

BS 4163:2014



BSI Standards Publication

**Health and safety for design
and technology in
educational and similar
establishments - Code of
practice**

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 August 2014. It was prepared by Technical Committee GME/27, *Safety in school workshops*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 4163:2007, which is withdrawn.

Information about this document

The Health and Safety at Work etc. Act 1974 places a general duty on employers to ensure, as far as reasonably practicable, the health and safety of employees and other persons affected by their activities.

The Management of Health and Safety at Work Regulations 1999 require employers to carry out risk assessments for the purpose of identifying what is required to comply with this general duty and any relevant Regulations made under this Act. This code of practice is primarily for protection of learners, employees, trainee teachers, and other adults across the full range of design and technology teaching areas. This code applies to schools of all types, including those maintained by local authorities, academies, free schools, independent schools and any type of school for learners with special educational needs. It will also be helpful to further education colleges, universities, teacher training establishments, adult education workshops, and workshops in hospitals and prisons.

Implementation of this code of practice is not a legal requirement but it does provide one means of demonstrating that reasonably practicable steps have been taken to minimize risks from the machinery, equipment, processes and materials used. The recommendations in this code of practice cannot ensure the health and safety of learners and employees without proper training and supervision by the teacher in charge. It is essential that anyone in charge of a teaching space covered by this code of practice has recognized accredited training in health and safety.

This code of practice has been written also for persons responsible for providing services, equipment and machinery in educational establishments, and for persons employed to work in these establishments. If similar resources are used in other school departments and colleges of further education, the recommendations of this standard can be applied to these departments. They can also be applied where learners are undergoing initial teacher training.

Risk assessment is an important part of health and safety and teachers should be aware of the five step approach (information is available via the HSE toolbox ¹⁾). In design and technology teaching areas, risk assessments are likely to be applied to the working environment, equipment, processes, techniques, and activities.

¹⁾ The HSE toolbox is available at: <http://www.hse.gov.uk/toolbox/> <last accessed 25 June 2014>.

Practical experience provides opportunities to introduce learners to concepts of risk assessment and safe working methods and with encouragement, they can develop their understanding of risk assessment processes. Through application of this process, learners can be trained to use appropriate control measures to minimize risks to themselves and others. It is essential that teachers are fully conversant with hazards in the area that they supervise, and that they plan, organize, control and monitor the work so that risks can be controlled.

Whilst this standard is meant to be comprehensive, it does not preclude the development and introduction of new technologies so long as appropriate risk assessments are made and the employer accepts their introduction.

This code of practice is intended to be a useful guide to those who teach and manage in design and technology areas in educational establishments, and it aims to contribute to the prevention of accidents and dangerous occurrences. Employers and employees can incorporate the recommendations of this code of practice into their working environment.

Hazard warnings

WARNING. Learners may only use the following machines when they have been assessed and the assessment has shown that they are competent, and they are under appropriate supervision of specifically trained employees:

- portable grinding machine (e.g. angle grinding machines) (see 12.3);
- rotating (circular) portable saws (see 12.4);
- portable biscuit jointer/tenon jointers (see 12.5);
- reciprocating portable saws (e.g. jig saws) (see 12.6);
- multi-tool (saws, carvers, scrapers etc.) (see 12.8);
- portable planing machines (see 13.11);
- portable routers (see 12.12);
- band sawing machines (see 13.6.1);
- chop and radial arm sawing machines (see 13.6.4);
- sawing machines with cutting discs or abrasive discs, power hacksaws and metal cutting bandsaws (see 14.6).

Use of this document

As a code of practice, this British Standard takes the form of guidance and recommendation. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

Presentational conventions

The provisions in this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

In particular, attention is drawn to the statutory legislation listed in the bibliography.

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Section 1: General

1 Scope

This British Standard code of practice provides recommendations and guidance for persons responsible for planning services, equipment and machinery and for persons who might use these in design and technology facilities in all types of educational establishments.

Design and technology facilities include all teaching areas and preparation areas where materials are manipulated and processed, equipment is used and design and/or manufacturing takes place (e.g. food, catering, textiles, graphics, electronics, technology, craft, engineering, manufacturing, woodworking of all types, vocational workshops, motor vehicle workshops and computer rooms).

NOTE The recommendations cover the supply and safe use of equipment, machine tools and materials and chemicals, personal protection and safety management, with particular reference to the hazards involved.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 546, *Two-pole and earthing-pin plugs, socket-outlets and socket-outlet adapters*

BS 1363-1, *13 A plugs, socket-outlets and adaptors – Part 1: Specification for rewirable and non-rewirable 13 A fused plugs*

BS 1363-2, *13 A plugs, socket-outlets and adaptors – Part 2: Specification for 13 A switched and unswitched socket outlets*

BS 1363-4, *13 A plugs, socket-outlets and adaptors – Part 4: Specification for 13 A fused connector units switched and unswitched*

BS 1710, *Specification for identification of pipelines and services*

BS 2769-1, *Hand-held electric motor-operated tools – Part 1: Specification for general requirements*

BS 4111, *Specification for woodcutting bandsaw blades*

BS 5169, *Specification for fusion welded steel air receivers*

BS 5499-4, *Safety signs – Part 4: Code of practice for escape route signing*

BS 7288, *Specification for socket outlets incorporating residual current devices (S.R.C.D.s)*

BS 7671, *Requirements for electrical installations – IET Wiring Regulations – Seventeenth edition*

BS EN 149:2001+A1:2009, *Respiratory protective devices – Filtering half masks to protect against particles – Requirements, testing, marking*

BS EN 166:2002, *Personal eye protection – Specifications*

BS EN 352-1, *Hearing protectors – General requirements – Part 1: Ear-Muffs*

BS EN 847-1, *Tools for woodworking – Safety requirements – Part 1: Milling tools, circular saw blades*