



Glenmere Community Primary School Design Curriculum Policy



Introduction

Design and Technology is about children developing their designing and making skills that they can combine with specific knowledge and understanding in order to design and make quality products. The process should assist children in developing a greater awareness and the understanding of how everyday products and items are designed and made. Children will be taught the technical skills to execute practical tasks and develop confidence in using these skills.

Aims:

To ensure all children:-

- understand food and nutrition and have opportunities to learn to cook;
- to develop practical skills and use these safely with a range of materials, drawing media, tools and equipment, in both 2D and 3D;
- to make well crafted products that are fit for a purpose;
- understand and use the design cycle of planning, developing, adapting, making and evaluating;
- know about good design, everyday products and use correct technical terminology, and to understand why they are designed in a particular way and with particular materials;
- can work both collaboratively and independently, giving constructive evaluations for their own and others designs;

Subject content:

In Foundation, Key Stage 1 and Key Stage 2, children should be taught progressively more demanding practical knowledge, skills and crafts. Children will have the opportunity to work within certain fields such as;

- food and cookery: to learn about food and plan and prepare healthy, wholesome dishes, following straightforward recipes and using a range of common ingredients; (for safety considerations, see appendix);
- materials to plan, design, make and evaluate decorate objects and practical objects using a range of textiles and employing common techniques such as sewing;
- horticulture: to cultivate plants for practical purposes, such as for food;
- construction: to carry out common diagnostic, maintenance and repair tasks and use simple techniques in building and construction.

In Foundation, Children will use a variety of materials and equipment to be able to construct with a purpose in mind. They will use simple tools and techniques competently and appropriately, selecting tools and techniques needed to shape, assemble and join materials. Children will begin to adapt their work at a basic level.

In Key Stage 1 children will be taught to:-

- perform simple and practical tasks, making products for a purpose using a basic range of tools and materials, and techniques such as cutting, forming and joining;
- explore different materials and become familiar with their properties and uses;
- communicate ideas simply, such as drawing, jottings, modelling in 2D and 3D;
- appreciate the need for good design by evaluating a range of design and designers.

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In Key Stage 2 children will develop the above skills by undertaking a range of practical tasks. They will increase their experience in different areas of design and technology. They will understand how to use constructive feedback to improve what they design and make. Pupils will be taught about key historical developments in design and technology. They will also be taught the major components of a balanced diet and how ingredients can be combined to prepare healthy meals.

In addition to the above, children in Key Stage 2 will:-

- use safely and increasingly a wider range of tools, equipment and materials with increasing skill to make the products that are fit for a purpose;
- develop and use straightforward practical, maintenance and repair skills;
- extend their skills to communicate their ideas visually in 2D and 3D, including through using information and communication technology;
- use constructive comments from others to improve their work;
- understand key events and turning points in design and technology.

Teaching Strategies and Planning:

All Design and Technology plans and lessons will be based upon the Key Skills for this subject. These begin at level 1 and continue until level 5. They are organised into 4 criteria:

1. Developing planning and communicating ideas;
2. Working with tools, equipment, materials and components to make quality products;
3. Evaluating processes and products
4. Knowledge and understanding of materials and components.

Where appropriate, Design and Technology skills are taught within a specific Context for Learning for that year group and particular term. The purpose of the unit of work is linked into a theme that provides cross-curricular opportunities, including tasks to enthuse and motivate the children into providing a purposeful outcome.

Progression within design and technology is achieved by placing an ever increasing demand, within a wider range of materials, whereby children can draw upon prior knowledge and understanding. Children are encouraged to work as individuals, in pairs, small groups and also as a whole class when appropriate. Classroom helpers will be provided with specific guidance on ways in which they are to work with children, the degree of independence that the children should be given and the specific aims and objectives for any activity that they are to oversee.

Progression is achieved with the whole school planning co-operatively and ensuring that teachers provide the planned focus for each unit of work taught.

G&T and SEN

Activities both within and outside the classroom are planned in a way that encourages full and active participation by all children, irrespective of ability. All lessons are to be differentiated to cater for differing abilities.

Every effort will be made to ensure that activities are equally interesting to both boys and girls. Units of work will be planned to ensure that gender stereotyping is not reinforced.

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Assessment and records of progress:

Formative assessment opportunities will be identified on medium term planning with reference to the key skills. Summative assessment will take place at the end of the unit, using a Design and Technology assessment grid. This grid is used by each class teacher as the children progress through the school.

Reporting to parents is done on a termly basis through Parents evenings and through an annual written report. This indicates areas of achievement and progress made. Teachers will be responsible for ensuring that assessments are made at the end of each year so that records can be forwarded to the next teacher.

Monitoring and Evaluation:

The subject leader will undertake regular monitoring of planning and work to ensure continuity and progression of the key skills. (For more information on the role of the Subject Leader, see below) Teachers in every year group will keep samples of children's work (either originals, photocopies or pictures) in a portfolio. This will be dated and annotated and follow the class as the children move through the school each year.

The role of the subject leader is to:

- take the lead in policy development and the production of the context for learning for each class, to ensure progression and continuity in design and technology throughout the school;
- support colleagues in their development of detailed planning, implementations of the context for learning and assessment and record keeping activities;
- monitor progress in design and technology and advise SLT on actions needed;
- take responsibility for the purchase and organisation of central resources for design and technology;
- keep up-to-date with developments in design and technology education and disseminate information to colleagues as appropriate.

Resources:

- a. Most design and technology equipment is kept within a central resource area, adjoining the small hall in clearly labelled boxes and trays.
- b. Children are given instructions in the safe and considerate use of resources, including care of consumable and materials that are not easy to store.
- c. A variety of tools and materials are stored in each classroom. These include simple tools for cutting, shaping and joining.
- d. The design and technology subject leader is responsible for all design and technology resources including ordering, upkeep and organisation.

Safety:

Children in the Foundation Stage and Key Stage 1 should be provided with as wide an experience as possible of working with materials including paper, card, construction kits, paints, glues, textiles, reclaimed materials and food. They should be provided with opportunities to work with the associated tools and given direct instructions on the safe ways of working.

Children in Key Stage 2 should have access to tools such as circle cutters and glue guns and they must be under direct adult supervision.

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A separate area should be set aside for the use of glue guns and instructions should be given to the whole class on their safe use.

Sharp pointed scissors may be used at Key Stage 2 but must be stored upright at all times. Children should not use craft knives, which are for adult use only. Direct safety instructions will be given to children each time they undertake a design and technology activity.

Only children accompanied by a responsible adult will have access to the Design and Technology corridor storage area.

For more detailed advice please refer to the Appendix attached to this policy.

Other Policies:

‘CLEAPSS – Supporting practical science, D&T and art’, Health and Safety Policy

Review:

This policy is reviewed by the staff and governors annually. A copy is also available on the School Website. Parents are most welcome to request copies of this document and comments are invited from anyone involved in the life of the school.

Updated November 2017

Date for Review: November 2018

SAFETY CONSIDERATIONS FOR A DESIGN AND TECHNOLOGY

AREA Quote from ASE publication 'Be Safe'.

'In primary schools Design and Technology is very much an open-ended activity. As such it is not always possible to predict all the problems which might occur. Safety standards at school should be higher than those often found in the home.'

Listed below are some of the questions relating to Health and Safety that schools should be asking themselves about their approach to planning and implementing Design and Technology within their establishment.

- a. Have teacher's sufficient skills and knowledge to be able to handle tools and materials safely?
- b. Does this put the pupils at risk?
- c. Is the school equipped to carry out Design and Technology tasks safely?
- d. Is there a whole school policy on Health and Safety?
- e. Are the procedures in the School's Health and Safety Policy document understood by all who teach Design and Technology?
- f. Are the pupils taught safe working practices?
- g. Is the working environment safe?
- h. Is there adequate provision for the safe storage of tools and materials?

These are just a few of the issues that need to be addressed in this particular field of the school curriculum. To help you identify and act on these issues there are a number of documents/publications which you might find useful. They are listed at the end of this article.

Working with food:

An adult will be required to supervise activities involving cooking. When undertaking food activities the appropriate health and safety procedures must be adhered to. When working with food all children should be aware of the school rules regarding personal hygiene.

1. Before undertaking any food activity

- Teachers should ensure that any helpers who are to participate in or lead any aspect of the food activities are made aware of all matters relating to health and safety when working with food and particularly those listed below;
- 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 the refrigerator;
- Only equipment in the food cupboard, which is for use with food only, should be used;
- Glass and wooden items should never be used.

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2. Setting out the food area

- Ensure that the plastic sheets, specifically for use with food, cover the desk area;
- Wipe down the sheets with a steriliser;
- Ensure that all utensils to be used have been cleaned and wiped with a steriliser;
- Only use equipment set aside for food activities;
- Set aside an area for children to wash their hands.

3. During food activities

- Ensure that all children wear the aprons set aside for specific use during food activities;
- Ensure that all children wash their hands;
- Ensure that all children follow the school rules for working with food;
- Adults 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.

4. After the activity

- Ensure that all equipment is cleaned and put away in the food cupboard;
- Wipe down the work sheets with a steriliser.

5. Tasting food

- A parent consent form to be completed at the beginning of the year and teacher to know of all food allergies
- Ensure that children use their own utensils when tasting food;
- Coloured plastic spoons could be used for placing food on to plates and white spoons for tasting food.

CONSIDERATIONS FOR THE SAFE USE OF TOOLS

Making things

Many activities in Design and Technology lead to children making and testing artefacts and to using a wide range of tools and materials. It is therefore vitally important that teachers should train pupils in the correct and safe use of these tools and materials. They should also help children recognise safe working practices wherever and whenever appropriate.

General

The management of the classroom is of the utmost importance. If children see an untidy and badly managed classroom how can we ask them to take seriously our insistence on them working safely?

- * Make sure that children know how to use the tools that are available to them and that keep the working areas tidy.
- * All pupils should know where tools are stored so that everyone can help with the tidying-up at the end of the lesson.
- * It helps if tools are stored in special boxes or on shadow boards.
- * There should be adequate working space for the number of children working in that particular area. A rule of thumb here is that if it feels cramped then it is cramped, so reduce the number of children.

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- * Cutting tools are safer if kept sharp, but remember to warn children to take care when using them. Pupils should be taught to take extra care when carrying tools around.
- * There should be adequate supervision at all times of the whole class and a direct one-to-one supervision with specific tasks of a more dangerous nature.

Saws and Sawing:

This is probably where most primary children will first come into contact with cutting tools other than scissors. This experience should therefore form the basis of their understanding of a self imposed code of practice. They should be taught how to use the saws safely and be made aware of the hazards they are likely to encounter. Some of which are listed below.

- * When sawing, make sure that saw blades are firmly fixed to the handle.
- * Hold the material to be cut firmly by either using a vice, a bench hook or G cramp.

Hints

- * Use the right size of tool for the children. This may appear common sense but put yourself in their small sized world and think again. The best saw for young children is the junior hacksaw of which there are a variety on the market to choose from.
- * A saw cuts by using a chiselling action. Each tooth cuts a small amount of material at each push forward of the saw. It's worth while explaining to the children that they should push 'across' the wood so that this can happen rather than try to push the 'down' as this will inevitably 'jam' the saw.
- * To help very young children cope with this new 'cutting' action try giving them rolled newspaper to practise on. Rolled newspaper reacts similarly to wood but is easier to cut, a lot cheaper and can be incorporated into a number of projects.
- * If you are using a sawing board it helps to fix it to the table or bench with the G cramp.

Craft Knives:

- * Craft knives are extremely dangerous and should only be used in conjunction with direct adult supervision and only be responsible pupils, using a metal safety rule where possible.

In most cases if a pupil needs to use a craft knife to achieve a result it is far better for the teacher to be the 'provider' of a service and do the work for them under the pupil's guidance, just as you might employ a plumber or electrician to work on your house.

- * It is your decision as to when to introduce craft knives to children.

Metal Safety Rules:

- * The corners of metal rules are pointed and sharp and potentially dangerous if mishandled. Pupils should therefore be made aware of this and care should be taken when using them in the classroom.

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Hammers:

- * Only have available small hammers for pupils to use. Remember their size.
- * Regularly check that all hammer heads are firmly secured to the shafts.
- * Make sure pupils don't leave them on tables and benches to be 'knocked' off.

Hints:

- * There's more to using a hammer than at first you think, so, give children ample guidance and time to practice by letting them hammer lots of small nails into large pieces of wood.

Chisels:

- * Avoid using wood chisels as they are very dangerous and not really needed.

Powered Hand Tools:

- * Children should never use mains voltage (240 or 110 volts) powered hand tools such as drills, jigsaws, sanders, screwdrivers, etc.

CONSIDERATIONS FOR THE SAFE USE OF MATERIALS

Wood/plastic/metal:

- * Most woods that can be purchased by primary schools are safe to use. If however parents or industry give you materials it is as wise to check that they are safe to use. If in doubt - don't use them.
- * Rough edges of sawn or broken wood need to be glass papered smooth so as to eliminate the chances of pupils picking up splinters.
- * Fine dusts from wood, polystyrene and some other plastics are known to be dangerous and carry a health risk. But it is unlikely that children sanding by hand will create a dangerous level of dust.
- * Expanded polystyrene can be cut safely with craft knives, scissors and a hot-wire cutter. You will however need a well ventilated room to get rid of the fumes.
- * When working with wire it is wise to use face masks or goggles with pupils.
- * If you use lengths of wire with children then fold the ends over or place a piece of cork over the sharp exposed end.
- * Cutting tin plate and tin cans should be avoided as the sharp edges are difficult to 'make safe'. If however you should need to use them with the pupils then direct adult supervision and a strong pair of gloves is recommended. This tends to negate any value or benefit gained by using tin plate.

CONSIDERATIONS FOR THE SAFE USE OF GLUES

General:

- * Glues which give off a heavy vapour should only be used in a well-ventilated area.
- * Beware of the risk of solvent abuse.
- * When gluing children should wear some form of protective clothing i.e. an apron or old shirt to protect their clothes.
- * Super glues should never be used by children.

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Glue Guns:

- * Only glue guns of the 'low melt' variety will be used in school. The 'low' melt glue gun is much safer and will not cause blistering but should still be used by responsible pupils under direct adult supervision.

Wall Paper Pastes:

- * Use only wallpaper pastes that do not include a fungicide. There are many on the market to choose from. If in doubt read the label.

Plaster of Paris:

- * A separate risk assessment is required by law if Plaster of Paris was to be used as it is a hazardous substance.