Meopham Community Academy
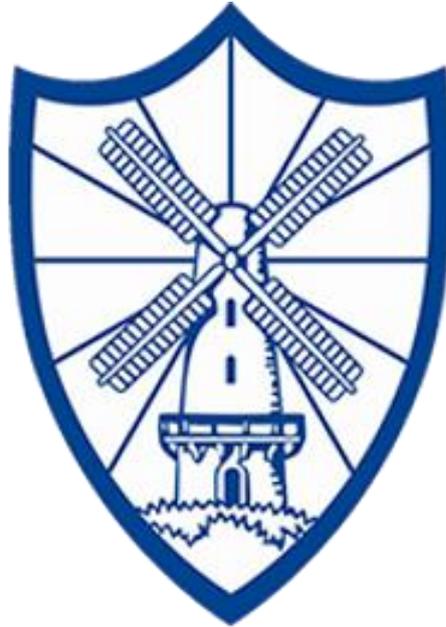
Enjoy, Learn, Aspire

Design and Technology Policy

This policy was reviewed by: Ali Hyland, DT Subject Leader	
Date: May 2018	
Approved by Governors: May 2018	
Next Review Date: May 2020	

Rationale

The Importance of Design and Technology from National Curriculum 2015

- "Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real problems within a variety of contexts.
- They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art."

Aims

- develop the creative, technical and practical expertise
- 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.

These objectives, derived from the aims, will guide us in our decisions in relation to planning schemes of work. They will also form the basis of evaluation

Most topics are now derived from the DATA publication "Projects on a Page" and will be effective from September 2015. In addition some year groups have written their own Design and Technology topics linked to the work in our new "Creative Curriculum" – such as designing a bread roll in Year 3 and air-raid shelters in Year 5.

Teaching Design and Technology (DT)

- The new DT programmes of study comprise five main strands:

  o Designing & Planning
  o Making
  o Evaluating
  o Technical Knowledge
  o Cooking and Nutrition

- To ensure projects are in line with the DT requirements the subject leader must ensure they are:

  o For something
  o For somebody or
  o For some purpose

- To develop a sense of enjoyment and pride in pupils ability to design and make.

  o Pupils celebrate the value of designing and making activity, evaluating their own, each other's and other peoples work, past and present.

- o Teachers display pupils work and work of other designers.

- To develop a range of skills related to decision-making and management.

  - o To provide opportunities for children to work independently and in teams.
  - o To help children to work within constraints, e.g. time, materials, space, equipment, ability, health and safety.
  - o To develop a sense of responsibility for their working environment and resources.

Planning and Resources

Resources need to be collected or ordered well in advance. Topics are best covered by working in a block – a whole day or 2 afternoons for example

Health and Safety

- Main risks:
- Food – hygiene / allergies
- Tools – sharp / hot
- Tidiness – avoid tripping etc.
- Adult supervision is key

Principles of Teaching and Learning

Differentiation

Design and Technology will engage the children in a broad range of activities designing and making which involve a variety of methods of communication, e.g. speaking, designing, drawing, assembling, making, writing and using information and computers. These activities can be differentiated through careful planning and the selection of resources which are appropriate for different ages and abilities.

Breadth and Balance

The subject leader will ensure that teachers have a clear idea of the skills, knowledge and understanding to be taught in each unit of work.
*See assessment sheets based on the new scheme of work – "Projects on a Page"

Units of work will be selected and planned to ensure a balance of materials, skills, knowledge and understanding throughout each Key Stage.

All pupils should have a breadth and balance of experience. Care should be taken to ensure activities do not have a gender bias.

Variety of Teaching Styles

Design and Technology requires pupils to become capable of thinking and acting for themselves. We need to adopt a range of teaching styles to enable this to happen, such as:

- Questioning
- Managing
- Motivating
- Instructing
- Supporting
- Co-ordinating
- Responding
- Sharing

Appropriate teaching strategies will enable children to:

- develop skills and knowledge of tools and materials and ICT applications
- explore and develop their ideas and the ideas of others;
- work individually, with the support of a group, or in a class situation;
- apply skills and knowledge (especially of science and mathematics) to a practical situation;
- evaluate their own and other peoples work in a constructive way;
- be reflective about their work.

A wide range of resources (the environment, products, construction kits, books, pictures, plans, photographs, people and the internet) will be used to help pupils to develop understanding about Design and Technology.

Cross-Curricular Skills and Links

Design and Technology draws upon and develops skills, knowledge and understanding from across the curriculum. Appropriate links can be made with other curriculum areas.

Design and Technology can make a major contribution to cross curricular elements in the development of key concepts, skills, values and attitudes.

Design and Technology has a particularly strong link with the following cross curricular themes: Computer Technology, Literacy, Numeracy, Problem Solving, Arts, Physical Development, Education for Citizenship and Economic and Industrial Understanding.

Appropriate Early Years/Foundation Years' experience for children pre-National Curriculum will be planned to develop areas of learning related to Design and Technology, e.g. developing an understanding of the world around them, using materials and tools to make things, developing language skills

Equal Opportunities

All activities will be taught to stretch the able and support the less able.
Boys and girls are given equal opportunity to access all material areas and processes.

Physically disabled pupils will be supported with teaching and learning aids such as special tools e.g. easi-grip scissors. If necessary they will be helped by the teachers or helpers to ensure progress to the next stage of learning.

Able and gifted and talented pupils will be supported and challenged through the subject developing analysis, thinking skills and evaluation techniques.

Health, Safety and Hygiene

It is important that pupils are taught essential life skills to enable them to participate confidently and safely in designing and making in society. Teachers will introduce pupils to a wide variety of production processes and how to safely use the correct tools for the task.

Pupils will be shown how to operate in a safe and hygienic manner when designing, considering health and safety issues.

Main risks have been identified as:

- Food – hygiene / allergies
- Tools – sharp / hot
- Tidiness – avoid tripping etc.
- Adult supervision is key

The school DT subject leader will support the teachers, Senior Leadership Team (SLT) and Governors to undertake a risk assessment of activities and plan INSET for teachers to teach the skills necessary ensuring that pupils can design and make safely.

Assessment, Recording and Reporting

There are separate grids for Key Stages 1 and 2 due the amount of detail. They contain all of the different parts of the programme of study.

The Level Descriptions for each Attainment Target on the assessment sheets are an aid to summative assessment. All children are assessed at the end of each unit as 'Emerging', 'Expected' or 'Exceeding' based on the descriptors

A record of the child's experience and achievement in Design and Technology will be kept by each class teacher. Photographic evidence is essential to record the process of designing and finished products.

A statement of the child's progress and achievement in Design and Technology will form part of the annual report to parents.

Subject Leadership

An annual review will be held in the Autumn Term to assess the needs of Design and Technology. Resourcing, personal development and training needs will be discussed. The Design and Technology co-ordinator will implement this. This will help the planning and development of the subject.

Role of the Subject Leader

The Subject Leader is responsible for developing a long term curriculum plan for Design and Technology. This is matched against the programme of study and ensures that at least two long projects are undertaken per year.

The Subject Leader's job description is kept in the School staffing handbook.

Resourcing/Budget

Funding for Design and Technology will be within the School budget plan for each financial year.

There is a central Design and Technology budget to cover the purchase of equipment such as tools, construction kits, consumable materials, books and other resource materials. The Design and Technology Subject Leader will be responsible for ordering equipment and materials related to the topics studied. It is the responsibility of each class teacher to identify additional resource needs in relation to their Schemes of Work.

Some equipment and materials are organised in the Art and DT cupboard but some is kept by individual year groups. Any shortages, breakages or losses should be reported immediately to the Design and Technology Subject Leader.

Monitoring and Evaluation

The Design and Technology Subject Leader with the Science and Technology Team Leader will monitor classroom teaching in all year groups on a yearly basis and develop a Design and Technology Portfolio of work.

The effectiveness of the Design and Technology curriculum will be evaluated in discussions with the Headteacher, Team Leader and Design and Technology Subject Leader. Resources, teaching methods and needs should be identified and priorities for in-service support established.

On-going evaluation will form the basis for an action plan that will inform the School development plan.