engage children with their learning and to provide opportunities for self-assessment, consolidation, depth and target setting.
- DT moderation and monitoring.
- Pupil voice asking the children questions and finding out if they can remember ideas form pervious terms.
- Peer and self-assessment of work. Children evaluate at the end of the unit upon completion of a final piece of work.

Assessment in the Early Years takes into account the Early Learning Goals, in particular, Understanding the World, People and Communities. Classroom monitor is used to record these assessments.

Health and Safety

The safety of the children is the responsibility of the teacher. It is paramount that other school staff and voluntary helpers are confident and knowledgeable in the appropriate and correct use of tools and equipment. When planning and delivering a design and technology lesson teachers take into account the following:

•Teachers and teaching assistants always give a clear demonstration of how to use a tool safely and how it should be transported around the room in a safe manner.

•Electrical equipment will only be used from the site and not be brought in from home.

•Craft knives and rotary cutters will only be used safely.

•Children will be taught to work safely and to understand that their actions can affect others.

•Only small, lightweight hammers will be used and checked regularly that the heads are securely attached to the shaft.

•All potentially risky tools and equipment (glue guns, junior hacksaws, craft knives, vegetable knives, sewing needles, fabric scissors, vegetable peelers and graters) before the lesson and again when they have been handed in.

• Even if children have used them before, lessons always begin with a reminder of how to use the tools and equipment safely.

• All teachers and staff must be familiar with the school Health and Safety document.

•A first aid box/bag is kept in each classroom, relevant to the needs of the class.

Food Technology

•Children and staff will wear protective clothing during activities.

•Food will be bought fresh and used on the same day unless correct storage is maintained.

•Teachers' awareness of individual children's allergies are given appropriate consideration.
•Letters are sent home at the beginning of each year to ask parents to inform the school of any known food allergies.
• We know that pathogenic bacteria can easily be spread around the food preparation area, via our hands, chopping boards, dishcloths, tea towels, utensils and equipment, so when working with food we reflect the highest standards of domestic practise and hygiene.
• Work surfaces are cleaned before, during and after food activities as well as a, "clean as you go" routine which is used and taught to the children.
• After use, all equipment and utensils are washed with hot water and washing up liquid.
• We use disposable cloths and paper towels, and they are discarded after use.
• The cleaning spray that we used to prepare our tables for cooking lessons, before and after use, is provided by the school's cleaning supervisor.

Equal Opportunities

All teaching and non-teaching staff at Walton-on-Trent are responsible for ensuring that all pupils, irrespective of gender, ability, ethnicity and social circumstances, have access to the whole curriculum and opportunities to make the greatest progress possible in all areas of the curriculum whilst in our school.

The role of the Subject Leader

One of the main purposes of the subject leader is to facilitate the implementation of the National Curriculum of Art and design at Walton-on-Trent. Advice and support will be offered to staff including training in school and from outside agencies. Changes in National Curriculum requirements should be communicated to staff. The subject leader is responsible for preparing policies and documents.

Date approved by the Governing Body ……..

Date to be reviewed by the Governing Body: ……

Signed