

**HEALTH AND SAFETY**

**IN**

**PRIMARY SCHOOL CURRICULAR ACTIVITIES**

**INTRODUCTION**

**ABOUT THIS CODE**

This Code of Practice has been prepared by the Education Department and in particular by the Departmental Health and Safety Officer and personnel from the Inspection, Advice and Training Services.

It contains the best practice for primary school curricular activities and has been devised with reference to documents produced by a number of Educational Curricular Advisory Bodies.

The Code should be read in conjunction with the guidance and procedures outlined in the Education Department Health and Safety Manual

The Code outlines the safe working practices which are necessary to ensure the risks associated with primary school curricular activities are adequately controlled.

All Governing Bodies and Headteachers will be required to ensure their school is operating within the requirements of this Code.

**RISK ASSESSMENT**

The process of risk assessment is a legal requirement of the Management of Health and Safety at Work Regulations 1999. The Education Department has created a procedure for the carrying out of risk assessments in educational establishments.

The procedure splits the process up into two distinct areas i.e. general and curricular activities. This Code has been created on the basis of an assessment of the risks inherent in primary school curricular activities. It indicates the main hazards and the protective and preventive measures necessary to control the risks.

The law requires risk assessments to be recorded. The assessments are recorded in this Code of Practice, but there must be evidence that these assessments have been consulted and that the protective and preventive measures required have been taken into account.

Hygiene;

- Changing room floors should be cleaned regularly and kept as dry as possible
- Students should not be allowed to share towels nor exchange footwear with others
- Pupils should be encouraged to use the lavatory before swimming and this should be part of the training for pupils. When available, showers should be used before and after swimming
- Food and drink. must not be allowed in the pool area and pupils must not enter the water chewing sweets, etc.
- Where a foot bath is provided it should be kept clean and filled with a dilute solution of sodium hypo chlorite which should be changed daily
- The wearing of outdoor shoes at the poolside where swimmers stand and move about should be discouraged
- Pupils should be trained to dry themselves thoroughly paying particular attention too hair, ears and feet.

#### Mats:

- Mats with cellular (polyurethane) foam give off toxic fumes in a fire. PE mats should be stored away from possible sources of flame
- Where there are suitable storage areas, mats should be stored in them and where the stores have doors these should be kept closed
- Where the covering of mats is torn the mats should be recovered or repaired.

#### Goal Posts:

- Goal posts must be properly secured in position to prevent them from tipping forward.

#### Outdoor Activities:

##### Protection from the Sun;

Pupils are particularly susceptible to the harmful effects of the sun.

As well as the short term risk of sunburn and heat-stroke there is a grave concern about the long term risk of skin cancer. When pupils are likely to be in the sun for an extended period of time schools are advised to:

- Inform parents in advance and ask them to provide sun hats and high factor sunscreen
- Ensure pupils are given plenty of liquids to prevent dehydration
- Keep an eye on pupils and take them inside if they begin to burn (as pupils may not notice when they are burning).

##### Asthma;

Refer to School Administration of Medicines Policy for conditions and treatment of this subject.

##### First Aid;

Ensure there is access to first aid equipment (in some cases it may be necessary to take a travelling first aid kit).

#### Swimming:

##### Emergency Procedures;

The department has produced a detailed Code of Practice on the Operation and Maintenance of Swimming Pools. All schools with a pool must comply with its requirements. The following points must be noted when operating a pool:

## PART FOUR

### PHYSICAL EDUCATION

#### INTRODUCTION

This part of the Code covers the basic PE work carried out in most primary schools. However, schools should also refer to the main Code of Practice for PE work if they undertake anything other than this basic work.

#### Hazards:

The main hazards associated with P.E. work are; persons falling from a height, slips, trips and falls, equipment collapsing, insufficient space, hard surfaces, manual handling of equipment. Further hazards such as drowning and infection are apparent in swimming pools. Outdoor work also presents hazards from the elements.

#### Controls:

#### Inspection Of Equipment:

- All indoor physical education facilities (gymnasium, halls and sports halls etc.) and outdoor play equipment must be inspected on a regular basis (see "Provision and Use of Work Equipment" guidance and procedures contained in the Departmental Health and Safety Manual).

#### Clothing And Footwear:

- This must be appropriate to the activity. It is not acceptable to work in stockinged feet because they do not grip the floor, bare foot work is acceptable when floor conditions are suitable i.e. smooth, clean and without splinters
- Watches, jewellery, rings and earrings, (this also includes jewellery worn through other parts of the body, such as eyebrows, lips, navels, etc., such items should be removed during sporting activities). Schools should also have a policy which controls the wearing of such adornments whilst in school. Belts with metal buckles should not be worn and long hair should be secured (as appropriate to the activity). This follows advice issued by the British Association and Advisers and Lecturers in Physical Education (BAALPE)
- Wherever possible clothing allowing freedom of movement should be worn, appropriate to the activity.

Trapped Key- e.g. Castel Key, the same key fits the door lock and the power supply switch, it is trapped in the door unless it is locked shut, only then can it be used to switch on the power

Limit Switch - a switch is operated by the door, the power is switched off when the door is opened.

Temperature Control;

- Although some potters use traditional methods (e.g. cones) to measure the temperature, school kilns should, as a minimum, have a pyrometer.
- A more sophisticated method is a "programmable controller" which controls the temperature of the kiln through the full firing cycle raising and lowering the temperature as required. The controller also minimises the risk of over-firing the kiln and would switch off if any fault developed. The fitting of "programmable controllers" is strongly recommended, a lot however will depend on the experience of the teacher. The controller would be particularly beneficial if the teacher is not a specialist potter.

Clay, Glazes Etc.;

Clay dusts and clay glazes contain silica which can be harmful to health and the Control of Substances Hazardous to Health Regulations (COSHH) apply. The risk is controlled by the following:

- Floors should be swept by a wet method or using an industrial vacuum cleaner with an "H" Filter
- All working surfaces should be cleaned by a wet method
- Clay dropped on the floor should be removed at once
- Hands should be washed after using clay
- Only glazes approved for use in schools should be used.

Batik Boilers;

Batik boilers are used in art to melt wax for use in batik work. The most significant hazard is hot wax. In addition the equipment is electrically operated. In order to minimise the risk of burns and prevent electric shock the following precautions must be taken:

- Ensure the plug is wired correctly and fitted with the correct fuse. The boiler should be inspected by a member of staff before use and termly and be included in the annual combined inspection and test of electrical equipment
- Avoid the use of extension leads where possible

## PART THREE

### ARTWORK

#### INTRODUCTION

This part of the Code covers the basic Art Work carried out in most primary schools. However, schools should also refer to the main Code of Practice for Art Work if they undertake anything other than this basic work.

Several of the hazards associated with art have been dealt with in Part One Science and Technology for example, glues, glue guns, use of tools, photographic chemicals etc. You should refer to that part also when making your assessment of Art Work.

#### Hazards:

The hazards associated with art work are many and include; toxic vapours from paints, solvents, and fumes from kilns. The risk of fire is significant when using kilns, Batik Boilers etc., and also from flammable liquids such as paints and solvents. Hazards are also present from sharp objects such as craft knives, guillotines etc. Toxic dusts can be produced by certain clays and glazes etc., which can be harmful if inhaled.

#### Controls:

##### Spray Paints;

- Most ordinary paints used in school art lessons are of low toxicity and do not present a risk in use. Some schools use spray paints. These contain solvents which can be highly flammable, they also present health risks. They should be used only in well ventilated areas and for short duration. There should be no sources of ignition.

##### Guillotines And Rotary Trimmers;

- Guillotines may only be used by staff
- They must be guarded and should be stored away from pupils with the blade left down
- Rotary Trimmers may be used by pupils provided they have been shown how.

##### Pottery Kilns;

##### Fire Precaution;

- Under no circumstances should flammable material be stored or used in or adjacent to the kiln
- Fire fighting equipment must be available (i.e. a *dry* powder extinguisher) and must not be obstructed.

## PART TWO

### USE OF COMPUTERS BY PUPILS

#### INTRODUCTION

The Display Screen Equipment Regulations do not apply to pupil workstations. Nevertheless, there is a clear duty to take reasonable care for the health and safety of pupils. The guidance and procedures document contained in the Departmental Health and Safety Manual contains further advice on hazards and health concerns.

#### Hazards:

The main hazards associated with work on VDUs include, musculoskeletal disorders, (for example, upper limb aches and pains caused by poor posture), eyestrain and fatigue and stress. There are also tripping hazards from cables and manual handling from transporting equipment around the school.

#### Controls:

- Use a specially designed trolley to house and transport portable computer systems wherever possible
- Ensure equipment is secure on the trolley particularly when it is being moved
- Keep leads and cables tidy
- Layout the bench/trolley as neatly as possible ensuring there is sufficient space in front of keyboard
- When computer equipment is left unattended, it must be switched off unless it is being used for a specifically designed task. In which case it should be in a safe location
- Provide adequate space around workstations for unhindered staff and pupil movement
- Position the screen to avoid reflections
- Encourage pupils to adopt postures etc., which do not impose a strain or require awkward movements.

In most tasks natural breaks occur as a consequence of the inherent organisation of the work. When such natural breaks do not occur, rest pauses should be introduced to prevent build up of fatigue. In the classroom, projects using computers will not generally involve intensive keyboard work. However, some tasks may be visually demanding and teachers should ensure that such work is alternated with less visually demanding tasks.

- Wooden chopping boards or other wooden equipment should not be used, Only polypropylene or polyethylene chopping boards are suitable
- Pupils should wear clean aprons and tie back hair
- Fridges and freezers used for the storage of food should not be used for any other purpose.

#### Use of Cookers;

- Only teachers should light a gas cooker. Use an automatic igniter if fitted, or a spark generator. If matches are being used always light the match first, before turning on the gas
- Always turn off the gas at the mains tap when an activity is finished and at the end of the day
- The cooker should be located in an area on its own away from other equipment, doors, passageways, etc. The area around it should be uncluttered and the floor should be kept clean
- The area around the cooker must be free from combustible materials, there should be no wall displays, pinboards, etc. in the vicinity
- Pupils should be discouraged from wearing loose clothing. A fire blanket should be kept in the area and staff should be aware of how to use it. Portable cooker trolleys should have a fire blanket. Staff should be aware of means of exit from the cooking area
- Handles should not stick out over the edge of the cookers
- A Microwave oven is safe as long as the door and the seal are working properly. However, items being taken out can be deceptively hot - use oven gloves.
- Pupils should be closely supervised at all times. Frying should not be carried out in Primary Schools
- Cookers used for food should not be used for other purposes.

#### General;

- Pupils must be made aware of the hazards associated with cooking and that there is a need for special care
- Pupils must not carry bowls or other containers of hot water

## LIGHT AND SOUND

### Hazards:

The main hazards associated with light and sound are the sun's rays causing damage to the eye or fire if shone through convex lenses and damage to the hearing caused by exposure to loud noise.

### Controls:

- Teach pupils never to look directly at the sun
- Be aware that the focusing of the sun's rays with a convex lens can cause a fire. Lenses, especially large ones, should be stored out of direct sunlight
- Teach pupils that when using binoculars and telescopes to take care not to look directly at the sun, even accidentally
- Extra special care should be taken when viewing an eclipse of the sun. The sun's image should be projected on to a screen and NOT viewed through sunglasses, smoked glass or plastic
- Care should be taken when pupils hold things close to their eyes
- Warn pupils that very loud noises can permanently damage their hearing e.g. Walkmans, disco music, shotguns, machinery, etc.

## SCIENCE EXPERIMENTS INVOLVING PUPILS

### Blood and Cheek Cell Sampling;

DES Administrative Memorandum 2/86. 'Pupils at school and problems related to AIDS' advises strongly against taking human blood or cheek samples. Norfolk LEA has therefore 'banned' all experiments involving the use of human blood.

### FOOD PREP AREA ONLY BY PUPILS

### Hazards:

The hazards associated with pupils preparing food are contaminated equipment, worktops and indeed the food itself, dirty or contaminated hands and clothing all of which may lead to infectious disease and food poisoning. Kitchen areas also present serious burn, scald, fire and explosion hazards due to the number of hot surfaces and the use of gas cookers. The use of knives and power mixing equipment provides further hazards such as cuts, punctures and trapping of fingers and hands.

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- Where there are suitable storage areas, mats should be stored in them and where the stores have doors these should be kept closed
- Where the covering of mats is torn the mats should be recovered or repaired.

**Goal Posts:**

- Goal posts must be properly secured in position to prevent them from tipping forward.

**Outdoor Activities:****Protection from the Sun;**

Pupils are particularly susceptible to the harmful effects of the sun.

As well as the short term risk of sunburn and heat-stroke there is a grave concern about the long term risk of skin cancer. When pupils are likely to be in the sun for an extended period of time schools are advised to:

- Inform parents in advance and ask them to provide sun hats and high factor sunscreen
- Ensure pupils are given plenty of liquids to prevent dehydration
- Keep an eye on pupils and take them inside if they begin to burn (as pupils may not notice when they are burning).

**Asthma;**

Refer to School Administration of Medicines Policy for conditions and treatment of this subject.

**First Aid;**

Ensure there is access to first aid equipment (in some cases it may be necessary to take a travelling first aid kit).

**Swimming:****Emergency Procedures;**

The department has produced a detailed Code of Practice on the Operation and Maintenance of Swimming Pools. All schools with a pool must comply with its requirements. The following points must be noted when operating a pool:

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The law requires risk assessments to be recorded. The assessments are recorded in this Code of Practice, but there must be evidence that these assessments have been consulted and that the protective and preventive measures required have been taken into account.

## PART ONE

### SCIENCE AND TECHNOLOGY

#### INTRODUCTION

This part of the Code covers the basic work carried out in science and technology in most primary schools. However, schools should also refer to the main Codes of Practice for Science and Design and Technology work for high schools if they undertake anything other than this basic work.

#### ELECTRICITY

##### Hazards:

The main hazards associated with electricity are, electric shock, burns and fire.

##### Controls:

##### Mains Electricity;

- Teach the pupils the dangers and that they must never experiment with mains electricity
- Teachers will have to decide whether they consider pupils competent to plug in and/or to switch on mains electricity. Pupils may well be doing this at home but they need to be aware of the dangers and how to do it safely and correctly
- In Norfolk L.E.A. schools, all mains plugs should be of the type with the insulated sleeve on the live and neutral pins. Any plugs not of this type should be changed by a competent person
- Ensure that the socket is switched off before unplugging or plugging in electrical appliances
- All portable electrical equipment i.e. with a mains electrical plug attached, must be tested annually. Any equipment not tested within the last twelve months should not be used. Before use, all equipment should be inspected visually for damage to the casing or the plug, frayed leads, naked wires or exposed inner insulation i. e. blue, brown, green/yellow showing, usually at the plug grip. The cable should also be firmly attached to the equipment. Any equipment not passing this test should be removed from general use until the necessary repairs have taken place and it has been retested
- The use of adapters is not recommended. There should be sufficient sockets to supply the portable appliances used. Where, on occasional demand, more outlets are

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should be used only where there is not a safer alternative

- If used they must be well ventilated and quantities should be kept to a minimum
- They must be stored in flammable cupboards when not in use (see Storage of Chemicals later in this Part)
- Wallpaper paste containing a fungicide is not suitable for use by young pupils.

Super Glues;

- Super glues are not considered suitable for use in primary school curricular activities.

Hot Glue Guns;

- Hot glue guns should be of the low temperature type (usually stated on the gun) and only used under supervision
- Low temperature glue sticks are usually oval in cross-section
- Read the manufacturers instructions before use and ensure all staff are aware of the instructions
- Hot glue guns should be used over a piece of hardboard or other similar place mat. Stands are available to support them.

Burns from hot glue can be more serious because the glue remains in contact with the skin and pupils could make matters worse by trying to remove it and burning their hands.

In the event of a burn immerse the area in cold water for several minutes. It is easy to underestimate the time which hot glue can retain heat, it is important to prolong the treatment with water.

It is recommended that a container of water, or access to water, is available so that any burns can immediately be immersed in water.

## USE OF TOOLS

### Hazards:

The main hazards associated with the use of tools are cuts, bruises, dusts, fumes and electrocution.

### Controls:

- Pupils must be taught how to use any tools safely
- Pupils should be encouraged to keep their work area tidy and to return tools to their storage point
- Cutting tools present fewer hazards when they are kept sharp but pupils should be warned that they are very sharp
- When sawing ensure that the blades are firmly attached to the saw. The material being cut should be firmly attached to the bench using a vice, G-cramp or bench hook
- Avoid the use of wood chisels and tin snips with young pupils
- Craft knives should be used only by responsible pupils and even then only when under supervision. A metal safety rule should be used as a guide. Keep hands behind the cutting edge. Use retractable blades if possible
- Check periodically that the heads of hammers are secure in their shafts
- Pupils should not use powerful, electric hand tools which work from the mains voltage or rechargeable cells
- Teachers should, by law, have a certificate of competency before using a pillar drill, grinding machine, circular saw or band saw
- If cutting expanded polystyrene with a hot wire cutter the area should be well ventilated to avoid the build up of styrene. Machine sanding or cutting should not be carried out. Hand cutting with hacksaw and manual sanding must be carried out in well ventilated area.
- Although dusts can be dangerous, manual sanding of softwood or Balsa by pupils is unlikely to produce a serious problem. Dust should be removed with a damp cloth or vacuum cleaner
- If sufficient dust is produced to be considered a problem then a face mask should be worn, or an extraction system should be available
- Protect eyes from sawdust and splinters

Sulphate for example, is often used, but it is poisonous and should only be handled by teaching staff. Suitable steps must be taken to ensure pupils cannot ingest it.

#### Chemicals used as Solvents;

Methylated Spirits (highly flammable)

Surgical Spirits (highly flammable)

White Spirit (irritant and flammable)

These chemicals must be kept away from naked flames or other sources of ignition. Only very small quantities should be available and it should be used under the direct supervision of the teacher.

#### Chemicals used for Photography;

Fixer (mainly concentrated hypo-sodium thiosulphate)

Developer (this is corrosive)

Stop Bath (mainly acetic acid which is corrosive when undiluted)

When undertaking photography pupils should not use the concentrated chemicals. The teacher should dilute them.

#### Iron Filings;

Iron filings are used to demonstrate magnetic fields. There have been a number of incidents when iron filings have entered pupils eyes. This can be fairly serious because the iron filings oxidise.

It is strongly recommended that for demonstrations of magnetic fields the iron filings are kept in clear plastic containers. Proprietary containers specifically for this purpose are available. Alternatively, other suitable containers can be used.

#### Pupils Handling Chemicals;

- Consider the need for eye protection; during pouring of chemicals, chemicals spitting from a test tube, chemical contaminated fingers rubbed into eyes. If eye protection is required it should comply with BS 2092 (type c - For chemical splash protection)
- Consider the risk of chemicals irritating the skin; use spoons for transferring solid chemicals, use droppers for transferring liquids, consider using protective gloves
- Consider the possibility of ingestion; inform pupils of the dangers of putting fingers near mouths, ensure hands are washed at the end of the activity
- Wipe up any spillage's at once
- Only tip out small quantities so it is never necessary to return excess chemicals to their containers.

### Unacceptable Heat Sources;

The following heat sources are unacceptable for use in primary school science activities;

- Picnic stoves
- Portable liquid gas burners
- Spirit burners
- Hot air paint strippers

### Heating Liquids in Test Tubes;

- Always use a test-tube holder to hold the hot test tube
- Never fill to more than a fifth of the test-tube
- Slope the tube and point the open end away from colleagues
- Gently shake the tube to ensure even heating
- Do not use bungs in test tubes when heating
- Remove the tube from the flame whenever vibrations are felt and return when they die down

### General;

- Naked flames when considered essential, should only be used by the teacher
- Warm or hot water prepared by the teacher is suitable for most purposes
- If transporting hot water use a kettle rather than a saucepan.
- Wear eye protection if there is a risk of spitting.
- Correctly installed gas points with Bunsen Burners may be used by older pupils, with adequate training & supervision. Teachers should know where the mains gas cut-off tap is
- Always turn off the gas at the mains tap when an activity is finished and at the end of the day
- Use spirit thermometers in preference to mercury filled ones. The 150mm Stirring type are stronger and more stable than the 300mm type
- Beware of hot containers falling over and spilling the contents

## ANIMALS IN PRIMARY SCHOOLS

### Hazards:

The hazards associated with the keeping of animals are the transmission of disease, poisonous bites or stings, there is also the hygiene aspect to consider from animal waste products.

### Controls:

#### Suitable Animals for the Primary School;

The following list is not exhaustive and, indeed, some may not be suitable for all circumstances. For example, small mammals are less suitable for use in infant classrooms, since the pupils may have difficulty in handling them with sufficient care. It is important that staff assess the needs of the animals and their suitability for the particular class.

#### Mammals

Mongolian Gerbils  
 Syrian Hamsters (nocturnal)  
 Laboratory Rats  
 Guinea Pigs  
 Rabbits

#### Amphibians

Clawed Toads  
 Axolotis (Mexican reptile)  
 Bullfrog Tadpoles  
 Tiger Salamanders

#### Fish

Cold Water Fish  
 Tropical Fish

#### Reptiles

Garter Snakes

#### Invertebrates

Earth Worms  
 Slugs and Snails  
 Wood lice  
 Land Crabs  
 Brine Shrimps  
 Indian Stick Insects  
 Pink Winged Stick Insects  
 Australian Spiny Stick Insects  
 Mill Worm Beetle  
 Chamfer Beetle  
 Some butterfly and moth larva where their food plant is available  
A variety of common pond creatures

General;

- Teach pupils to avoid touching their eyes whilst handling plants
- Teach pupils never to taste a plant unless they are absolutely sure that it is safe
- Attractive fruits and seeds are often poisonous ensure pupils are aware of this
- Pupils should always wash their hands after handling plants
- Avoid using seeds dressed with pesticides.

## MICRO-ORGANISMS

Hazards:

The main hazard associated with work with micro-organisms is that of infection through inhalation, ingestion or entry through the eyes or cuts to the skin.

Controls:

Suitable Material for use in Primary Schools;

Micro-organisms studied in primary schools are limited to mould of one sort or another and yeast. It is important that only microbes which are known not to be a hazard to humans are used. The following material is suitable;

Mildews and rust on weeds and garden plants

Soil

Bakers Yeast

Pond Material

Mouldy Cheese, bread or fruit yoghurt

Hay or Grass infusion in rain water Milk

Unsuitable Work in Primary Schools;

### Growth of Cultures on Special Growth Media

The culturing of micro-organisms requires special skills and hygienic techniques to prevent contamination and the risk of infection. Therefore this should not be attempted in primary schools unless the person has been trained in these skills and has the necessary knowledge to be able to do so safely.

*Education Department Health and Safety Manual*

- Dead animals are likely to be infected and should be removed from the school as quickly as possible. They should be placed in a plastic bag and then in newspaper and put in the dustbin for disposal
- If animals run free on the floor or on tables ensure that the surfaces are cleaned afterwards
- Pupils must wash their hands before and after handling animals
- Keep animal housing clean, disinfect at regular intervals
- Teachers should be aware that there are legal restrictions on the taking of animals and plants from the wild
- Ensure animals are correctly fed
- Make suitable arrangements for holiday periods
- Injured animals should be removed from school as soon as possible. Consult the local Vet, RSPCA, etc. for advice