Cledford Primary School and Gainsborough Primary & Nursery School

A Federation of Cheshire East Primary Schools

Cledford Primary School

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Local Authority Code: 895
Establishment Number: 3821

School Principal: Mr C Adlington

Federation Headteacher: Mrs A J Booth

Gainsborough Primary & Nursery School

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Local Authority Code: 895
Establishment Number: 3810

School Principal: Mrs J Nurse

Federation Curriculum Policy – Design and Technology

Reviewed: October 2022

Signed:

Mrs J Sercombe (Chair of Governing Board) …….

Mrs AJ Booth (Federation Headteacher) …….

Mrs J Nurse (School Principal GPNS) ……..

Mr C Adlington (School Principal CPS) ……

Next Review Date: October 2023

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Statement of Intent, Implementation and Impact

Intent:
Design and Technology at Cledford Primary School and Gainsborough Primary & Nursery School aim to:

- Provide opportunities to ask well thought through questions
- Encourage children to think critically and logically
- Develop resilience and perseverance to tackle problems and find solutions
- Allow children to communicate with each other and respectfully share opinions
- Challenge children to research information and think for themselves
- Build on prior learning
- Promote progression of skills
- Create memorable cross curricular learning experiences that link with other disciplines such as maths, science, computing and art
- Provide hands-on, well scaffolded opportunities that challenge all to create well designed products
- Improve analysis, problem solving, practical capability and evaluation skills
- Teach children subject related vocabulary, helping to reduce barriers they have to learning and to communicate using the correct and appropriate terminology.

Implementation:
Our Design and Technology curriculum at Cledford and Gainsborough is purposeful and promotes pupils' enjoyment, achievement and confidence. Our planning is based upon the National Curriculum programmes of study for Design and Technology 2014 and the 'Expressive arts and design' feature of the Development Matters document for Early Years 2021. The curriculum is sequential which allows for skills to be learnt, revisited and embedded. Key skills have been mapped across the school to ensure progression between year groups. Lessons are appropriately scaffolded to ensure that Design and Technology is challenging to all. Design and technology is sometimes taught in blocked sessions so that children's learning is focused throughout each unit of work. Food technology is taught across the school with children developing an understanding of where food comes from, the importance of a varied and healthy diet and how to prepare this.
Our curriculum incorporates a variety of different skills, including co-operative learning, to encourage the children to consider the views of others, evaluate their ideas and products against their own design criteria and to improve their work.

Impact:
Our Design Technology curriculum impacts positively on our children's ability to acquire the knowledge, skills and understanding needed to collaborate, learn from, understand and react to others' perspectives and strengths. Children will leave school with the confidence that they can design, make and change products and with the belief that qualifications and careers incorporating D&T are within their capability.
The curriculum is high quality, well thought out and is planned to demonstrate progression. If children are keeping up with the curriculum, they are deemed to be making good or better progress. The impact of our curriculum is also measured through:

- A reflection on standards achieved against the planned outcomes
- Pupil discussions about their learning, including discussions of their thoughts, ideas, processing and evaluations of work
- Work scrutiny
- Lesson observations

Through the teaching of Design and Technology, **The Cheshire Federation (Cledford Primary & Gainsborough Primary & Nursery)** aims to:

- Provide opportunities to ask well thought through questions

- Encourage children to think critically and logically
- Develop resilience and perseverance to tackle problems and find solutions
- Allow children to communicate with each other and respectfully share opinions
- Challenge children to research information and think for themselves
- Build on prior learning
- Promote progression of skills
- Create memorable cross curricular learning experiences that link with other disciplines such as maths, science, computing and art
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Our **curriculum plans in** Design Technology **are clear on what end points the pupils are working towards** and what pupils will need to be able to know and do at those end points.

The Design Technology curriculum is **planned and sequenced** so that new knowledge and skills build on what has been taught before, and towards defined end points.

The Design Technology curriculum **reflects the school's local context** by addressing typical gaps in pupils' knowledge and skills.

The Design Technology curriculum is **broad and creatively linked to other subjects, with an emphasis on English skills.**

Disadvantaged pupils or pupils with SEND are supported to access the same broad and challenging curriculum as all pupils.

Teachers have **expert knowledge** of Design Technology and, where they do not, they are supported to address any gaps so that pupils are not disadvantaged.

Teachers enable pupils to understand and embed in long term memory, **key concepts** in Design Technology, presenting information clearly and promoting appropriate discussion. Teachers check pupils' **understanding** effectively, identifying and correcting misunderstandings.

Teachers use **assessment** effectively to check pupils' understanding in order to inform their teaching and further planning; this helps pupils to **embed and connect** knowledge fluently and to further develop their learning and skills.

1. Legal Framework

1.1. This policy has due regard to all relevant legislation and statutory guidance including, but not limited to, the following:

- DfE (2013) 'National curriculum in England: Design Technology programmes of study'
- DfE (2017) 'Statutory framework for the early years foundation stage'

2. Roles and Responsibilities

2.1. The **Design Technology coordinator** is responsible for:

- Preparing policy documents, curriculum plans and schemes of work for the subject.
- Reviewing changes to the national curriculum and advising on their implementation.
- Monitoring the learning and teaching of design technology, providing support for staff where necessary.
- Ensuring the continuity and progression from year group to year group.
- Encouraging staff to provide effective learning opportunities for pupils.
- Helping to develop colleagues' expertise in the subject.
- Organising the deployment of resources and carrying out an annual audit of all Design Technology resources.
- Liaising with teachers across all phases.
- Communicating developments in the subject to all teaching staff.
- Leading staff meetings and providing staff members with the appropriate training.
- Organising, providing and monitoring CPD opportunities in the subject.
- Ensuring common standards are met for recording and assessment.
- Advising on the contribution of Design Technology to other curriculum areas, including cross-curricular and extra-curricular activities.
- Collating assessment data and setting new priorities for the development of Design Technology in subsequent years.

2.2. Classroom teachers are responsible for:

- Acting in accordance with this policy.
- Ensuring progression of pupils' design technology skills, with due regard to the national curriculum.
- Planning lessons effectively, ensuring a range of teaching methods are used to cover the content of the national curriculum.
- Liaising with the **Design Technology coordinator** about key topics, resources and supporting individual pupils.
- Monitoring the progress of pupils in their class and reporting this on an **annual** basis.

- Reporting any concerns regarding the teaching of the subject to the **Design Technology coordinator** or a member of the **SLT**.
- Undertaking any training that is necessary in order to effectively teach the subject.

3. Early Years Provision

3.1. Activities and experiences for pupils will be based on the seven areas of learning and development, as outlined in the DfE's 'Statutory framework for the early years foundation stage'.

3.2. Provision for early years pupils focusses on four specific areas:

- Literacy
- Maths
- Understanding the world
- Expressive arts and design

3.3. All activities will adhere to the objectives set out in the framework.

4. The National Curriculum

KS1 Objectives

4.1. When designing and making, pupils should be taught to:

4.2. 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.

Cooking and nutrition

- Use the basic principles of a healthy and varied diet to prepare dishes

- Understand where food comes from.

KS2 Objectives

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

- Understand and apply the principles of a healthy and varied diet
- Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

5. Cross-curricular links

5.1. Wherever possible, the Design Technology curriculum will provide opportunities to establish links with other curriculum areas.

5.2. **English**

- Pupils are encouraged to use their speaking and listening skills to describe what is happening.
- Pupils' writing skills are developed through recording findings and creating reports.
- Pupils' vocabulary is developed through the use and understanding of specialist terminology.

5.3. **Maths**

- Pupils use their knowledge and understanding of measurement and data handling.
- Where appropriate, pupils record findings using charts, tables and graphs.
- Pupils use data analysis in order to identify patterns.

5.4. **Science**

- Pupils use their knowledge to identify and analyse materials, products and foods.
- Pupils' investigative and practical skills are developed through the use of problem-solving activities.

5.5. **Computing**

- ICT will be used to enhance pupils' learning.
- Pupils will use ICT to locate and research information.
- ICT will be used to record findings, using text, data and tables.

6. Teaching and Learning (Pedagogy)

6.1. Pupils will be taught to use technical terminology and specialist vocabulary.

6.2. Pupils will undertake independent work, and have the opportunity to work in groups and discuss work with their peers.

6.3. Lessons will allow for a wide range of design technology, activities, including the following:

- Questioning, predicting and interpreting
- Practical experiences
- Collaborative work
- Discussions
- Problem-solving activities
- Application of skills

The classroom teacher, in collaboration with the **Design Technology coordinator**, will ensure that the needs of all pupils are met by:

- Setting tasks which can have a variety of responses.
- Providing resources of differing complexity according to the ability of pupils.
- Setting tasks of varying difficulty depending on the ability group.
- Utilising teaching assistants to ensure that pupils are effectively supported.

6.4. Opportunities for outdoor learning and practical work will be provided wherever possible, such as testing and analysing products.

6.5. **Feedback**

Feedback should:

- Redirect and focus either the teachers' or the learners' actions to achieve a goal
- Be specific accurate and clear
- Encourage and support further effort
- Inform future planning, ensuring continuity, progression and appropriate differentiation
- Be given sparingly so that it is meaningful
- Put the onus on students to correct their own mistakes, rather than providing correct answers for them
- Alert the teacher to misconceptions, so that the teacher can address these in subsequent lessons
- Encourage children to take responsibility for improving their own learning by self- assessment and peer assessment
- Ultimately be seen by pupils as a positive approach to improving their learning

7. Planning

7.1. All relevant staff members are briefed on the school's planning procedures as part of staff training.

7.2. Throughout the school, Design Technology is taught as a discrete lesson and as part of cross-curricular themes when appropriate.

7.3. Teachers will use the key learning content in the DfE's statutory guidance 'National curriculum in England: Design Technology programmes of study'.

7.4. Lessons will demonstrate a balance of interactive elements used in teaching, ensuring that all pupils engage with their learning.

7.5. Long-term planning overviews are used to outline the units to be taught within each year group.

7.6. Medium-term planning are used to outline the vocabulary and skills that will be taught in each unit of work, as well as highlighting the opportunities for assessment.

7.7. Medium-term plans will identify learning objectives, main learning activities and differentiation.

7.8. Medium-term plans will be shared with the **Design Technology coordinator** to ensure there is progression between years.

7.9. All lessons will have clear learning objectives, which are shared and reviewed with pupils.

8. Assessment and Reporting

8.1. Pupils will be assessed, and their progression recorded, in line with the school's **Assessment Policy**.

8.2. Throughout the year, teachers will plan ongoing creative assessment opportunities in order to gauge whether pupils have achieved the key learning objectives.

8.3. Assessment will be undertaken in various forms, including the following:

- Talking to pupils and asking questions
- Discussing pupils' work with them
- Marking work against the learning objectives
- Specific assignments for individual pupils
- Observing practical tasks and activities
- Pupils' self-evaluation of their work

8.4. Formative assessment, which is carried out informally throughout the year, enables teachers to identify pupils' understanding of subjects and informs their immediate lesson planning.

8.5. In terms of summative assessments, the results of end-of-year assessments will be passed to relevant members of staff, such as the pupil's future teacher, in order to demonstrate where learners are at a given point in time.

8.6. Parents will be provided with a written report about their child's progress during the Spring term every year. These will include information on the pupil's attainment, progress and attitude towards Design Technology.

8.7. Verbal reports will be provided at parent-teacher interviews during the Autumn and Summer terms.

8.8. Pupils with SEND will be monitored by the SENCO, and the appropriate support will be put in place.

9. Resources

9.1 There is a range of resources to support the teaching of Design Technology across the school including a range of practical equipment required for effective teaching and learning.

9.2 Teachers have access to the library service and can order a wide range of books and resources for each area of learning.

9.3 Children have access to the internet through computers, laptops, i-pads and interactive whiteboards.

10. Equal Opportunities & Inclusion

10.1 We are committed to giving all of our children every opportunity to achieve excellence. We do this by taking account of pupils' varied life experiences and needs.

10.2 Our curriculum is broad and balanced and we have high expectations of all children.

10.3 The achievements, attitudes and well-being of all our children matter, regardless of ethnicity, attainment, age, disability, gender or background.

10.4 We actively seek to remove barriers to learning and participation that have the potential to hinder or exclude individuals or groups of children.

10.5 Equality of opportunity must be a reality for our children and we ensure this through the attention we pay to the different groups of children within our school

11. Staff Development

11.1 Teachers are expected to have good, up to date subject knowledge and to use the materials that are available to them in order to promote the best outcomes for children.

11.2 Training needs are identified as part of our whole school monitoring and evaluation, performance management/appraisal and induction programmes. These needs are reflected in the School Development Plan.

11.3 Ongoing coaching is given, where needed, throughout the year by subject leaders and SLT.

11.4 Staff have the opportunity to observe their colleagues teach as part of an informal coaching programme.

11.5 Where necessary, in conjunction with the SLT and in order to secure outstanding subject knowledge, subject leaders lead or organise training for colleagues.

12. Monitoring and Review

12.1. This policy will be reviewed on an annual basis by the Design Technology coordinator.

12.2. The Design Technology coordinator will monitor teaching and learning in the subject at the school, ensuring that the content of the national curriculum is covered across all phases of pupils' education.

12.3. Any changes made to this policy will be communicated to all teaching staff.

12.4. The next scheduled review date of this policy is October 2024

This policy operates in conjunction with the following school policies:

- Special Educational Needs and Disabilities (SEND) Policy
- Feedback Policy
- Assessment Policy
- eSafety Policy
- Equal Opportunities Policy