Design and Technology Policy

Design and technology helps to prepare children for the developing world. The subject encourages children to become creative problem-solvers, both as individuals and as part of a team. Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental issues. Design and Technology helps all children to become discriminating and informed consumers and potential innovators. It should assist children in developing a greater awareness and understanding of how everyday products are designed and made

Curriculum Coordination

The curriculum coordinator for Design and Technology at the school is Lauren Munnery. The role of the curriculum coordinator is to act as a catalyst and a focus for the subject within the school. These include acting as a buffer for all relevant documentation and its subsequent dissemination in a digestible form. Lauren Munnery is also responsible for establishing and implementing both policy and initiatives throughout the school.

Purpose

The following document provides guidance on the teaching of Design and Technology at North Lancing Primary School; it should be read in conjunction with the Early Years Foundation Stage Framework and the National Curriculum. It is intended that this policy will:

- Provide a common vision of DT for the school.
- Ensure that each pupil has access to good quality DT.
- Provide a clear basis from which to plan.
- Provide a source of reference for visitors to the school

Aims And Objectives

DT is concerned with the whole education of the child. It can make a significant contribution to a pupil's self-esteem and inter-personal skills. DT is a process involving pupils in a continuous process of planning, performing and evaluating. DT should encourage acceptance of success and failure. It should build upon foundations of play in the early years through consolidation and finally toward making reasoned active lifestyle choices on leaving school.

- To develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making;
- To enable children to talk about how things work, and to draw and model their ideas;
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;
- To develop inquiring minds and to foster enjoyment, satisfaction and purpose in designing and making;
- To use ICT software to assist our designing and learning;
- To give children the confidence and competence to identify, examine and solve practical problems involving the design and production of good quality products using a variety of approaches, materials and methods;
- To encourage pupils to make judgments about the aesthetic, economic, social and technological quality of their own work and others;
- To encourage respect for the ways in which people of different cultural backgrounds, past and present, have shown their ability to enrich the environment;

- To develop pupils understanding of the ways in which products or systems might be controlled and how they might be made to work more effectively;
- To help pupils develop the social skills required to work as a member of a team as well as the ability to work independently when the situation demands it;
- To provide opportunities for children to be guided through the process of identifying needs and opportunities, generating a design, planning and making and evaluating what they have created;
- To develop skills of communication, manipulation, observation, interpreting information, drawing conclusions and the application of ideas;
- To develop attitudes of a range of skills including imagination, cooperation, creativity, perseverance, initiative, criticism, motivation and reflection;
- To provide a broad and balanced range of contexts (home, school, community, recreation etc.) and be aware of the degree to which other curriculum areas are inextricably linked to technology activities.
- To promote an awareness of everyone's needs through a policy of equal opportunities, regardless of sex, race, creed or colour.

Design and Technology Objectives in accordance with the Early Years Foundation Stage Framework and the National Curriculum

By the end of their time in our school we would want our pupils to be able to use designing and making skills as well as evaluate and draw on a developing technical knowledge. This is in accordance with the Early Years Foundation Stage Framework and the National Curriculum. These differ in Early Years, KS1 and KS2 and are outlined below.

Early Years, Expressive arts and design

- **Exploring and using media and materials:** involves enabling children to explore and play with a wide range of media and materials, as well as providing opportunities and encouragement for sharing their thoughts, ideas and feelings through a variety of activities in art, music, movement, dance, role-play, and design and technology.
- **Being imaginative:** Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function and use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories.
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National Curriculum

KS1 designing:

- 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.

KS1making:

- 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.

KS1 evaluating:

- Explore and evaluate a range of existing products.
- Evaluate their ideas and products against design criteria.

KS1technical 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.

KS2 designing:

- 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.

KS2 Making:

- 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.

KS2 evaluating:

- 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.

KS2 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. #

Teaching Methodology

We should use a variety of teaching and learning styles in design and technology lessons. Teachers need to allow time to ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. We can do this through a mixture of whole class teaching and individual/group activities. All ideas will be treated with respect. Children critically evaluate their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.

Design and Technology Curriculum Planning

We carry out the curriculum planning in design and technology in three phases: long, medium and short term within/linked to the topic planning. The long-term plan maps out the skills to be covered during the key stages. They identify learning objectives and outcomes for each unit, and ensure an appropriate balance and distribution of work across each term. We plan the activities in design and technology so that they build upon prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move

through the school. The planning will be completed through a cross curricular approach ensuring the DT has a link to the topic being studied. Teachers will give each DT theme a purpose. Each topic will need to be reviewed, informally by the teachers and TA's within the year group to ascertain the enjoyment had by the children, the effectiveness of developing skills and the quality of purpose. Continuity is achieved through coherent planning across each key stage and through communication between teachers within the year group.

The Class Teacher

The classroom teacher is expected to:

- Prepare fully for all aspects of the lesson
- Adhere to the school policy guidelines
- Help develop the agreed schemes of work
- Have due regard for safe practice
- Attempt to achieve the highest standards of achievement and quality of learning of which they are possible.

Design and Technology Policy Statement regarding the use of Food

When working with food an adult will be required to supervise activities involving cooking and food handling/preparation.

- When undertaking food activities the appropriate Health and Safety Procedures must be adhered to taking in recent guidelines regarding COVID-19.
- When working with food all children should follow personal hygiene guidance (tie back hair, clean apron, use of blue plasters and washing hands)
- Teachers should check the dietary needs of the children in their class to identify any foods that should not be available to specific children, or groups of children.
- Any perishable food should be stored in a fridge.
- Only use equipment set aside to use with food.
- Set aside an area for children to wash their hands.
- Teachers taking part in any food activity should dress appropriately and follow the same procedures as the children with regard to any rules regarding personal hygiene.
- Ensure that all equipment is cleaned and put away in the food cupboard.
- Ensure that all children use their own equipment when tasting food.
- Certain spoons should be identified and used when placing food onto plates for children to taste food, teachers/TA's need to ensure children do not use their own.

Assessment and Recording

Teachers assess work in design and technology by making observations of the children working during lessons. They record progress made against the learning objectives for that lesson. At the end of a unit of work, children undertake a review of their work that focuses upon an evaluation of the finished product and an overview of the various tasks undertaken. Teachers make an annual assessment of progress for each child, as part of the annual report to parents. Each teacher passes this information on to the next teacher at the end of each year.

Due to the practical nature of design and technology, evidence of work undertaken by children can be in the form of teacher's notes or as a photographic record. Samples of the design process and end product are also valuable evidence.

Equal Opportunities

Teachers should be aware and take account of the possibility for differentiation and equal opportunities within both the formal and informal curriculum. Planning should ensure that activities allow **access** and **opportunity** for all, regardless of gender, race, social class or special educational needs. It should be remembered that access is not synonymous with opportunity. Lessons should address these issues through planned strategies for grouping, expectations and attitudes towards the children by the teacher and by each other.

Children with special educational needs in design and technology require particular thought to enable them to demonstrate what they can do rather than what they cannot. It should be remembered that these children may well be able to succeed in one particular strand but not in another. Wherever possible, planning should attempt to fully integrate SEND children with their peers. Where this is not possible activities should be modified to enable the child to work with the class. If safety is a concern then the child should continue to work alongside the class on the modified activity. Segregation should be avoided if at all possible. It should be remembered that Design and Technology is an entitlement, and that the enabling statements allow a child to work towards the programmes of study of an earlier key stage if required. However, the activity set for a particular child should maintain the integrity of the task selected for the majority of the class.

The needs of more able pupils should also be taken into account. Expectations set for these pupils can be met through extensions tasks, enrichment programme or through extra-curricular work; delivered both by the school and by external partners.

Health and Safety

All adults leading DT lessons/ activities should ensure that they have read and understood the D&T Health and Safety section of the policy.
Adults should ensure that:

- DT equipment is not left out and unsupervised.
- Floors and work surfaces are kept clean and tidy and all tools used must be of good quality, in good condition and stored safely.
- Direct safety instructions should be given to children each time they undertake a design and technology activity.
- Children should be given suitable instruction on the operation of all equipment before being allowed to work with it.
- Children should be strictly supervised in their use of equipment at all times.
- Adult to child ratio must be appropriate to the activity e.g. closer supervision on activities such as use of a glue gun.
- Children should be taught to recognise and consider hazards and risks and to take action to control these risks, having followed simple instructions.

Specific health and safety points will need to be included onto topic plans. These will help teachers to identify activities of a high risk and highlight any areas in which they need to reduce risk or ensure safe practice. As appropriate, risk assessments for specific tools should be referred to during the planning and use of equipment. These will be found in the risk assessment file on the staff shared area of the network and in a folder as a paper copy with the DT resources.

Teachers should be conversant with the phrase "in loco parentis". All teachers accept a duty of care which requires them to take greater precautions than a prudent parent in similar circumstances.

Accident Procedures

Accident procedures should be well understood and implemented by all teachers. In the case of

minor injuries the teachers should deal with the situation using their professional judgement. For more complicated cases, the situation should be made safe, including dealing with the rest of the class at the same time. A message should them be sent to the First Aider and recorded in accordance with the schools policy. In addition more serious incidents, usually involving a hospital visit, should be recorded on the appropriate form and sent to the area office. Parents should be kept fully informed throughout by the First Aider.

All classroom assistants, midday supervisors and other responsible adults working in the school environment should be aware of these procedures.

Medical Records

An up to date list detailing pupils who require special medical attention is held within each classroom and all teachers and support staff should be fully aware of information pertinent to their class. Particular care should be given to ensuring that new entrants, at any age, have information available. However, sensitivity should also be given to respecting parental wishes in certain circumstances.

Equipment

Teachers should ensure that equipment is returned to the appropriate store and left in the correct place. Teachers should remove any equipment or apparatus from circulation that is damaged or broken and report it to Lauren Munnery. Some responsibility should be delegated to the pupils for the collection and return of equipment, and ensuring that the stores are left in a tidy, safe and accessible way.