Barefoot Computing Conference

Inspecting computing

David Brown HMI

National Lead for Computing

@DavidBrownHMI

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Computing

- The final programmes of study for computing for Key Stages 1-4 were published in September 2013. Maintained schools in England are legally required to follow this statutory national curriculum from September 2014.
- The national curriculum sets out in programmes of study, on the basis of key stages, subject content for those subjects that should be taught to all pupils.
- Every state-funded school must offer a curriculum which is balanced and broadly based and which promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society, and prepares pupils at the school for the opportunities, responsibilities and experiences of later life.

Computing

- The school curriculum comprises all learning and other experiences that each school plans for its pupils. The national curriculum forms one part of the school curriculum. Inspectors see a range of curricula across maintained schools, academies and free schools. Schools develop their own curriculum to respond to the particular needs of their pupils and ensure they receive a broad and balanced education. However, a school's curriculum must comply with the legislation to give pupils the opportunity to study a wide range of subjects.
- Academies are also required to offer a broad and balanced curriculum in accordance with Section 1 of the 2010 Academies Act.
- All schools must publish their school curriculum by subject and academic year online; there is a legal requirement to make curriculum information available on a school's website.

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Computing

The computing curriculum can be considered as built from three strands:

- **Computer science:** the scientific and practical study of computation; what can be computed, how to compute it, and how computation may be applied to the solution of problems.
- **Information technology:** concerned with how computers and telecommunications equipment work, and how they may be applied to the storage, retrieval, transmission and manipulation of data.
- **Digital literacy:** the ability to effectively, responsibly, safely and critically navigate, evaluate and create digital artefacts using a range of digital technologies.

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School inspection

School inspection

- The **School inspection handbook** explains how inspections are conducted and the judgements that are made by inspectors. It contains the grade descriptors used by inspectors when making their judgements.
- The **Framework for school inspection** sets out the statutory basis for section 5 inspections.
- A regularly updated **Subsidiary guidance** document is provided to support inspection.

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Evaluating the curriculum (extract)

The School inspection handbook (paragraph 140) states that inspectors should consider how well leaders and managers ensure that the curriculum:

- is broad and balanced (in the context of the school) and meets the needs, aptitudes and interest of pupils including, if applicable, pupils in the sixth form
- promotes high levels of achievement and good behaviour
- is effectively planned and taught
- does not compromise pupils' achievement, success or progression by inappropriately early entry to public examinations
- is based at Key Stage 4 on an appropriate balance between academic and vocational courses.

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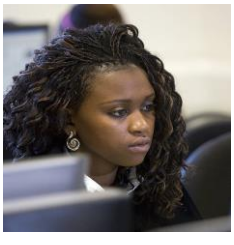
Evaluating the curriculum (extract)

Subsidiary guidance (paragraph 120) states that:

When considering whether the curriculum has sufficient breadth and balance and the extent to which it meets the needs, aptitudes and interests of pupils, inspectors should note the following:

- A curriculum with breadth and balance in maintained schools is likely to consist of the national curriculum subjects, religious education (RE) and a variety of other courses and programmes, including extra-curricular and enhancement activities offered by the school and its partners. Where a school does not provide the national curriculum and RE, inspectors will need to fully explore the school's reasons. For academies, inspectors should check the curriculum requirements set out in the academy's funding agreement.



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Evaluating achievement (extract)

Achievement is outstanding when

- pupils make rapid and sustained progress throughout year groups across many subjects, including English and mathematics, and learn exceptionally well.
- the achievement of pupils for whom the pupil premium provides support at least matches that of other pupils in the school or has risen rapidly, including in English and mathematics
- pupils develop and apply a wide range of skills to great effect in reading, writing, communication and mathematics; they are exceptionally well prepared for the next stage in their education, training or employment
- pupils, including those in the sixth form and those in the Early Years Foundation Stage, acquire knowledge quickly and develop their understanding rapidly in a wide range of different subjects across the curriculum

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Evaluating achievement (extract)

Achievement is outstanding when

- the learning of groups of pupils, particularly those who are disabled, those who have special educational needs, those for whom the pupil premium provides support, and the most able is consistently good or better
- the standards of attainment of almost all groups of pupils are likely to be at least in line with national averages with many pupils attaining above this. In exceptional circumstances, an outstanding grade can be awarded where standards of attainment of any group of pupils are below those of all pupils nationally, but the gap is closing rapidly, as shown by trends in a range of attainment indicators.

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Use of assessment information

As now, inspectors will use a range of evidence to make judgements, including by looking at test results, pupils' work and pupils' own perceptions of their learning. Inspectors will not expect to see a particular assessment system in place and will recognise that schools are still working towards full implementation of their preferred approach. However, inspectors will:

- spend more time looking at the range of pupils' work to consider what progress they are making in different areas of the curriculum
- talk to leaders about schools' use of formative and summative assessment and how this improves teaching and raises achievement
- evaluate how well pupils are doing against relevant age-related expectations as set out by the school and the national curriculum

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Use of assessment information

- consider how schools use assessment information to identify pupils who are falling behind in their learning or who need additional support to reach their full potential, including the most able
- evaluate the way schools report to parents and carers on pupils' progress and attainment and assess whether reports help parents to understand how their children are doing in relation to the standards expected.

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Inspection of computing

Achievement in computing

Achievement in computing is **good or better** when

- pupils demonstrate excellent understanding of important concepts in all three strands of the computing curriculum and are able to make connections within the subject because they have highly developed transferable knowledge, skills and understanding
- pupils consistently use their subject knowledge and understanding very effectively in written and verbal explanations and can solve challenging problems
- pupils make highly effective use of a wide range of hardware and software appropriate to their age and ability

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Achievement in computing

Achievement in computing is **good or better** when

- pupils show independence in their use of computing across all three strands of the curriculum and exhibit positive attitudes towards the subject and working constructively with others
- pupils show high levels of originality, imagination, creativity and innovation in their understanding and application of skills in computing
- all secondary pupils have the opportunity to study aspects of information technology and computer science at sufficient depth to allow them to progress to higher levels of study or to a professional career.

Achievement in computing

Achievement in computing is likely to be **inadequate** when

- pupils' lack of understanding of one or more strands of the computing curriculum impedes their progress
- pupils rarely demonstrate creativity or originality in their use of computing but seem confined to following instructions
- pupils lack interest and enthusiasm for the subject and cannot describe the relevance of computing in a technological age
- in secondary schools significant proportions of pupils in Key Stage 4 neither study information technology or computer science nor develop their skills systematically through other subjects.

Teaching in computing

Teaching in computing is **good or better** when

- it is informed by excellent subject knowledge and understanding of continuing developments in teaching and learning in computing
- teachers have a high level of competence and expertise, both in terms of their specialist knowledge and technical skills and in their understanding of active learning in computing, which they use effectively to secure achievement which is at least good
- it is rooted in the development of pupils' understanding of important concepts and progression within the lesson and over time; it enables pupils to make connections between individual topics and to see the 'big picture'

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Teaching in computing

Teaching in computing is **good or better** when

- lessons address pupils' misconceptions very effectively; teachers' responses to pupils' questions are accurate and highly effective in stimulating further thought
- teachers communicate high expectations, enthusiasm and passion about computing to pupils; they challenge and inspire pupils to produce the best work they can
- teachers use a very wide range of innovative and imaginative resources and teaching strategies to stimulate pupils' active participation in their learning and secure good or better progress across all aspects of the subject.

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Teaching in computing

Teaching in computing is likely to be **inadequate** when

- teaching fails to engage pupils in computing; lessons are not sufficiently related to pupils' lives and experiences with the result that pupils do not value the subject
- weaknesses and gaps in the teacher's knowledge of computing or how pupils learn the subject hamper lesson planning, the choice of resources, or the quality of teachers' explanations, with the result that pupils make too little progress
- assessment information does not inform lesson planning and schemes of work are not differentiated to meet the needs of different groups of pupils
- teachers' low expectations contribute to the pupils' poor progress in computing

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Teaching in computing

Teaching in computing is likely to be **inadequate** when

- teaching strategies result in pupils being too passive, with little opportunity for pupils to contribute their own understanding and ideas in lessons
- the quality of feedback is poor and teachers do not correct common errors or misconceptions
- teachers' subject expertise is limited and does not cover the required breadth of the three strands of the computing curriculum.

Inspecting computing

The computing curriculum

The computing curriculum is **good or better** when

- an imaginative and stimulating curriculum is skilfully designed to match to the full range of pupils' needs to ensure highly effective continuity and progression in their learning
- the curriculum is broad and balanced with all three computing strands covered well for all pupils, in computing lessons and/or across the school curriculum
- the contexts in which computing is taught are relevant to pupils' lives and reflect the increasing use of computing in the world of industry; excellent links are forged with other agencies and the wider community to provide a wide range of enrichment activities to promote pupils' learning and engagement with the subject
- links with other subjects in the school are productive in strengthening pupils' learning in computing

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The computing curriculum

The computing curriculum is **good or better** when

- pupils are expected to use their computing knowledge, skills and understanding in realistic and challenging situations
- KS4 and KS5 pupils have access to a range of appropriate qualifications in information technology and computer science, including academic and vocational options
- pupils' have comprehensive knowledge and understanding of how to stay safe when using new technologies
- rigorous curriculum planning ensures the subject makes an outstanding contribution to pupils' spiritual, moral, social and cultural development.

Inspectors will be aware that, for example, a Year 7 teacher cannot currently assume that pupils have covered the full KS1 and KS2 computing programmes of study.

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The computing curriculum

The computing curriculum is likely to be **inadequate** when

- the curriculum does not meet the needs of significant numbers of pupils in the school and, as a result, too many make poor progress
- the curriculum is not broad and balanced, covering all three strands of the computing cuirriculum
- significant proportions of pupils do not receive any computing provision, either discretely or through appropriate cross-curricular provision
- there is little enrichment activity in the subject
- connections between the computing experiences planned and the lives of pupils are weak and result in low levels of engagement and enjoyment

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The computing curriculum

The computing curriculum is likely to be **inadequate** when

- there are few links between computing and other subjects
- there are no suitable progression routes into information technology and computer science for pupils at Key Stages 4 and 5
- pupils have poor knowledge and understanding of how to stay safe when using new technologies
- opportunities to promote pupils' spiritual, moral, social and cultural development are missed.

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Leadership in computing

Leadership of computing is **good or better** when

- leadership is informed by a high level of subject expertise and vision which has a clear impact on the performance and practice of members of the department and on outcomes for pupils
- there is a strong track record of innovation in computing; subject reviews, self-evaluation and improvement planning are well-informed by current best practice in computing education
- subject leadership inspires confidence and whole-hearted commitment from pupils and colleagues; there are effective strategies to delegate subject responsibilities where appropriate and to share good practice and secure high quality professional development in the subject

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Leadership in computing

Leadership of computing is **good or better** when

- continuing professional development is well-targeted and thoroughly evaluated for its impact; it includes up-to-date training for teaching assistants and technical support staff
- computing has a very high profile in the life of the school and is at the cutting edge of initiatives to raise pupil progress
- access to computing equipment is outstanding, and the school is likely to have promoted the use of mobile technologies; the computing infrastructure enables pupils and staff to have very good access to their work and to the school's learning resources at all times, and contributes to pupils' achievement

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Leadership

Leadership is **good or better** when

- there is an age-appropriate e-safety curriculum that is flexible, relevant and engages pupils' interest; that is used to promote e-safety through teaching pupils how to stay safe, how to protect themselves from harm and how to take responsibility for their own and others' safety
- e-safety is a priority across all areas of the school, with all teaching and non-teaching staff receiving regular and up-to-date training in e-safety
- rigorous e-safety policies and procedures are in place, written in plain English, contributed to by the whole school, updated regularly and ratified by governors.

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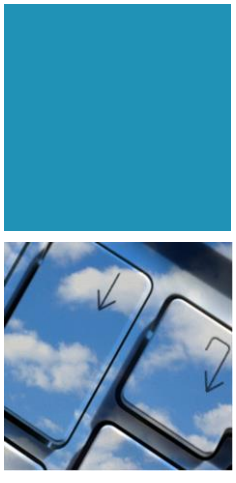
Leadership in computing

Leadership of computing is likely to be **inadequate** when

- leadership is not well-informed about current initiatives in the subject
- there is little evidence of a broader vision of computing education that draws on the work of other professionals beyond the school
- key statutory requirements for computing are not met
- self-evaluation is weak and not informed by good practice in the subject, or by outcomes for pupils
- insufficient effort is made to coordinate the work of computing staff and to improve the quality of the weakest teachers



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Leadership in computing

Leadership of computing is likely to be **inadequate** when

- opportunities for professional development in the subject are limited, and, as a result, some staff lack the confidence and expertise to deliver computing effectively
- the subject has a low profile in the life of the school, is poorly resourced and does not contribute significantly to whole-school improvements
- pupils and staff have only limited access to computing equipment when they need it.

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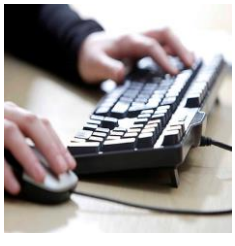
Leadership

School leadership is likely to be **inadequate** when

- there is no progressive, planned e-safety education across the curriculum
- there is little evidence of e-safety training for staff
- e-safety policies are generic and not regularly updated.

The leadership and management of the school are likely to be judged to be **inadequate** if:

- the school's arrangements for safeguarding pupils do not meet statutory requirements and give serious cause for concern.



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Statutory duty

'The **governing body** of a maintained school shall make arrangements for ensuring that their functions relating to the conduct of the school are exercised with a view to **safeguarding** and **promoting the welfare** of children who are pupils at the school.'

section 175 Education Act 2002

The inspection of e-safety

Inspection of e-safety

The April 2014 School inspection handbook contains the following text:

The behaviour and safety of pupils at the school

Inspectors should consider (paragraph 135):

- Types, rates and patterns of bullying and the effectiveness of the school's actions to prevent and tackle all forms of bullying and harassment. This includes **cyber-bullying** and prejudice-based bullying related to special educational need, sexual orientation, sex, race, religion and belief, gender reassignment or disability.
- The school's success in keeping pupils safe, whether within school or during external activities through, for instance, effective risk assessments, **e-safety** arrangements, and action taken following any serious safeguarding incident

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Inspection of e-safety

The grade descriptor for outstanding includes:

- Pupils are fully aware of different forms of bullying, including **cyber-bullying** and prejudice-based bullying, and actively try to prevent it from occurring. Bullying and derogatory or aggressive language in all their forms are rare and dealt with highly effectively.
- All groups of pupils are safe and feel safe at school and at alternative provision placements at all times. They understand very clearly what constitutes unsafe situations and are highly aware of how to keep themselves and others safe in different situations, including in relation to **e-safety**.

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Inspection of e-safety

The April 2014 School inspection handbook contains the following text:

The quality of leadership in, and management of, the school

Inspectors should consider (paragraph 140):

- The effectiveness of safeguarding arrangements to ensure that there is safe recruitment and that all pupils are safe. This includes the promotion of safe practices and a culture of safety, including **e-safety**.

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Inspection of e-safety

The April 2014 Subsidiary Guidance document contains the following text (paragraph 145):

- Inspectors should include **e-safety** in their discussions with pupils, covering topics such as safe use of the internet and social networking sites and cyber-bullying including by text message, and the measures the school takes to promote safe use and combat unsafe use.

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And finally

- E-safety is now considered in the inspection of all education remits including the early years sector, further education and skills, and initial teacher education.
- Social care inspectors also consider e-safety in the inspection of these remits, including in boarding and residential provision in schools and colleges, children's homes and adoption and fostering services and agencies.

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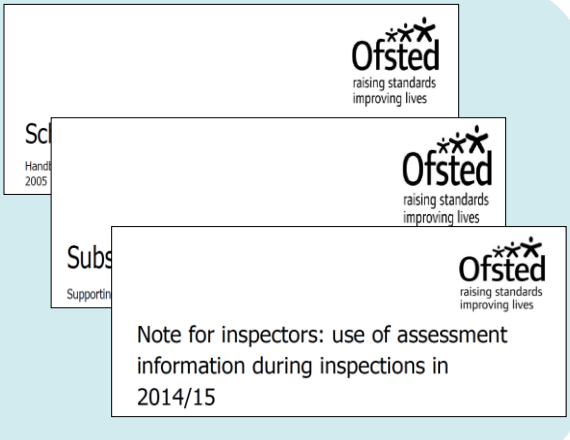
Support available



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Support available

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Links

- Computing at School: www.computingatschool.org.uk
- Naace: www.naace.co.uk
- UK Council for Child Internet Safety (UKCCIS): www.education.gov.uk/ukccis
- Child Exploitation and Online Protection Centre (CEOP): ceop.police.uk
- UK Safer Internet Centre: www.saferinternet.org.uk
- Childnet International: www.childnet.com

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