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Design and Technology Policy

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## Intent

At Spring Hill Community Primary School, we believe that Design and Technology should give children the opportunity to develop their technical, creative and practical skills. Our challenging curriculum has an appropriate balance of content across the Key Stages (this includes Mechanisms, Structures, Food and Textiles).  We aim to make DT relevant for our children through visits and visitors, within the local and wider community.

## Implementation

Throughout their time at our school, children develop their DT skills in seven broad areas: -

* Food
* Materials
* Textiles
* Electricals and electronics
* Computing
* Construction
* Mechanics

Details of the topics covered in each group can be found on the Design and Technology long-term plan. Children also have many opportunities to apply their DT skills in many other curriculum areas.

Children use sketchbooks/planning books throughout their time at school. This allows them to develop skills of designing, have the opportunity to understand and apply the iterative process when designing and making their product; and evaluating their work, with the opportunity to revisit their ideas.

Our children’s learning is supported and enhanced throughout the school, with displays and photographs; and visits.

## Impact

Throughout their time at Spring Hill, children will develop their key skills in line with the National Curriculum. Our curriculum is reviewed annually by all members of our school community.

We aim to see in our children’s work: -

Creative, technical and practical expertise to perform everyday tasks confidently and this will allow them to participate successfully in an increasingly technological world.
Evaluate and test their ideas and products and the work of others.
Understand and apply the principles of nutrition and that they learn how to cook.
The impact of our Design and Technology curriculum will be that our children develop and progress in the key skills outlined in the National Curriculum. The findings from our pupil voice and book looks will ensure the impact of our teaching and learning allows children to be enthused and develop their key skills by reviewing our practice annually.

The impact of curriculum will ensure that our children develop and consolidate:

Creative, technical and practical expertise to perform everyday tasks confidently and this will allow them to participate successfully in an increasingly technological world.
Evaluate and test their ideas and products and the work of others.
Understand and apply the principles of nutrition and that they learn how to cook.

## Teaching and Learning of DT in the Early Years

We teach DT in the Reception class as an integral part of the topic work covered during the year. Opportunities are provided to allow them to explore different materials freely, in order to develop their ideas about how to use them and what to make. They begin to develop their own ideas deciding which materials to use to express them. Children get to experience joining different materials and exploring different textures. They are taught how to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Children are encouraged to share their creations, explaining the process they have used.

## Key Stage One and Two Curriculum

At Spring Hill, we have developed a curriculum based on the National Curriculum.

#### Key Stage 1

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.

Cooking and nutrition

* use the basic principles of a healthy and varied diet to prepare dishes
* understand where food comes from.

#### Key Stage 2

In line with the National Curriculum, pupils KS2 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.

During DT lessons, children are given the opportunity to work as a class, as individuals and as part of a group. The choice of class organisation is determined by the learning. Teachers will use a variety of teaching methods to engage pupils, including demonstrations, group work, and independent tasks. Practical skills will be taught through a combination of teacher-led instruction and pupil experimentation. Cross-curricular links will be made where relevant to enhance pupils' understanding of different subjects.

## Resources

The following resources are available to aid the teaching of DT at Bindle Gregson Lane Primary School;

* Classroom based resources (paint, drawing/colouring media, paper, card)
* a selection of shared resources kept in the practical room (wood doweling, glue guns, types of fastenings, hand held tools, cooking equipment, material)

Health & Safety

All staff are responsible for:

* Complying with the school’s Health and Safety Policy
* Taking reasonable care of their own health and safety and those of others affected by their acts or omissions.
* Co-operating with their management in complying with relevant statutory provisions.
* Using all work equipment and substances in accordance with the instruction and training received, especially when preparing food (using sharp knives).
* Not intentionally misusing anything provided in the interests of health, safety and welfare.
* Following all prescribed safe working practices, and not working while unfit to do so.

All children will be responsible for:

* Complying with school rules and procedures
* Taking reasonable care of themselves and others.
* Co-operating with their teachers and other school staff.
* Using equipment and substances in the manner in which they are instructed.
* Not misusing anything provided for the purposes of health and safety.

Teachers will teach the safe use of tools and equipment in accordance with health and safety requirements. They will be responsible for storage of tools and materials. Children will be taught to recognise hazards in a range of products, activities and environments and take action to control the risks to themselves and others. Teachers are ultimately responsible for safety within their classroom.

Food Hygiene and Safety – Food will be bought and used on the day it is needed. Staff will ensure that all surfaces, cooker etc are clean. Aprons will be worn by everyone working with food and hands washed before.

## Assessment

Children demonstrate their ability in DT in a variety of different ways. Teachers will assess children’s work in DT by making informal judgements as they observe them during lessons, work completed in folders and finished pieces of work. On completion of a piece of work, the teacher will assess the work and give oral feedback. Older and more able pupils are encouraged to make judgements about how they can improve their own work. At the end of every unit, children will complete the assessment as outline in the assessment overview.

## Equal opportunities

Activities should be carefully planned by the class teacher and be differentiated where appropriate for children with SEN and equally more able Gifted and Talented children. All resources/materials have been reviewed in line with understanding of protected characteristics. Pupils will be encouraged to value social and cultural diversity through experiences in DT. They will participate in a variety of experiences in a positive and constructive way.

## Inclusion

We recognise that in all classes, children have a wide range of artistic ability, and so we seek to provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this in a variety of ways:

* setting tasks which are open-ended and can have a variety of responses;
* setting tasks of increasing difficulty;
* providing resources of different complexity, depending on the ability of the child;
* use of adults to support the work of individuals or groups of children.

## Equalities

At Spring Hill Community Primary School, we are committed to creating an inclusive and equitable environment where all children, regardless of their background or protected characteristics, are treated with respect and dignity. We have taken several measures to eliminate discrimination and other prohibited conduct in accordance with the Equality Act 2010. At Spring Hill Primary School, we see the need for a positive and effective equality. More information on this is available in our Equality policy.

## Role of the Subject Leader

The coordination and planning of the DT curriculum are the responsibility of the subject leader, who also:

* keeps colleagues and school governors informed about developments in DT and provides a strategic lead and direction for the subject;
* discusses progress with the Head Teacher and evaluates strengths and weaknesses in DT;
* reviews the success of the DT and reviews evidence of children’s work;