Design and Technology Policy

5th May 2024
Next review date: 5th May 2026

CONTENTS

This policy should be read in conjunction with the *Quality of Education Policy*, any related subject policies and the following:

Assessment Policy
Behaviour Policy
Early Years Foundation Stage Policy
Equality and Community Cohesion Policy
Able Pupils Policy
Health and Safety Policy
Safeguarding and Child Protection Policy
Special Educational Needs and Disability Policy

Other documents that support the teaching and learning of Design and Technology:
National Curriculum for Design and Technology
Development Matters (for the Early Years Foundation Stage)
Throughout this policy 'parents' denotes those with parental responsibility.

1. Intent:

At Belmont Primary School, children in DT are:
Designers who gather knowledge, strategically plan and choose materials
Makers who pay attention to detail by self-evaluating and adapt planning as they go
Evaluators who are reflective by testing effectiveness, making improvements to fulfil a purpose

1.1 Aims and Objectives

We aim to provide a variety of opportunities for DT activities that enable children to:

- investigate the objects around them, exploring how things work, their purpose and the needs of those who use them
- learn how to think imaginatively, working individually and with others to solve problems
- share and explore ideas about design and making through talking about them
- explore how others have solved problems through design and technology in the past and develop their own skills for the future workplace
- draw and model their ideas, using their knowledge to draw up increasingly technical and accurate plans
- work creatively within the limits of their resources to meet design criteria and, if applicable, economic constraints
- use tools appropriate to their age correctly, safely and with increasing accuracy, developing their fine motor skills
- evaluate their own and others' designs, identifying what works well and what can be improved
- use Information, Communication and Technology (ICT) to assist the designing and making process

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.

2. Approaches to Teaching and Learning: Implementation

The teaching of Design Technology across the school follows the National Curriculum through the use of Design and Technology Association's 'Projects On A Page' planning. The Design and Technology curriculum develops children's understanding of the world and how we live and work within it. Through investigating technological processes and manufactured products, pupils can appreciate the important contribution these make to our society. Design and Technology offers children opportunities to nurture creativity and innovation through designing and making products with a purpose and intended user in mind. The Curriculum includes opportunities to explore textiles, structures, mechanisms and food technology. Food Technology is implemented across the school with children developing an understanding of where food comes from, how to prepare food and the importance of a varied and healthy diet.

Design and Technology at Belmont is cross-curricular and draws upon subject knowledge and skills within Mathematics, Science, History, Computing and Art. Children learn to be risk takers, resilient, reflective, innovative and enterprising. Through the evaluation of past and present technology they can reflect upon the impact of Design Technology on everyday life and the wider world.

3. Impact

DT at Belmont is designed to give all children, including disadvantaged pupils and pupils with SEND, the knowledge and cultural capital to succeed in the next stage of their education. The children develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They also 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 and evaluate and test their ideas and products and the work of others. They also understand and apply the principles of nutrition and learn how to cook. Assessment of children's learning in Design Technology is an ongoing monitoring of children's understanding, knowledge and skills by the class teacher, throughout a series of lessons. This assessment is then used to inform differentiation, support and challenge required by the children. The subject leader also monitors Design Technology, undertaking pupil interviews to discuss their learning and understanding; establishing the impact of the teaching taking place.

4. Resources

In the Early Years, children design and make using a range of resources including recycled materials and construction toys. These continue to have their place for older pupils alongside more specialist equipment. Most resources are kept centrally in the resources room on the middle floor with some in the art resources room. They are organised by tools and materials in labelled trays. Teachers are able to borrow appropriate trays as necessary for their required topic. At the beginning of each half term the DT co-ordinator asks staff to look ahead to their following topic and report on any resources which are low in stock. Resources for food technology are stored in the kitchen areas. For health and safety reasons, children should not collect or return resources by themselves.

5. Learning Environment

Please refer to the Quality of Education Policy.

6. Planning

In the Early Years, DT is taught through the area of learning Expressive Arts and Design and an important element of this is child-initiated learning in which children choose their activity and the skills and materials they will use to create, perhaps in response to an idea shared in class. The teaching of DT in Key Stage 1 and 2 follows the National Curriculum through the use of Design and Technology Association's 'Projects On A Page' planning. This is through termly topics and units that are chosen and adapted to ensure cross-curricular links as part of a topic-based approach. (Appendix 1).

We recognise that there are children of widely different creative and physical abilities in all classes, so we plan 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 by:

- setting common tasks which are open-ended and can have a variety of responses;
- setting tasks of increasing difficulty (not all children complete all tasks);
- providing resources of different complexity depending on the ability of the child;
- providing support where required to enable children to access activities (see 9.1 below)

7. Assessment

Please refer to the Quality of Education Policy, Assessment Policy and Early Years Foundation Stage Policy

8. Cross Curricular Opportunities.

Please refer to the Quality of Education.

9. Enhancing the Curriculum.

Belmont holds an annual STEM enrichment week. Within this week, there are opportunities for the children to take part in a range of activities to enhance the DT curriculum. Children are given the opportunity to take part in cooking activities which support and enhance the curriculum, in addition to specific food technology units of work. They are able to work in groups in the designated kitchen under the supervision of a parent and teaching assistant. After school cookery clubs and enrichment groups may also be offered by school staff and/or external providers giving further opportunities for children to develop their skills.

10. Inclusion

To be read in conjunction with the Quality of Education Policy, SEND policy and Able Pupils policy

10.1 Special Educational Needs and Disability

Design and Technology provides a variety of opportunities and contexts for children to succeed and can help develop children's self esteem. As a subject it offers the possibility of success at different levels. Teachers should identify in their planning suitable resources and differentiated activities. In cases of ***physical or sensory disability*** the school will endeavour to provide suitable equipment and resources to allow as full access to the subject area as possible. Teaching support staff may work with individuals if they would otherwise have particular difficulty in accessing this subject alongside their peers. For some children, resources may need to be adapted to enable them to participate, e.g. visual resources may need to be enlarged. Curriculum planning takes into account the needs of individuals within the class group, in accordance with the school's disability access practice.

10.2 Gifted and Talented

We recognise that some children have a special ability in Design and Technology and seek to foster this talent through providing challenges for them to extend the scope of their learning and research and to enable them to develop higher order skills.

11. Health and Safety

To be read in conjunction with the Health and Safety Policy and Cookery Risk Assessment (Appendix 2).

- Staff have a responsibility for the health and safety of children, of other members of staff and of themselves.
- Children should always be taught the correct technique and safe use of tools and the care of equipment.
- All tools and practical equipment in the classroom and from the Design and Technology resources area should be kept in good condition, stored safely and be well organised. Glass containers should not be used.
- All paints, crayons and glues issued in school are non-toxic. Before using any other items teachers must check the labels carefully and if in doubt, check with the art subject leader.
- Glue guns and paper trimmers are used **only under supervision** once rules have been clearly established. Glue guns to be used by Upper KS2 using gloves and with an adult supervising that station. Any burn incident must be run under tepid water for a minimum of 10mins and school nurse contacted.
- Stanley knives and wire cutters are to be used only in Years 5 and 6 and in groups of no more than can be adequately supervised by the teacher. Steel rulers and a suitable cutting surface must be used.
- Children should not use expanded polystyrene, uncooked kidney beans and toilet rolls.
- Staple guns should only be used by adults.

When working in the kitchen, staff and parents must be familiar with the **risk assessment for cookery activities** and ensure that safety procedures and skills are taught to the children. In particular, they must ensure children are effectively supervised when cutting or using the oven or hot plate and that correct techniques are being employed. They must also ensure that they are aware of any allergies children may have to food stuffs.

12. Roles and Responsibilities.

Please refer to the Quality of Education Policy.

13. Policy Review

This policy will be reviewed according to the cycle agreed by the governors' Curriculum and Achievement Committee for curriculum policies.

Appendix 1

Projects on a Page Planning

Year 1	**Content**
From A to B	Mechanisms: Sliders and Levers Link to: Design a moving pictures/transport books to share/read
Our Island	Structures: Free-Standing Link to: Building a bridge over the water
Mother Nature	Food: Prepping Fruit and Vegetables Link to: Creating a fruit snack for a class picnic
Year 2	**Content**
I Love London	Mechanisms: Wheels and Axels Link to: Making a vehicle to drive down a ramp.
Fighting for Survival	Food: Prepping Fruit and Vegetables Link to: Hospital menu and benefits of fruit and vegetables
Water, Water Everywhere	Textiles: Templates and joining Link to: Puppets or toys from the sea
Year 3	**Content**
Active Planet	Mechanical Systems: Linkages and Levers Link to: Making a page for an information book
Clink!	Food: Healthy and Varied Diet Link to: Making a salad for a healthy snack
Veni, Vidi, Vici	Textiles: 2D shape to 3D product Link to: Creating a Roman bag/satchel/purse

Year 4	**Content**
Why Britain? **Healthy and Varied Diet**	Food: Healthy and Varied Diet Link to: Prepare something from a harvest. *What foods do we harvest at this time?*
Rivers **Science: Electricity**	Electrical Systems: Simple Circuits and Switches Link to: Light – a torch for someone to use.
The Tree of Life	Structures: Shell Structures using CAD - Using 2Design and Make on PurpleMash Link to: Packaging for food/ medicine sourced from the rainforest, for example, coffee beans, fruit and chocolate.
Year 5	**Content**
World at War **World War 2: Local History**	Food: Culture and Seasonality Link to: 'Apple' crumble creations.
Awesome Earth	Textiles: Combining different fabric shapes Link to: Creating snoods for mountaineers.
Circle of Life	Mechanical Systems: CAMS Link to: Egyptian Toys - Circle of Life
Year 6	**Content**
What Did the Ancient Greeks do for us?	Structures: Frame Structures Link to: Greek temples/ community places of worship
Who Do You Think You Are?	Food: Culture and Seasonality Link to: Local produce/food used within culture and celebrations
Balance of Power **Science: Electricity**	Electrical Systems: Monitoring and Control/ More Complex Switches Link to: Science units – switches and controlling circuits.

Appendix 2

Cookery Risk Assessment

Activity: Food technology and cookery	**Adult in charge:** Teacher, teaching assistant or volunteer helper under the guidance of the class teacher	**Activity Dates:** As agreed with class teacher	
Hazards/Issues	**Prevention action/control measures**	**Person responsible**	**Level**
Fire hazard	• Adults in charge to ensure that they follow the makers' instructions for equipment such as cookers and microwave and turn off all appliances when no longer required • Adults to identify location of nearest fire blanket and fire extinguisher suitable for electrical fires before first cookery session • Adults to ensure that flammable items such as tea towels are kept well away from heating elements/hot surfaces at all times (excepting use of oven gloves) • In the event of a fire, adults to follow Fire and Emergency procedures	Adult in charge	Medium
Fire and emergency procedures	• Fire evacuation notice posted in kitchen • Teachers to ensure that helpers read Fire and Emergency Procedures before first session and re-read them at least once a year • All volunteers to sign in at school office on arrival and sign out on departure • Adults in charge to follow procedures if the alarm sounds including safe evacuation of both adults and children and accompanying children to assembly point.	Deputy Head Class teachers Adult in charge	Low
Child protection	• No cookery groups may take place in the main kitchen unless at least **one adult is present who has an Enhanced DBS check** and is registered on the school's Single Central Record. In school-time, there should be at least one member of the school staff. • Cookery groups in the nursery kitchen are under the supervision of nursery staff and a DBS check is also conducted for regular parent helpers in this context. • All adults helping regularly to have an Enhanced DBS Check check. • This list is maintained by the School administration team.	School administration team	Medium
Movement and noise in kitchen area	• Children to be accompanied in the kitchen areas by an adult **at all times** • Number of people within the Nursery kitchen area to be restricted to no more than four people (except when passing through). Other participants in activity should be on Nursery side of work surface • Children to be reminded to move slowly and carefully in kitchen areas and to be aware of other people's movements, especially if anyone is dealing	Adult in charge	Low

	with hot food, sharp knives etc. • Children to be reminded to listen carefully with only one participant (adult or child) talking at a time and to follow instructions carefully.		
Movement and noise in kitchen area (contd)	• Any child behaving inappropriately, i.e. in a manner causing potential risk to safety, to be given a warning. If behaviour continues, the child is to be sent/accompanied back to class.	Adult in charge	Low
Hazards from hot equipment and hot food	• No children up to Year 2 to be allowed near a hot oven or hob, except to observe an adult working and under close supervision. • Children in Key Stage 2 (Year 3 upwards) may work at the hob with hot equipment/food **under close adult supervision** and following careful demonstration by the adult in charge and reminder of the risks. • Pan handles to be placed carefully so they are not sticking out form the hob • Children to be shown how to use oven gloves and why **with adult demonstrating** how to put baking trays/dishes into a hot oven safely • Children **not** to be allowed to put baking trays/dishes into a hot oven or to remove hot trays/dishes from the oven except in the upper junior classes (Years 5 and 6) and **only** following careful instruction and demonstration • Children to be told why hot baking trays/dishes should be placed on an appropriate stand/surface to cool • Adults to explain why a cooling rack is used for hot food needing to be cooled • Children allowed to use palette knives to lift hot foods off a hot baking tray (on a surface away form the oven), providing an adult is holding the tray firmly with an oven glove and watching to ensure child does not get too close • Children **not** to be given foods straight from the oven to taste. NB microwaved food should also be stirred after heating and checked thoroughly for temperature by the adult before children sample it. • Children to be supervised very carefully at all times if hot equipment is in the work area • In case of a burn, affected part to be placed under **running cool** water and First Aider called for.	Adult in charge	Medium
Use of knives	• Sharp knives to be kept in drawer/cupboard out of reach of younger children • Adults to collect knives and count out number being used and to count them back before returning them at the end of the session • Knives to be carried by the handle with the blade pointing down and placed safely in the work surface. Sharp knives to be given out by the adult - Children **not** to carry sharp knives • All cutting to be carried out on suitable chopping boards, one per person (as indicated by type of	Adult in charge	Medium

	food)		

Use of knives (contd)	• Adult to model correct cutting technique, before allowing children to begin work – bridge and claw methods • Adult and children to use the correct method at all times. Small items/pieces of food should only be cut by an adult • Only adults to wash up sharp knives after use • In case of a cut, First Aid procedures to be followed as below	Adult in charge	Medium
Use of graters, peelers and other sharp equipment	• Adult in charge to model safe and correct use of equipment before allowing children to begin work. Children below Year 2 should not in general use peelers or graters and only with one-to-one supervision • Adults and children to use correct method at all times • Children to stop grating food when piece becomes small to avoid fingers coming too close to the grater • Only adults to wash up these sharp items after use	Adult in charge	Medium
Injuries requiring First Aid	• First Aid trained staff on call in nursery or welfare/medical room • If injury is minor child to be sent to welfare room accompanied by another child • For more serious injuries, or if in doubt, two children to be sent to call the First Aider to attend the kitchen area	Adult in charge and First Aider	Low
Hygiene, personal safety and health	**Before cooking** • High risk foods, bought in advance, such as cooked meats, milk, cooked eggs etc. must be stored in the fridge or freezer as appropriate • All long hair to be tied back prior to cooking • Jewellery on hands to be removed where possible • Hands to be washed thoroughly with soap and dried prior to cooking • Cuts to be covered prior to cooking with a waterproof plaster or other suitable dressing (Children with cuts should not be in cooking group unless imperative for DT project) • Children with coughs/heavy colds not to be part of cooking group and to be sent back to class if adult becomes aware of a risk of infection • All participants to wear aprons and roll up sleeves • All surfaces and equipment to be checked for cleanliness prior to cooking and wiped/washed if necessary with a suitable product. **During session** • If a child feels unwell during the session he/she should be sent to the welfare room accompanied by another child or adult • Children/adults each to use **own clean** spoon when tasting food and only to use spoon **once** (unless portions of food have been shared out for tasting)	Adult in charge	Medium

Hygiene, personal safety and health (contd)	**After session** • All surfaces to be thoroughly wiped down using a • suitable disinfecting cleaning product • All equipment to be carefully washed after cooking (NB sharp items should be washed up by an adult), dried **thoroughly** and put away **safely** • Clean tea towel(s) to be used for each cooking session and put in nursery washing machine to be laundered at end of session • Aprons to be washed once a week • All waste to be correctly disposed of and unused food sealed and stored in cupboards, fridge or freezer	Adult in charge	Medium
Allergies to food or other materials	• Adult in charge to check the class list prior to the session to ensure that the recipe is suitable for all children. If not, then an alternative should be provided (discuss with the class teacher if in doubt) • **NO** recipes should contain nuts and children should not eat foods containing raw eggs. • Should a child appear to be suffering an allergic reaction, the First Aider on duty in the Welfare Room should be summoned **immediately** and given the child's name so that correct medication can be administered.	Adult in charge	Medium