



Exceed Learning Partnership
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'Innovative Education - Transforming Lives'



**Sheep Dip Lane
Academy**

Design & Technology Policy

Autumn 2020

Policy ratified on:	September 2018	September 2019	September 2020
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Signed/Responsible: Chair of Governors		<i>K. J. Moore</i>	
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Sheep Dip Lane Academy School: Design & Technology Policy
Reviewed: September 2020

DESIGN AND TECHNOLOGY POLICY

(Updated February 2003 and May 2003)

(Updated June 2008, July 2011)

(Updated and Reviewed September 2012)

(Updated and Reviewed September 2014)

(Updated and Reviewed December 2015)

(Updated and Reviewed October 2018)

(Updated and Reviewed September 2019)

(updated and reviewed September 2020)

Rationale

We believe that Design and Technology (D&T) makes an essential contribution to children's learning because:-

- It prepares pupils to participate in tomorrow's rapidly changing technologies.
- It enables them to become autonomous and creative problem solvers as individuals and members of a team, applying knowledge and skills from all curriculum areas.
- It combines practical skills with an understanding of aesthetics, social and environmental issues, function and industrial practices.
- It allows pupils to reflect on and evaluate present and past D&T, its uses and effects.

"The key aim of D&T is to enable pupils to learn how to contribute towards and intervene creatively and constructively to improve the world in a rapidly changing technological society ... D&T fosters learning through doing and provides an excellent basis for enhancing and consolidating work in other areas of the curriculum."

(DATA Guidance Material)

Introduction

This policy outlines the teaching and learning of D&T. It reflects the views of the teaching staff at Sheep Dip Lane Academy. We believe that the development of D&T capability is important in preparing all pupils for citizenship in an ever-increasing technological world. The ability to use technological skills is a

vital life skill in modern society. We also believe that using these skills in a purposeful way provides the opportunity to extend and enhance teaching and learning experiences in the National Curriculum as a whole. D&T can motivate pupils and promote self-esteem and confidence in all pupils.

It is intended that this document will:-

- i) ensure that each pupils entitlement to D&T is realised;
- ii) provide a clear basis from which to plan schemes/units of work.

This document provides a framework, which will maximise the knowledge and expertise of individual teachers and ensure that pupils receive a high quality D&T education.

Design and Technology is essentially a practical subject. It is therefore essential to employ strategies, which maximise this potential. Features of good D&T teaching include; generating ideas, discussion, planning, making and evaluating. It is the responsibility of individual teachers to select the approach which is the most effective in achieving the learning objectives for a particular lesson or task. However, it is important to strive for a balance between:-

- Investigating and evaluating a range of familiar products, thinking about how they work, how they are used and the views of the people that use them.
- Focused practical tasks that develop a range of techniques, skills, processes and knowledge.
- Design and make assignments using a range of materials, including electrical and mechanical components, food, mouldable materials, stiff and flexible sheet materials and textiles.

The statutory order states:-

Early Years Foundation Stage

During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have the opportunities to learn to:

- Use different media and materials to express their own ideas
- Use what they have learnt about media and materials in original ways, thinking about form, function and purpose
- Make plans and construct with a purpose in mind using a variety of resources
- Develop skills to use simple tools and techniques appropriately, effectively and safely
- Select appropriate resources for a product and adapt their work where necessary
- Cook and prepare food adhering to good health and hygiene routines

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

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

Aims

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook

OBJECTIVES

In D&T children should learn to draw on a developing repertoire of skills and knowledge, which will include:-

- Learning how to work independently and collaboratively.
- Developing skills and knowledge, required for effective planning and communicating ideas.
- Working with tools, equipment, materials and components to make quality products.
- Evaluating processes and products.
- Knowledge and understanding of materials and components.
- Health and safety.

ENTITLEMENT

All children will be taught Design and Technology as outlined in the Programmes of Study for D&T. They will have the opportunity to work individually or as part of a team. Time used is to be flexible to suit the designing and making activity. On occasions children may spend a day or week on an activity, whilst at other times, an hour per week. Time spent on D&T would normally amount to an hour per week, subject to whole school curriculum reviews. Children's topics are chosen from each year group's termly topics. It is the individual teachers responsibility to ensure that their year group has covered three D&T topics over the year and these have given children the opportunities to achieve the KPIs for their year group.

INCLUSION / DIFFERENTIATION

D&T tasks will challenge the more able child as well as letting the less able child achieve/succeed.

Gifted and Talented (More able pupils)

The curriculum and organisation of the school allows each pupil to learn at a pace that is appropriate for them. Opportunities are offered to enable the more able pupils to develop fully their abilities. These include:-

- HOT's questions to promote higher order thinking. (For all ability groups).

- The use of enhanced vocabulary.
- Increasing the opportunity for budget setting/calculations.
- Problem solving through technology projects with support from a range of local businesses / companies.

Year 5 children take part in the ‘Tekk Challenge’ each year to develop their skills in woodwork. Children also develop their skills through creating their own business and working as part of a team to compete in a regional competition. (Dependent upon situation DUE TO COVID-19)

10 Year 3 children take part in the ‘Mansion House’ project each year developing box models using motors, design for effect and working with other schools to create a town of various buildings. (Dependent on Situation due to COVID-19)

ASSESSMENT, RECORDING AND REPORTING

Assessment

Assessment is the means by which the progress of pupils in D&T is monitored. It is a tool used by teachers and subject leaders to inform curriculum planning and learning schemes/units.

Assessment is built into planning and takes place during each half term’s project. Planning show assessment foci, key questions and learning outcomes in accordance with the schools marking policy.

Staff are required to complete an assessment grid after every D&T topic. This is the responsibility of the individual teacher. This should then be passed to the D&T co-ordinator to support ongoing assessment of improving and raising attainment. The subject leader will then ensure progress is rapid and support is given to weaker cohorts. The assessment grids have recently been updated to ensure all key skills are being taught in each year group. These assessment grids include the KPIs in which children need to achieve by the end of their school year.

AfL (Assessment for Learning)

Assessment for Learning is a tool used by children to assess their own work (self assessment) as well as the work of their peers (peer assessment). This enables children to think about and reflect on things which have gone well, as well as thinking about things which could be improved next time. Success criteria are also generated by the children to meet the objectives set during sessions.

Monitoring, Recording/Portfolios

The school has a portfolio of work, including digital images, which contain evidence of work collected from all classes from the foundation stage to Year 6, reflecting work from all primary curriculum levels. It is used by subject leaders and staff as a monitoring tool to reflect on continuity, progression and expectations within school.

A monitoring and assessment document is also used to track progress, highlighting strengths and also indicating areas for development for individual teachers. Staff will be provided with written feedback after scrutiny of work with strengths and areas for development for the next topic. This scrutiny is completed for each year group consisting of 2x LAPS, 2X APPS, 2X HAPS. Discussions happen with staff to support their next steps and develop different ways to achieve better outcomes for children.

In 2019 Staff have been given their own class portfolio as a new way of evidencing their own D&T sessions. These are to be completed three times per year to cover the areas of D&T. In these portfolios staff will include work, photographic evidence, pupil voice and assessment. Over time these will build a bank of ideas for new staff who may teach in this year group.

CONTINUITY AND PROGRESSION

The long-term plan will ensure that continuity and progression is achieved between years and between Key Stages. The long-term plan will also ensure that all teachers will have a clear overview of the approach adopted for D&T. The assessment grids will equally show staff the before skills and greater depth skills when teaching D&T.

RESOURCES

The responsibility for maintaining an adequate supply of resources rests with the D&T co-coordinators. Resources will be stored centrally. The effective management of the resources, whilst ultimately the responsibility of the co-coordinators is also the responsibility of each teacher using them. Central resources are matched to the topics set in the autumn term.

Homework

Some homework tasks will involve children using their skills in designing, making and evaluating. This will provide children with the opportunity to consolidate and extend D&T capability. Homework tasks are always relevant. Creative learning homework tasks will give children choice and the opportunity to use and apply skills taught. Children are given a homework menu and can choose which activity they want to complete. These activities are highly based on using D&T skills to produce various pieces.

CITIZENSHIP

All children will have the same opportunity to follow the D&T curriculum, with each child learning at a pace which is appropriate to them. Through work carried out in D&T children will have the opportunity to:-

- Extend and develop their social skills.
- Work as part of a team.
- Experience moral and cultural issues.
- Discover the magic of technology – finding out how things work!

HEALTH AND SAFETY

Health and safety guidance is provided for the teaching of D&T through guidelines stated in “Make it Safe”. This document has been prepared in consultation with the **UK Health and Safety Executive Education Service National Interest Group**.

Guidelines include:-

- The organization of tools and equipment

- Things that burn and explode
- Using chemicals and substances
- Things that are dusty
- Electrical things
- Using electricity
- Things that fly
- Using food
- Things that are heavy
- Things that are hot
- Using machines
- Things that are sharp or pointed
- Things that are small
- Things that are smelly

HEALTH AND SAFETY – PUPILS

Teachers will use opportunities to highlight health and safety issues in all units of work.

Pupils will be taught:-

- About hazards, risks and risk control
- To recognise hazards
- Assess risks
- To manage their own environment

All of the above will ensure the health and safety of themselves and others.

(See separate risk assessment documentation – written March 2010)

Safeguarding

The safety, health & wellbeing of every child in our school remains a priority at all times.

All visiting practitioners must have up to date CRB checks before they are able to work in school. All visitors and practitioners are always supported by Class teachers or members of the Leadership Team.

All school staff (e.g. Teachers, Curriculum Support Staff, Parents etc) receive training regarding child protection and safeguarding in line with model protocol.

Curriculum Intent:

It is the intent of Sheep Dip Land Academy for Design Technology to be taught in all year groups through at least one topic per term, which includes one topic relating to food. Design Technology projects are often made cross curricular - linking to other subjects taught.

