



Providing the keys to success for every child

Whole School Policy on:

DESIGN AND TECHNOLOGY

Head Teacher: Mr M Cowell

Kent County Council

Document Title:	Policy – Design and Technology
Document Number:	PBS-P-DT-2014-01
Prepared by:	Mrs N Page & Mrs M Marshall
Governing Body Acceptance Date:	30 January 2014
Date for Next Review:	Spring Term 3, 2016



Contents

1	Rationale	1
2	Aims of Design and Technology at Palm Bay School	1
3	The Role of the Co-ordinators.....	2
4	The Role of the Teacher	2
5	The Design and Technology Curriculum	2
6	Curriculum Delivery.....	3
7	Additional Educational Needs	4
8	Assessment	4
9	Time Allocation.....	5
10	Equal Opportunities.....	5
11	Resources.....	5
12	Monitoring.....	6
13	Health and Safety (extract from the Health and Safety Policy)	6
14	Policy Review.....	6
15	Appendices	6
	Appendix 1: Palm Bay Primary School Long Term Plans.....	7
	Appendix 2: Health and Safely Guidelines	8



Members of staff responsible for the Design and Technology Policy:

Mrs N Page and Mrs M Marshall.

1 Rationale

Design and Technology is a 'hands on' subject in which pupils have the experience of evaluating, designing and making products of a high standard. Design and Technology encourages children to examine their environment, question the world and to think about how and why things work the way they do.

Design and Technology presents children with a series of real life scenarios, where children become autonomous creative problem solvers. The children will combine practical exercises with the more abstract notions of aesthetics, functional design and making skills. As they do this they will develop their ability to evaluate past and present designs, the uses they have and the impact they have on the real world. Through their Design and Technology, children become more focused on what makes a successful product and more imaginative in how a product could be made or improved.

Design and Technology should draw on the child's knowledge and experience from other subject areas particularly Literacy, Numeracy, Science, Art and ICT.

Design and Technology should always be a relevant, enjoyable and creative activity for all children.

2 Aims of Design and Technology at Palm Bay School

For Design Technology we aim to:

- Develop in children an understanding of the designing and making process, the need to evaluate existing ideas and products and an ability to work through the D&T process confidently.
- Ensure that by the end of Key Stage 2 children are able to work more independently, and with confidence on design and technology.
- Ensure that children are able to identify opportunities for design and technology activities by observing more closely the objects around them.
- Make children more aware of the ways in which everyday objects have been designed and made.
- To enable children to become more confident and skilled in using the range of tools and materials available in the school.



3 The Role of the Co-ordinators

Design and Technology will be managed by the subject co-ordinators who will produce and maintain a subject policy and manage the resources. Planning documents will be regularly reviewed.

The subject co-ordinators will:

- Ensure that all teachers are aware of what should be taught in Design and Technology, what resources are available and what standards of attainment are expected at the end of each key stage.
- Support colleagues and develop their subject expertise.
- Develop strategies to monitor and review the implementation of policy and schemes of work, the quality and effectiveness of the delivery of the subject, pupils' progress and standards of achievements.

4 The Role of the Teacher

Each class teacher will:

- Determine medium and short term planning objectives.
- Ensure that the units of work are delivered effectively.
- Assess the work and progress of pupils and keep an appropriate record.
- Provide feedback to the subject co-ordinators on the plans and any aspect related to the implementation of the plans and policy.
- Give adequate notice of resources required.
- Keep appropriate record of the pupil's achievement.

5 The Design and Technology Curriculum

Content

The Design and Technology curriculum is based on the QCA guidelines which meet the National Curriculum programme of study. **They ensure that at least three projects are undertaken during the school year.**

Planning

Teachers should endeavour to base their work on the QCA plans as these ensure that the requirements of the NC are met. Alternative units of work (e.g. Nuffield Primary Solutions or teacher designed projects) need to be discussed with and agreed by the subject co-ordinator prior to implementation. In accordance with the schools curriculum planning policy, teachers plan on a treble basis.

This planning takes account of:

- The need to acquire, develop and refine practical skills as children progress through the school.
- Pupils learning and skills attainment.
- Adult expertise in particular areas - expertise of teachers, classroom assistants, parents and helpers.



- The suitability of certain aspects for particular age groups.
- The need for children to be given ongoing and progressive experience in the three different types of activity - focused practical tasks, investigating/disassembling/evaluating tasks; designing and making tasks each of these focusing on textiles, food technology and hard materials.

Relevance

Design and technology can be made relevant by using interesting contexts for pupil's design and technology activities. Where possible, pupils will design and make products that will respond to real needs and opportunities, e.g. the need for reflective arm bands on dark nights; a project related to a unit of work in another curriculum area; or those they can relate to, e.g. using a story as a starting point.

Breadth and Balance

We will ensure that we have a clear idea of the skills, knowledge and understanding to be taught in each unit of work. Units of work are as prescribed in the QCA documents.

6 Curriculum Delivery

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

Managing	Motivating	Instructing	Questioning
Supporting	Co-ordinating	Responding	Sharing

Appropriate teaching strategies will enable children to:

- develop skills and knowledge of tools and materials
- 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 people's 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) will be used to help pupils to develop understanding about design and technology.

Teachers will, whenever possible, use a questioning approach to develop in the child a greater understanding.

The didactic approach will be used if it is felt that this is the most appropriate way of helping the children to learn.



Much of the work will involve setting a challenge for the child, creating opportunities for investigating, designing, making etc. Teachers will set the children problems to solve which will have various solutions and will require that they develop the ability to select appropriate materials and equipment.

Wherever possible, contexts and settings for problem solving will be familiar to children.

Pupils will experience a range of activities as follows:

- Focused practical tasks in which they develop and practise skills; **the acquisition of basic skills will be a key feature of all design technology teaching.**
- Activities involving the investigation, disassembly and evaluation of simple everyday products.
- Assignments in which they design and make products for an intended purpose using a range of materials and components.

The organisation of the class for Design and Technology lessons will vary according to the nature of the lesson. Children will be engaged in class, group or individual activities. Closer adult/pupil interaction is enhanced by careful deployment of the additional adult support (TA, volunteer parent etc.) This is most frequently directed towards children with AEN.

7 Additional Educational Needs

Access is guaranteed to all children as part of the whole-school policy on the Equality of Opportunity.

Design and technology will engage the children in a broad range of activities which involve a variety of methods of communication, e.g. speaking, designing, drawing, assembling, making, writing and using information and communication technology. These activities are differentiated as much as is practically possible for children with AEN through:

- careful planning
- the selection of resources which are appropriate for different ages and abilities
- the deployment of additional support in the form of teaching assistants
- For those children with fine and gross motor difficulties, additional adult support is made available particularly when potentially dangerous tools are being used.

8 Assessment

We aim to ensure that pupils understand what is required of them and what they need to do to improve. Learning objectives are shared at the beginnings of lessons and reviewed as appropriate. Expectations are clearly highlighted to children. All assessment, record-keeping and reporting is in accordance with the relevant whole-school policy.

Opportunities for assessment will be identified when planning and children will receive ongoing teacher assessment. Principally, assessment takes the form of classroom observation which is judged against expectations in the QCA schemes of work.



A record of the child's experience and achievement in design and technology will be kept by each class teacher in the form of the child's design exercise books which will be supplemented with photographs as appropriate.

9 Time Allocation

Design and Technology is taught throughout the year in often in an alternating cycle with Art. Staff are however able to block work if it is felt more productive or manageable to do so.

It is recognised that Design and Technology crosses the boundaries of a number of subjects. Effective study in areas such as science, geography and history inevitably involves consideration of the design and technology elements of for example, equipment used, materials used for building, equipment, weaponry etc., human needs and responses etc. The overlap between design and technology and art is also very considerable. Teachers should endeavour to ensure that the D & T perspective will be considered as appropriate in other areas of the curriculum.

D & T is also allocated a period in the timetable as follows:

K.S.1 32 - 35 hours per school year

K.S.2 40 - 44 hours per school year

Most frequently these hours will be spread evenly throughout the year to give, on average:

K.S.1 One hour per week

K.S.2 One hour fifteen minutes per week

The school endeavours to conform to LEA guidelines which recommend a time allocation for different aspects of the study of D & T.

10 Equal Opportunities

In accordance with the school policy on Equality of Opportunity, no child will be prevented from taking part in the DT lessons or be disadvantaged in any way in these lessons because of colour, creed, race, class, gender or any other potentially discriminating factor.

With the nature of the subject in mind and the findings of research into gender stereotyping, the staff will be particularly vigilant in this regard. Boys and girls must be given equal opportunity to achieve their potential in this area. All activities (e.g. construction kits, cooking/food activities, sewing, the use of textiles, the use of tools etc.) will be encouraged for both sexes; stereotyped images must become a thing of the past.

11 Resources

The school has a wide range of resources to support the teaching of Design and Technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in the Design and Technology



store. Class teachers are responsible for informing the subject leaders and Head teacher of resources which are required in order to deliver their planned curriculum. Shared D&T resources are stored (in the labelled boxes) in the Resource/Science cupboard or in the appropriate classroom.

Information books on D&T topics are available in the school library.

It is the responsibility of all teachers to ensure that:

- all resources are used carefully;
- all tools are counted in and counted out;
- tools and resources are returned to their appropriate place in the central store immediately after use.

12 Monitoring

The D&T Co-ordinators are responsible for developing and undertaking, in conjunction with the Head teacher, a monitoring schedule for each academic year, including: work scrutiny, planning scrutiny, pupil interviews, and lesson observations. This is carried out in accordance with the school's Monitoring Policy. Information from monitoring is shared with staff and a report made to the Governing Body.

13 Health and Safety (extract from the Health and Safety Policy)

A high standard of discipline eliminates some of the risks to health and safety. Particular attention must be paid to:-

- movement around the classroom - walk at all times
- appropriate use of furniture - chairs put under desks when not in use; no tilting of chairs
- careful use of all apparatus and equipment
- developing the children's awareness of any risks to health and safety.

For a more detailed account of Health and Safety issues and strategy please see the attached appendix.

14 Policy Review

This policy will be reviewed bi-annually (every even year) during Term 3. The next review of this policy is due: Spring Term 3, 2016.

15 Appendices

Appendix 1: Long Term Plans (page 7)

Appendix 2: Health and Safety Guidelines (pages 8 – 10)



Appendix 1: Palm Bay Primary School Long Term Plans

Year Group	Terms 1 & 2	Terms 3 & 4	Terms 5 & 6
Key Stage 1 Cycle A		Musical Instruments	Fruit Salad Moving Pictures
Key Stage 1 Cycle B	Lighthouses	Moving Vehicles	Puppets
Year 3	Photo frames	Packaging	Sandwiches
Year 3/4	Purses	Photo Frames	Playground
Year 4	Light it up	Story Books with moving parts	Healthy drinks
Year 5	Biscuits	Carrier Bags	Cam Toys
Year 5/6	Slippers	Musical Instruments	Puppets
Year 6	Anderson Shelters	Moving Vehicles	Bread



Appendix 2: Health and Safety Guidelines

While individual class teachers must judge for themselves whether or not their class is able to use a particular resource the following guidance must be adhered to:

Clamps: Pliers/Vices/Punches

Children may use these pieces of equipment when their strength of grip enables them to operate the tool. N.B. eyelet punches require a considerable amount of strength to control so should be used only by teachers or older children.

Cookers

Once instruction has been given, children may be allowed to operate the cooker under close supervision.

Drills

Hand drills: These may be used by children after training under supervision. When the teacher is satisfied that the child has become competent in the use of this tool they may use the drill in the classroom by themselves (Unsupervised in KS2 only).

Mini Drills: To be used by KS2 children after training under supervision.

Power Drills: Not for classroom use.

Where possible drills should be in a stand and the material should be clamped to a surface.

Safety Glasses

These should be worn when there is a risk of damage to the eyes.

Food Hygiene

Children should be made aware as early as possible of the need for hygienic food preparation. Teachers should train the children to prepare food hygienically and supervise preparation.

Glues

Pritt-Sticks: These may be used by children as soon as they are competent not to get any in their eyes, mouth etc...

PVA/Hobby glues: As above in addition to some training and then general supervision.

Wood Adhesive: This should only be used by the teacher or under direct supervision

Wallpaper paste: This glue may be used after training and then under general supervision.

Solvent Glues: While the Borough allows use of solvent based glues after training and under close supervision, it is the recommendation of this policy that children use only water based glues.



Glue Guns: Only low temperature glue guns should be used. They should be used by the teacher only until years 5 and six, where they may be used by the child under close supervision of an adult.

Paper Trimmers

These may be used by children after instruction under general supervision. While the School does not specify a key stage or year group, it is the recommendation of this policy that only children in years 5 and 6 and possibly some mature year 4 children, at the discretion of the teacher be allowed to use a paper trimmer.

Hammers

Children may use a hammer as soon as their motor skills allow them to hit the nail accurately and as soon as they are disciplined enough to stay on task. Smaller weight hammers are sufficient for most jobs in the classroom. Claw hammers and Club Hammers are not for use in the classroom.

Knives

While use of scissors is preferable, children may be required to use knives for their Design and Technology work. They should only be used by older children and can be used once they have learnt the rules, techniques and skills for cutting. They should be closely supervised while working with a knife.

Paints

Children should use water based paints only. These may be used under general supervision. Emulsions (house paints) should be used by adults only or with older pupils under supervision.

Plastics

Plastic sheeting should be cut using scissors and may be used at any age where the pupils are competent with scissors. Years 5 and 6 may sand plastics but only after training and under supervision.

Sanding/Filing

Sandpaper/Emery paper/Files: Sanding and filing may be carried out using these tools under general supervision as soon as the children's motor skills are sufficient.
Orbital sanders: These should be used by teachers only. They are not for classroom use.
Edgegrinders: Not for use in school.

Saws

Hacksaws and Junior Hacksaws: These are suitable for most jobs and may be used by the children providing they have undergone some training and have the appropriate motor skills.



Tenon Saws: As they are slightly larger, these saws are better suited to older children with finer motor control. The children using these should undergo some training in the use of a tenon saw.

Larger saws: For example coping saws and bow saws should not be used in class.

Scissors

Paper cutters: These should be used by the youngest pupils until they have the motor coordination to use scissors.

Blunt ended scissors: These may be used as soon as the children can actually handle them under general supervision.

Sharp ended scissors: These may be used under general supervision once the children can be relied upon to use the correct techniques.

Safety snips: These may be used under general supervision once the children can be relied upon to use the correct techniques.

Tin Snips: These should be used by adults only.

Left handed scissors/snips: While most children are right handed left handed scissors and snips should be made available for left handed children.

Nails and Pins

These may be used under general supervision once the children have been trained in their use.

Sprays – Paints/Fixatives

These should only be used by adults in well ventilated areas. They should not be used in the presence of children.

Staplers

Mini staplers may be used by children under general supervision. Heavy duty staplers may be used under close supervision until the children are competent. Electric staplers are never to be used in the classroom. Staple guns are to be used on by trained adults.