

Links between ICT Advanced Skills Teachers and Initial Teacher Training



A BRIGHTER FUTURE BEGINS TODAY



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Contents



Introduction

Core principles underpinning effective ICT practice

The National Context

- Professional Standards for Teachers
- Framework for secondary ICT

Some recommended resources from Teachers TV

Advanced Skills Teachers

- Making a difference
- Roles and responsibilities
- Supporting the development of trainee teachers' ICT skills
- Case studies

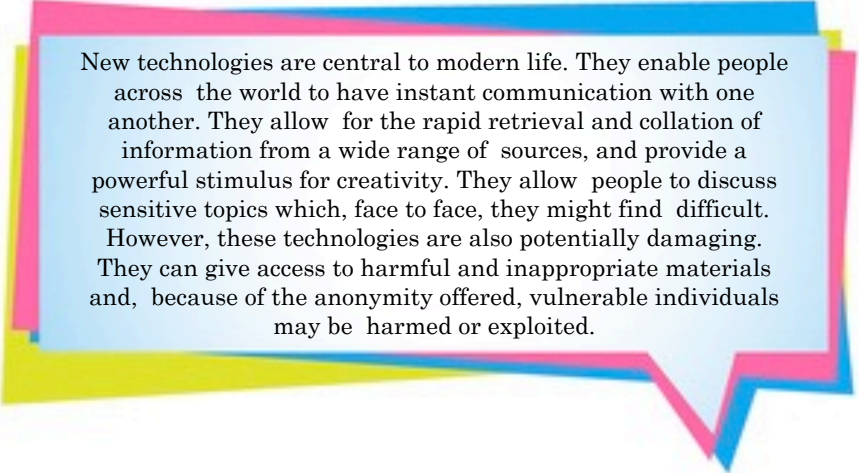
Future directions

Additional resources

Appendix 1: Checklist for assessing and reviewing your use of technology

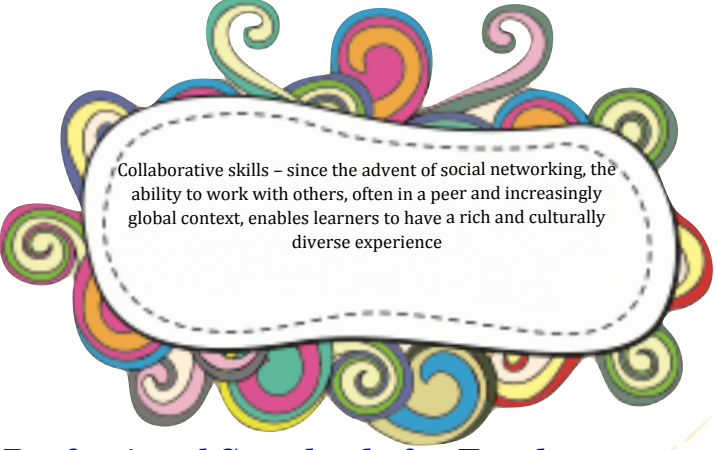
The National Context

As Ofsted (2010: 7)³ reports in their recent small-scale survey of 35 maintained schools in England:

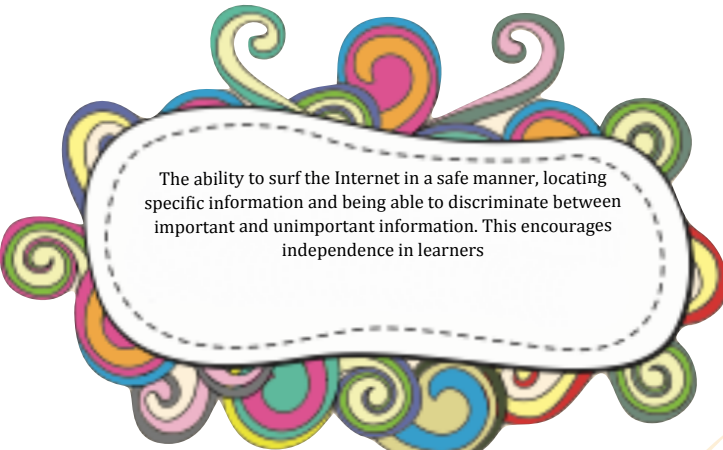


New technologies are central to modern life. They enable people across the world to have instant communication with one another. They allow for the rapid retrieval and collation of information from a wide range of sources, and provide a powerful stimulus for creativity. They allow people to discuss sensitive topics which, face to face, they might find difficult. However, these technologies are also potentially damaging. They can give access to harmful and inappropriate materials and, because of the anonymity offered, vulnerable individuals may be harmed or exploited.

Against this backdrop, Byron (2008)⁴ not only recognises the advantages of new technologies and the confidence and ease with which children and young people use them, but also notes disadvantages when children and young people do not have the knowledge, skills and understanding necessary to keep themselves safe. She highlights the need for Government to empower children and raise the skills of parents by delivering Internet safety (e-safety) through the curriculum and by providing teachers and the wider children's workforce with the knowledge and skills they need. The importance of e-safety permeates throughout many of the Professional Standards for Teachers (TDA, 2007).⁵



Collaborative skills – since the advent of social networking, the ability to work with others, often in a peer and increasingly global context, enables learners to have a rich and culturally diverse experience



The ability to surf the Internet in a safe manner, locating specific information and being able to discriminate between important and unimportant information. This encourages independence in learners

Professional Standards for Teachers

The government's aspiration to build a 21st century school system based on excellent teaching in order to raise the standards of education across the country places the role of ICT firmly at the heart of teaching and learning. This message is reflected in The Professional Standards for Teachers, which clearly state that your skills in ICT should support most aspects of your work in schools including: planning, teaching, assessment, evaluation and your wider professional activities. The following table identifies the professional values, attributes, skills, knowledge and understanding teachers must demonstrate so as to become effective practitioners within the context of 21st century schools.

³ Office for Standards in Education (2008) *The safe use of new technologies*, Manchester: Crown, www.ofsted.gov.uk/publications/090231

⁴ Byron, T. (2008) *Safer children in a digital world: the report of the Byron Review*, DCSF and DCMS, www.dcsf.gov.uk/byronreview/

⁵ Training and Development Agency for Schools (TDA) (2007) *Professional Standards for Teachers*, available at: www.tda.gov.uk

Introduction

As part of their outreach work, Advanced Skills Teachers (ASTs) in Information and Communications Technology (ICT) have worked with Initial Teacher Training (ITT) providers over the past decade to contribute toward the education and training of trainee teachers. This is to ensure, not only that future generations of teachers can benefit from the high quality teaching resources and materials they have produced and disseminated, but more importantly, that future generations of teachers can also become empowered to explore, develop and embed creative, innovative ICT practice within their own teaching. In so doing, they should be better prepared to accommodate the needs of all their learners, a majority of



whom already use many of the new technologies currently available both within and beyond the 21st century classroom context and have regular access to the Internet.¹

All children and young people are unique and, as 'digital natives'², bring a vast array of ICT knowledge, skills, understanding and experience to the classroom. Teachers who are responsive to a wide range of difference and



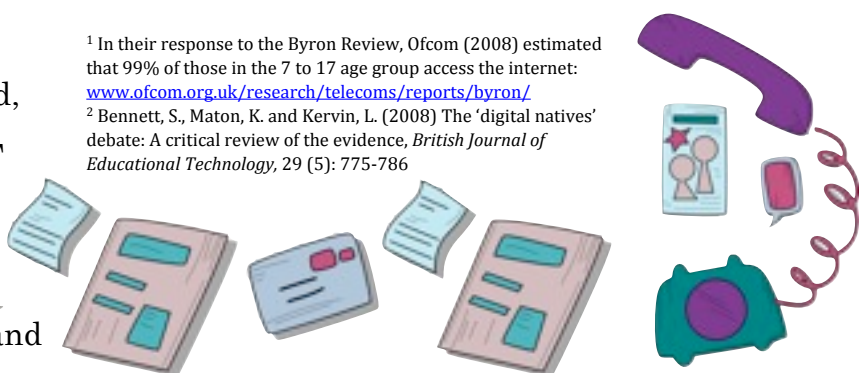
diversity, and who can support each child and young person to effectively use ICT tools and technologies by personalising provision, are more likely to enable their learners to become independent, self-directed and achieve their full potential in a safe and responsible manner.

This guidance booklet has been informed by the combined vision and expertise of ASTs, ICT Consultants and ITT university lecturers and is designed to support you by sharing some key messages related to teaching and learning with and through ICT. A wealth of resources and web links are interspersed throughout and a more extensive list has been included at the end to enable you to access further relevant information. These provide the catalyst to guide you in your professional learning journey and in the development of your pedagogical ICT capability.

¹ In their response to the Byron Review, Ofcom (2008) estimated that 99% of those in the 7 to 17 age group access the internet:

www.ofcom.org.uk/research/telecoms/reports/byron/

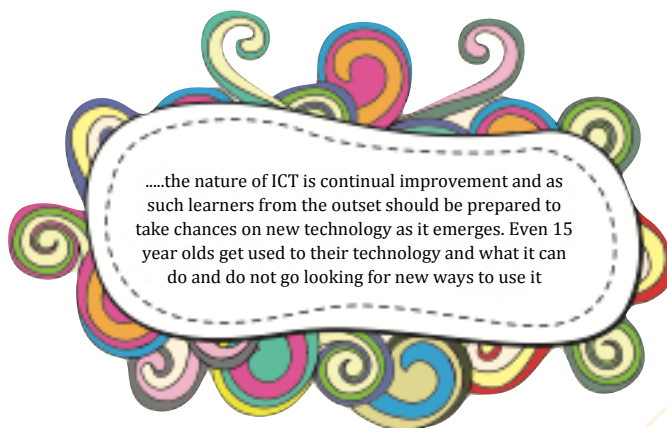
² Bennett, S., Maton, K. and Kervin, L. (2008) The 'digital natives' debate: A critical review of the evidence, *British Journal of Educational Technology*, 29 (5): 775-786



Professional skills and practice	Professional knowledge and understanding	Professional values and attributes
<ul style="list-style-type: none"> • Has a vision for technology in learning and teaching • Appreciates the role of technology within the learner's wider context • Has high expectations of all learners when using technology, understanding issues around equality and diversity • Reviews and evaluates the role of technology within learning and teaching • Develops professional understanding of and capability with ICT 	<ul style="list-style-type: none"> • Demonstrates capability in using ICT within the professional context • Understands the role of technology within effective teaching and learning • Has appropriate specialist knowledge of ICT • Understands how to identify and develop learners' ICT capability • Understands professional responsibilities for safeguarding learners and their data 	<ul style="list-style-type: none"> • Designs activities using technology to enhance and extend learning • Teaches effectively with technology • Manages learners' use of technology appropriately to promote engagement and learning • Monitors learning where technology is used, makes judgments about impact and reports on progress • Manages physical and virtual learning environments safely and effectively • Uses technology for communication and collaboration

[adapted from Becta, 2010:]⁶

These broad outcome statements highlight the need for you to adopt a critical stance in developing your pedagogical skills in ICT, one that is exemplified by an open-minded attitude to ICT and a willingness to try new things out. Whilst the ICT knowledge, skills and understanding each of you brings to your training will be different and might well range from: familiarisation, utilisation, integration, reorientation through to evolution on Hooper and Reiber's (1995)⁷ scale of e-maturity, the rapid advances continuously being made in ICT signal the need for each of you to also think of yourselves as a learner.



⁶ Becta (2010) *21st century teacher: Are you ready to meet the challenge?* Coventry: Becta.

⁷ Hooper, S. and Reiber, L. (1995) Teaching with technology, in A. Ornstein (ed) *Teaching: Theory into practice*, pages 154-170, Neeham Heights: Allyn & Bacon.

You must regularly review how you both can and do use technology within your role and be flexible in adapting your existing ICT knowledge, skills and understanding to new technologies as they emerge.



Framework for secondary ICT

The Framework for secondary ICT⁸ is part of the government’s National Strategy for secondary schools in England and builds on the framework for teaching ICT that was originally introduced in 2002. The principle aim underpinning this framework is to increase pupils’ access to excellent teaching and engaging, purposeful learning, which enables them to make good progress throughout Key Stages 3 and 4.

The four main strands, and ten sub-strands featured within this framework are designed to progressively enable pupils to become more confident, creative and productive in their use of ICT. This includes not only the mastery of technical skills and techniques but also an understanding of how to apply those skills and techniques purposely, safely and responsibly in learning, everyday life and in their future employment. The following table provides an overview of what aspects of ICT are mapped into each of the strands and sub-strands of this framework.

Strands	Sub-strands
1 Finding information	.1 Using data and information sources .2 Searching and selecting .3 Organising and investigating
2 Developing ideas	2.1 Analysing and automating process 2.2. Models and modeling 2.3 Sequencing instructions
3 Communicating information	3.1 Fitness for purpose 3.2 Refining and presenting information 3.3. Communicating
4 Evaluating	4.1 Evaluating work [Discrete but also embedded into the other nine sub-strands]

⁸ The complete Framework for secondary ICT can be downloaded from: <http://nationalstrategies.standards.dcsf.gov.uk/secondary/framework/ict/fwsict/afwlo>

Learning objectives are aligned to each sub-strand, which sets out the knowledge, skills and understanding that most pupils are expected to acquire as they demonstrate progression in their learning of ICT across years 7 through 11. For example, the learning objectives aligned to sub-strand 3.3 on communicating are shown in the table below.

Learning objectives 3.3: Communicating

Year 7	Year 8	Year 9	Year 10	Year 11	Extension
Capture, store and exchange information digitally by a variety of means	Select appropriate methods of exchanging digital information and recognise that the format affects the method of exchange	Recognise and describe the technical limitations and strengths associated with a range of digital communication methods			
Use digital communication to share information and collaborate with others for a purpose	Use digital communications for the sharing and collaborative development of ideas for a variety of purposes	Use a range of tools to automate the sharing of information and communication for a range of purposes	Refine the use of tools to create an efficient communication system to facilitate collaboration	Apply communication systems to facilitate collaboration and dissemination of information with a wider and possibly unknown audience, taking account of appropriate use of feedback	
Recognise the risks associated with the sharing of personal information digitally and to take actions to protect themselves	Work in a safe and responsible way when communicating with others	Be responsible, safe and secure in all communications	Describe the moral, social, legal and ethical issues relating to digital communication and the sharing of information, and apply them when communicating in a responsible, safe and secure manner	Exchange information securely, minimising the risks and the misuse of personal information; reflect critically on the use of digital communications, the implications for international communication and the impact on global life	Support and direct organisations to develop acceptable use and safety policies that contain appropriate guidelines on exchanging and sharing information

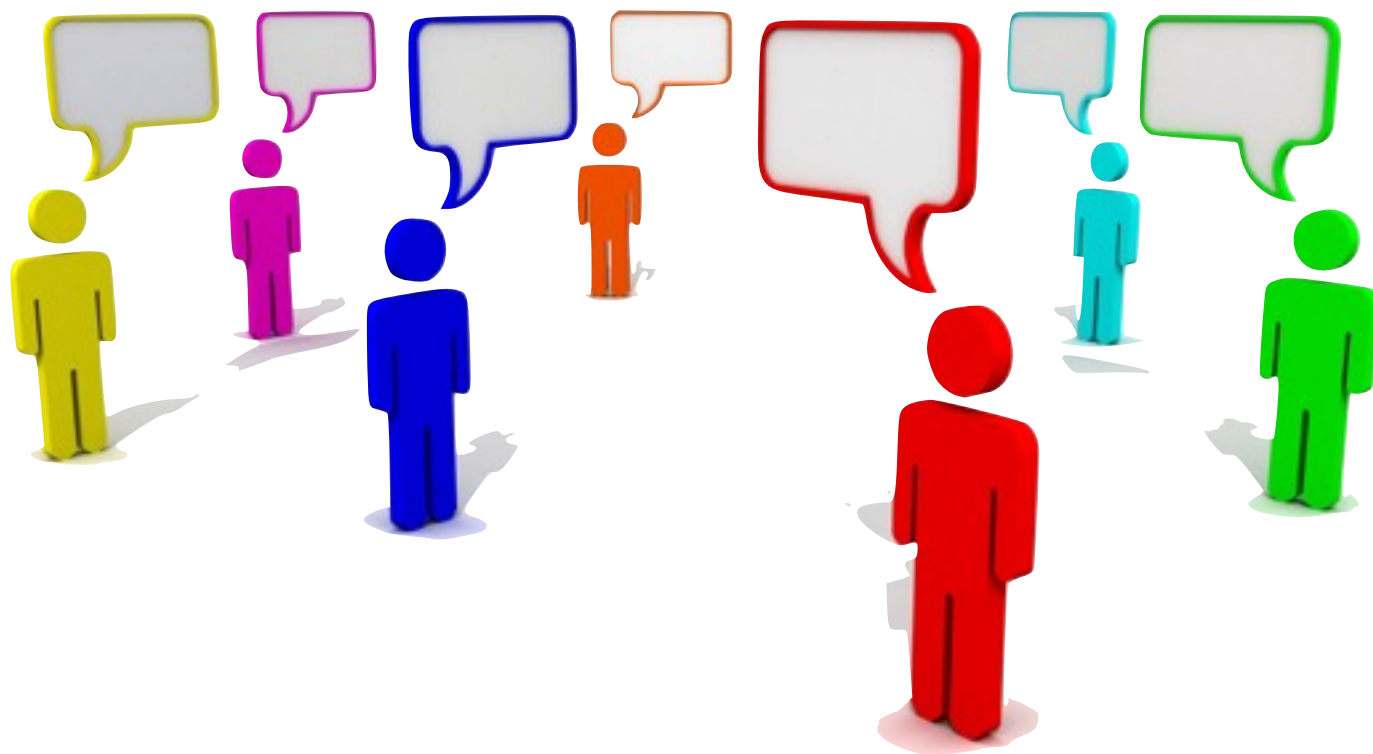
The purpose behind sharing some of the indicative content within this framework with you is to raise your awareness of how children and young people are currently engaging with technology, particularly in the ICT component of their secondary schooling. Increased capability in the use of ICT supports the development of creativity, initiative and independent learning, as children and young people are able to make more informed judgments about *what, when, how, where* and *why* to use ICT to enhance their own learning and the quality of their work.

These same individuals will already have been introduced to an exciting array of multi-media technologies as ICT has become embedded within all aspects of the primary curriculum.⁹ The key message here is that your pupils are already using and engaging with technology as part of their daily life, both in and out of school, and will increasingly expect to use it as a learning tool in all areas of the curriculum. The advances in the use of technology in all aspects of society makes the creative and productive use of ICT an essential skill for life.

Do you feel suitably equipped to integrate and embed ICT within your own teaching to support the needs of all your learners?

To help you review and assess your use of technology as a teacher in a focused and meaningful way you will find the checklist in Appendix 1 extremely beneficial.

Once you have completed this checklist you will need to consider your next steps toward acquiring the necessary knowledge, skills and understanding of ICT for 21st century teaching and learning.



Where might you turn for guidance, advice and support?

⁹ The Information Technology Advisory and Support Service (ITASS) has devised a Scheme of Work and created exciting materials that you can access for the Early Years Foundation Stage and Years 1 through 6 via: <http://www.itass.newham.gov.uk/curriculum/sow.aspx>

Advanced Skills Teachers

Making a difference

Since its launch in 1998, the National Assessment Agency for Advanced Skills Teachers [ASTs] and Excellent Teachers [ETs] have accredited more than 11,000 ASTs and ETs who are making a huge impact on raising the standards of pupils and inspiring other teachers to attain standards of excellence¹⁰.

As Professor Sir Tim Brighouse [former Senior Government Education Adviser] comments¹¹:

Youngsters learn best ... when they encounter teachers who are really skilful, understanding how to unlock their minds and how to appeal to them, and teach with flair ... here we see ASTs not only doing that but in the process ... changing life chances for the youngsters they teach.

Schools that have ASTs will tell you that they come back with the most extraordinary and positive ideas from visiting other schools.

I think that the most important benefit ... is what those ASTs bring to the quality of learning and teaching generally, not just in their own practice but more widely, so that more youngsters have that opportunity to brush against genius in teaching and therefore have the opportunity to fill their pockets with the confidence that will lead them on to becoming successful adults

Some of the ways in which ASTs have been making a difference in all phases of education across England include:

- narrowing the achievement gap and raising standards across schools
- creating an ethos of outstanding teaching through their in-reach work within school to inspire other teachers
- engaging in out-reach work to share and disseminate best practice
- having creative, innovative and committed teachers working alongside the leadership team and available to coach and mentor other teachers

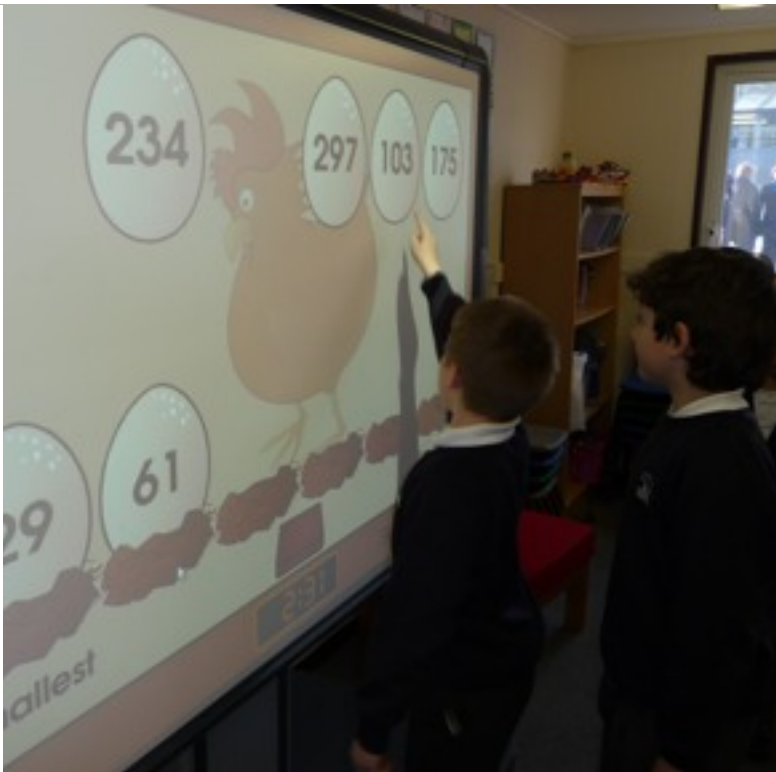
¹⁰ National Assessment Agency for ASTs and ETs have a range of resources, regular newsletters, information and guidance material available for prospective and current ASTs and ETs, headteachers, local authority representatives and other interested parties and hold workshops, events and conferences nationwide to share and disseminate best practice [email ASTandET@babcock.co.uk]. Other useful websites for this purpose include: www.advancedskillsteachers.com and www.teachernet.gov.uk/professionaldevelopment/ast/ as well as the AST page of the National College website www.nationalcollege.org.uk

¹¹ National Assessment Agency for ASTs and ETs (2009) *Advanced Skills Teachers: Making a Difference*, DVD-ROM available from ASTandET@vtpic.com

Roles and responsibilities¹²

For twenty percent of their teaching time ASTs use and share skills in classroom teaching with teachers in other schools, at higher education institutions, at facilities of the Local Authority [LA] and elsewhere to help raise the standards of teaching and learning more widely. They provide a lead in teaching and learning in their own school at all times and within the specific priorities of the school's own priorities for development. They also engage in innovation and the dissemination of effective practice with other teachers and members of the LA. Their key tasks and areas of responsibility include:

A. Teaching and Learning	<ul style="list-style-type: none">• Plan lessons• Team teach with other teachers in the school, as required• Model effective teaching to a whole class or target group of pupils whilst other teachers observe e.g. gifted and talented, English as an additional language, Special Educational Needs• Informally observe lessons, provide feedback to teachers and set appropriate targets• Coach teachers to develop their own teaching skills



¹² National Assessment Agency for ASTs and ETs (2010) *Leadership and Management of ASTs in Schools: A Tool Kit for Headteachers and Managers of Advanced Skills Teachers*, Surrey: Babcock 4S, page 11. Available from ASTandET@babcock.co.uk

B. Leading and supporting staff

- Support the head of department or subject leader with regard to schemes of work, policies or management skills
- Advise teachers on classroom organisation and management, lesson planning and appropriate teaching methods e.g. differentiation, pace and challenge
- Provide advice on developing behaviours of learning
- Act as a consultant to teams, developing strategies for pupils experiencing difficulties
- Participate in initial teacher training
- Participate in the mentoring of newly qualified teachers
- Assist teachers who are experiencing difficulties
- Lead and support subject networks
- Advise on the provision of in-service training
- Lead groups of staff in continuing professional development activities in area of expertise and evaluate outcomes
- Lead professional learning groups
- Provide subject specific advice, drawing on up-to-date research and developments
- Support the performance management process as required
- Ensure that teachers and schools receiving support develop sustainable practice
- Collect data to inform school developments
- Participate in interviews by monitoring teaching expertise
- Develop school policy

<p>C. Monitoring, recording and reporting</p>	<ul style="list-style-type: none"> • Produce and maintain records of visits to schools and elsewhere • Complete a summary report each term of their in-reach and out-reach work • Provide the LA with a portfolio of personal skills to help shape out-reach contributions within the LA
<p>D. General</p>	<ul style="list-style-type: none"> • Produce high quality teaching resources and materials, including video recordings of lessons for dissemination in their own school and other schools • Distribute materials relating to best practice and educational research to other teachers • Attend AST network meetings • Engage with appropriate training opportunities to promote professional effectiveness within their AST role • Undertake other responsibilities as agreed and negotiated with other teachers

Supporting the development of trainee teachers' ICT skills

ASTs collaborate with ITT providers to support the development of trainee teachers' ICT knowledge, skills and understanding in a number of different ways e.g.

- ASTs are often mentors for trainees, who benefit from their ongoing research and commitment to being at the cutting edge of developments
- Keeping up-to-date with developments in their area and undertaking their own ongoing research are vital parts of what it is to be an AST. Many have links with university, are involved in research projects, or teach at higher education institutions as part of their out-reach time, or in addition to their school AST role
- Many ASTs undertake Masters degrees, the results of which are shared amongst the trainees they support and networks they belong to
- ASTs develop and share innovative and stimulating schemes of work and resources e.g. creating websites, blogging, use of new technology
- ASTs often run training sessions for trainees in their own and other schools on the development and use of virtual learning environments (VLEs)
- ASTs are experts in the use and analysis of pupil data e.g. often creating and demonstrating the use of online tracking systems

A particularly important focus for ASTs, which builds on their expertise and specialism in ICT, is to ensure that all learners have an opportunity to:

- Access and use a **culturally and historically diverse range** of technologies and media products, including broadcast media, film, printed communications, games, web, podcasts and animation
- Use technology confidently and productively to find things out, try things out, develop and present ideas, and communicate with local and global audiences
- Use technology to create products for real situations and audiences, and become authors for different types of media
- Read, deconstruct and critically evaluate different types of media, including news, advertising images, documentary, film and podcasts
- Learn to question the authenticity, accuracy and reliability of information they encounter by asking: *'Can I believe what I read?' 'How can I use technology safely?' and 'How can the media be used to benefit society?'*
- Consider media both as consumers and authors of content
- Adapt to the changing nature of technologies and media
- Consider the relationship between reality and the world portrayed by the media
- Reflect on the role of the media in society and its ability to inform, influence and entertain
- Use and manage information effectively

As these examples begin to illuminate, the roles and responsibilities undertaken by ASTs are on the one hand, broad and wide-ranging yet on the other, highly focused and context specific. To gain access to ASTs news, information, discussions and resources you can join the national AST online forum. Simply go to www.nationalcollege.org and create a login, then navigate to the AST or Prospective AST groups in the 'Networking' section.



CASE STUDY 1

Hugo John catches up with Renaldo Lawrence 'the quiet revolutionary' in the link below. Renaldo is an ICT Advanced Skills Teacher from St John the Baptist School who shares with colleagues and trainee teachers his innovative skills and the exciting, imaginative ways in which he uses the *Adobe e-learning suite*. Some of his work has been influenced by

the work of Newcastle University regarding the 'Hole in the Wall' project.

<http://agent4change.net/innovators/864-the-innovators-24-renaldo-lawrence.html>



CASE STUDY 2

Jon Audain, a primary ICT AST, educational author and consultant welcomes you to Share Excellent ICT Practice by logging into the Hampshire website via the link below. The Creative Digital Media Circle is well worth a visit as it provides high quality examples of digital animation, digital

video and creative curriculum planning using *Apple and Digital Media* technology.

<http://www.jonaudain.co.uk>

CASE STUDY 3

The link below will take you to Learning Logs Online: Sharing Good Practice in Personalised Learning and stems from Inglehurst Junior School in Leicester. Ofsted viewed this particular aspect of the curriculum very positively and report that independent learning is promoted well; the use of home learning logs successfully develops pupils' enthusiastic attitudes after school; and, they (home learning logs) have inspired many parents to participate in their children's enthusiastic learning.

www.learninglogs.co.uk/theearlydevelopment.htm

You can also navigate your way to a hyperlink that explores building learning power and which the school realised went hand in glove with learning logs. For example, children were able to illustrate their learning and ability to learn in a variety of styles. They used the language for learning to explain ways in which they achieved or approached tasks and how they could move on to the next chapter in their learning.

www.buildinglearningpower.co.uk

Case Study 4

AST Darryl Bedford has recently launched a website upon which his achievements and lines of enquiry are clearly documented. He uses such technology as iPads, laptops, video cameras and Wacom tablets to facilitate cross-curricular links and to inspire his SEN students to work with animation, Internet technologies, performance and making films. He has also built a multimedia suite at Oak Lodge School for the Deaf to further engage his pupils.

www.projectict.com

More information and case studies on how ASTs support teaching and learning, which is published in newsletters that the National Assessment Agency for ASTs and ETs produce each term, as well as additional resources can be accessed via the following website: www.advancedskillsteachers.com



Core principles underpinning effective ICT practice

In light of the sheer volume of ICT resources that are currently available, in addition to the almost exponential, rapid advances being made in the development of new technologies, it becomes increasingly important that you are able to ground yourself in some core principles, which underpin the effective use of ICT for teaching and learning. Five core principles have been identified and captured within the purposefully coined acronym **SHARE**:

Core principles

underpinning

effective ICT

practice

Harness

Safety

Audit

SHARE

Excellence

Reflect



Safety: awareness of issues associated with children and young people online such as exploitation, data disclosure and cyber bullying in addition to how to protect your own professional identity. Often teachers show little concern when using YouTube videos as lesson starters or random Google Image searches in front of the class, which can set a poor example of online safety to children and young people. It is important to have the ability to surf the internet in a safe manner, locating specific information and being able to discriminate between important and unimportant information.



Harness: identify and explore the potential of current and new technologies children and young people use out-of-school and bring with them to the classroom as well as those beyond the workplace; be innovative, imaginative and creative; consider the power of multi-media technologies and the value of establishing international links. For example, smart notebook is very versatile and by layering images or text you can put the 'wow' factor into your lessons. Visualisers can be used as an Assessment for Learning tool by providing instant feedback, editing children's work, peer assessment, displaying resources, collaborative work, animation, time lapse science and much more. Power point and publisher are popular with pupils and the use of Serif Web Plus with Key Stage 4 pupils for website creation is very effective. Primary Wall/Wallwisher can be used for class discussions and Dance Ejay for creating soundtracks for movies, slideshows and crazy talk. You need to be able to access and effectively use virtual learning environments to support learning 24/7 as this supports personalised learning and independence



Audit: regular self-review, analysis and scrutiny of personal skills in ICT as well as your pupils ICT knowledge, skills and understanding; question how you accommodate pupils' learning styles/preferences and special educational needs; set yourself Specific, Manageable, Achievable, Realistic, Time bound (SMART) targets. You also need to have the resilience to attempt new methods of working and testing techniques to achieve new solutions to problems and increase your knowledge of applications by being able to apply the techniques of one software to another via functional skills



Reflect: evaluate the impact of ICT in relation to personal competence, pupils' progress and achievement, relevance to task and intended learning outcomes, pupils level of engagement and enjoyment in learning, communication with family and carers; identify what next steps need to be taken to enhance teaching and learning. You need to be critical of the quality of information available as learners have a tendency to accept all that is available on the internet without any form of vetting



Excellence: strive toward the highest possible standards of teaching and learning; challenge pupils thinking and empower them to become independent learners/enquirers; regularly engage in peer observation/review and professional development opportunities to refresh/update/up-skill; collaborate with colleagues and pupils; share and disseminate best working practice; engage in self-study and collaborative research within professional learning communities to develop innovative practice and co-create new knowledge. Since the advent of social networking, the ability to work with others, often in a peer and increasingly global context, enables learners to have a rich and culturally diverse experience.

Some recommended resources from Teachers TV

More than 3,500 resources are featured on Teachers TV, which capture different phases of schooling and whole school initiatives. The following selection exemplifies how you can promote better learning with ICT.

Computer Games in the Classroom - www.teachers.tv/video/37337

Using computer games in the classroom is a relatively new phenomenon of which many teachers are skeptical. Year 3 teacher Neil Webster knows very little about using computer games in class and sets out to discover whether they really can enhance the quality of his teaching. His reservations are erased when he meets Dawn Hallybone, a year 6 teacher, who is already using computer games in class to great effect. In this resource, Neil demonstrates the technology he has learnt and uses it in action with his own pupils.

Data Handling in the Classroom - www.teachers.tv/video/37339

Data handling is often carried out using traditional pen and paper methods in the classroom. However, ICT offers an effective and simple way to teach data handling at all levels and year 2 teacher Lynne Hall is challenged to overcome her fear of ICT in order to develop her teaching of data handling. She spends time with another primary teacher, Chris Thomas and learns about the benefits of using ICT to cut back on the data handling workload. After observing his confident use of ICT in data handling, Lynne heads back to her own school to create an engaging lesson for her pupils using ICT.

Improving Your Presentations – www.teachers.tv/video/37335

Presenting to pupils is something teachers do on a day-to-day basis, yet many are nervous about incorporating ICT into their presentations. Lise Bosher, a year one primary teacher is challenged to improve her presentation skills using ICT. She meets Joe Dale, a middle school French teacher, who uses ICT technology to enhance his own presentations. After observing one of his classes Lise returns to her own classroom to put the presentation technology she has learned into action.

Online Communities in the Classroom – www.teachers.tv/video/37336

Online communities and social networks are often criticised by teachers due to the negative publicity and online safety issues surrounding certain websites. Secondary French teacher Marie Guyomarc'h investigates how to make use of online communities in her classes. She meets with Lisa Stevens, a primary Spanish teacher who enjoys using social media websites for teaching purposes. Lisa explains the benefits of using websites such as Twitter and Voicethread, and demonstrates how they can be used in the classroom. Marie faces the challenge of taking back what she has learned and trying new things out with her own classes.

Video in the Classroom – www.teachers.tv/video/37338

Video use in the classroom is a technology that many teachers are nervous about yet it can offer a great way to engage pupils of all abilities. Becky Acton-Slaney, a geography teacher overcomes her fear of using video in the classroom by gaining tips from a colleague. She spends time with fellow geography teacher, Paul Cornish, who uses it regularly to enhance his lessons and watches how he uses video to stimulate learning and discusses the benefits of using videos with him. Becky takes this new knowledge on board and delivers an engaging lesson to her year eight geography students using video technology.

KS3/4 Music - Teaching Copyright – www.teachers.tv/video/37326

At Monk's Walk School in Hertfordshire, Head of Music Anna Gower invites songwriters and musicians to discuss the impact of illegal downloading with pupils. The musicians work with Key Stage 3 pupils as they write their own songs and highlight the importance of copyright in the creative process.

A personal approach is pivotal to engaging the pupils at Harrogate Grammar School with the same issue. Year 9 pupils define different roles within the music industry and discuss the effects of illegal downloading on songwriters. For Year 8 pupils the music teacher Andy Goldsmith asks pupils to imagine they are in a band as they learn how to protect their own work through copyright.

Primary e-Safety - Five Classroom Tips – www.teachers.tv/video/37344

In Barnard Castle, Startforth CE Primary School provides five key tips to help primary teachers deliver e-safety education in the classroom. Year 1 and 2 teacher Jilly Kearton works with pupils to create their own set of age appropriate e-safety rules. Year 3 and 4 teacher Vicky Bain makes use of online resources to deliver online safety messages to pupils. Differentiated activities enable her to reinforce important messages across a wide range of abilities. Year 6 teacher Martin Clunderay encourages pupils to talk about key issues by using role-play activities. Also, Headteacher Linda Sams speaks about the value of embedding e-safety across the whole school.

Primary e-Safety - Five Whole-School Tips – www.teachers.tv/video/37345

The staff at Parkwood Primary School, in Bradford, present five key messages underpinning their whole school approach to e-safety. Pupils deliver an e-safety assembly to parents and local authority ICT consultant Paul Scott raises awareness through a presentation to parents. Paul also runs a staff training session to develop teachers' knowledge of new technologies and their e-safety risks. Year 5 pupils are encouraged to use technology positively as they plan and create their own videos on cyber bullying. Year 6 teacher Kelly McGreavy assesses the pupils Internet safety knowledge, as the school strives to embed e-safety across the whole curriculum.

KS3 Maths – Lesson Starters: Scrapyard – <http://www.tes.co.uk/teaching-resource/KS3-Maths-Lesson-Starters-Scrapyard-Maths-6020119/>

This programme is intended for teachers to use in sections and by showing it to pupils on the whiteboard. There are five main topics within the programme: probability, ratio, symmetry, square numbers and circles.

Climate Change – The Causes – <http://www.tes.co.uk/teaching-resource/Teachers-TV-Climate-Change-The-Causes-6046533/>

This richly illustrated programme uses animation and natural history footage to provide an introduction to the topic of climate change at Key Stages 3 and 4. The concepts introduced include: naturally occurring greenhouse gases, natural variations in climate, industrialisation and population growth, use of fossil fuels and carbon dioxide emissions. The programme considers why climate change can appear to be controversial and examines how scientists ensure that their research is valid.

KS3/4 PSHE – Drugs: Breaking the Habit – <http://www.tes.co.uk/teaching-resource/KS3-4-PSHE-Drugs-Breaking-the-Habit-6044030/>

This programme features young people speaking about their drug and alcohol misuse and viewing the 15-minute footage in full for appropriateness before showing it to your class is recommended. Three young people talk openly about their experiences with drugs and alcohol and discuss what drove them to take drugs and potentially put their health, education and futures at risk and the impact this has had on their respective lives. The film also highlights how they were helped by such services in Brighton as Ru-ok? and how they eventually managed to overcome their addictions.

KS4 English – Island Man and Blessing – <http://www.tes.co.uk/teaching-resource/Phil-Beadle-S-Masterclass-Island-Man-and-amp-Blessing-6048904/>

Phil Beadle, former Teacher of the Year, explores poetry from different cultures and inspires a group of inner-city year 10 pupils with an active lesson about poetry from different cultures. He uses a variety of visual set pieces to inspire, challenge and excite, which provides English teachers with some concrete and accessible ways to approach the material. Poems featured within this episode are Grace Nichol's *Island Man* and Imtiaz Dhaker's *Blessing*.

Design and Technology – A Taste for Bridges – <http://www.tes.co.uk/teaching-resource/A-Taste-for-Bridges-6038937/>

Irene Harrison from Stoke Bishop primary school brings design and technology to life as she creates an inspirational programme to demonstrate how Brunel's suspension bridges were constructed. This includes taking pupils out of school on a field trip and inviting a parent governor in who has expertise as a bridge engineer to speak with the children. She willingly shares her creative and imaginative ideas with a fellow teacher from another school and endeavours to introduce a new piece of technology to her class each term.

Future directions

One of the central aims of government, as reflected in its proposal and vision for Teaching Schools (DfE, 2010)¹³ of the future, is to harness outstanding teachers through creating the role Specialist Leader of Education (SLE). Given the very successful track record in making a difference over the past decade, ASTs are very well placed in demonstrating their commitment to support other schools and teachers within other schools to improve their own practice. To maintain the culture of AST out-reach work and ensure that it does not disappear altogether, at the time of writing this guidance, the National Assessment Agency for ASTs and ETs¹⁴ has called upon its membership to consider a range of working models for ASTs:

- Devolved model
- Partnership or Cluster Model
- School Funded Model

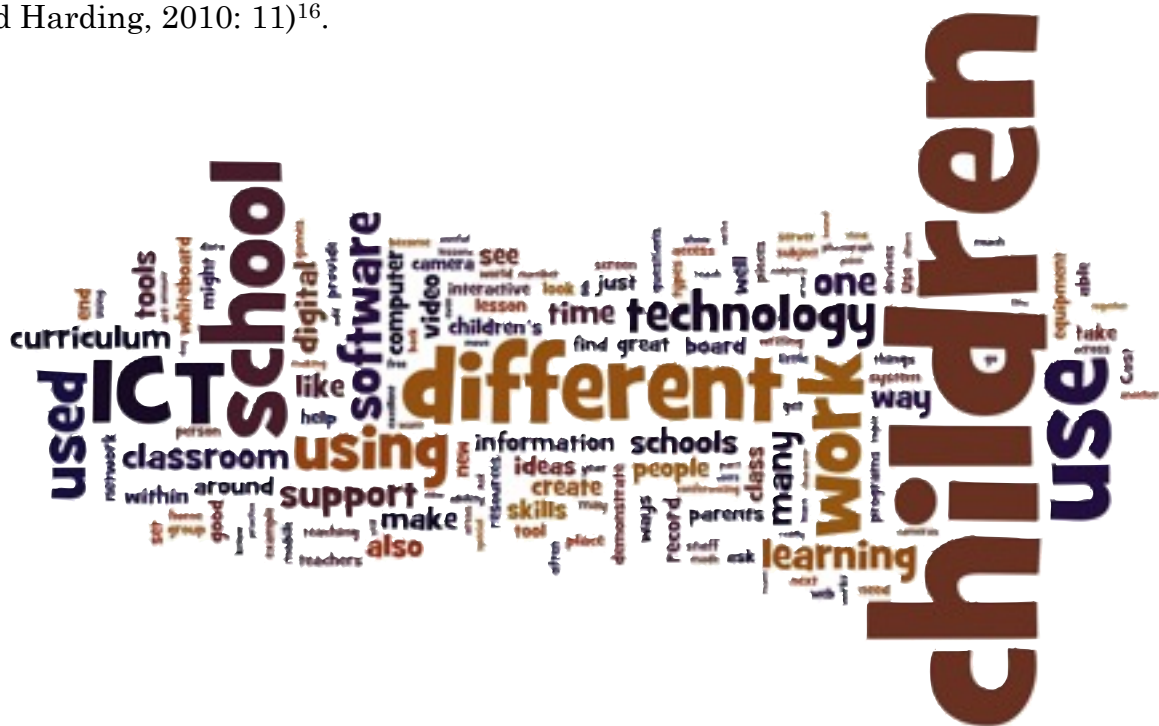
¹³ Department for Education (DfE) (2010) *The Importance of Teaching: The Schools White Paper 2010*, London: DfE.

¹⁴ National Assessment Agency for ASTs and ETs (2011) *Exploding the myth*, June Newsletter, page 2, Surrey: Babcock 4S. Available from ASTandET@babcock.co.uk

Looking to the future, particularly in light of the key messages embedded within *The Importance of Teaching* (DfE, 2010), Project Director of the National Assessment Agency for ASTs and ETs, Martin Flatman advises ASTs¹⁵ to take their opportunities by:

- Making a difference in their own and other schools [especially those that fall below the ‘floor standards’]
- Offer their services – possibly in conjunction with other ASTs – in innovative projects, especially the new Education Endowment Funded projects
- Track the establishment of ‘collaboration incentives’ and support the designated ‘weaker schools’
- Keep up-to-date by reading recent research in educational journals and getting a handle on the various systems around the world that are recognised as being exceptional

Although the future direction of ASTs appears to be somewhat uncertain with the financial restraints and cuts very much in evidence across the educational sector, the unique role of ASTs should be championed as these individuals provide real advantages not only by ‘enhancing the quality of teaching of those they work with’ but also by providing opportunities for ‘feedback on how teachers are applying their new practices, adapting their ideas into classroom contexts or more general enquiries about using new material or curriculum examples’ (Fuller, Goodwyn, Francis-Brophy and Harding, 2010: 11)¹⁶.



¹⁵ National Assessment Agency for ASTs and ETs (2011) *The AST as Coach, Consultant and Career Guru*, A report of the conference in Leeds on 7th February 2011: 5, Surrey: Babcock 4S. Available from ASTandET@babcock.co.uk

¹⁶ Fuller, C., Goodwyn, A., Francis-Brophy, E. and Harding, R. (2010) *Advanced Skills Teachers: Summary Report*, The Institute of Education: University of Reading

Additional resources

Becta – although no longer in existence the original resources produced by Becta, particularly those related to Harnessing Technology can be found in the National Archives by following this link: <http://www.becta.org.uk>

British Broadcasting Company (BBC) – houses numerous resources that can be accessed and used for teaching and learning: <http://www.bbc.co.uk/>

British Film Institute: <http://www.bfi.org.uk>

Centre for the use of Research & Evidence in Education (CUREE) – a very resourceful website which provides a bubble map to navigate your way round, for example, the terminal entitled inside evidence will lead you directly to a recent Ofsted (2009) report entitled 'What makes for good progress in ICT?' <http://www.curee-paccts.com/block-content/bubble-map>

Cultivating Creativity: http://www.nrich.maths.org/public/viewer.php?obj_id=5784

Futurelab – this website houses a wealth of resources [e.g. articles, research reports, software, downloads, web tools and video clips] on a wide variety of themes, including personalisation, to support learning with ICT: www.futurelab.org.uk/

ICT tutors website – www.ict-tutors.co.uk

Information Technology Advisory and Support Service for EYFS and Primary School ICT Schemes of work, materials and resources: <http://www.itass.newham.gov.uk/curriculum/sow>.

Interactive resources: <http://www.interactive-resources.co.uk/>

Interactive Teaching Programs 1: <http://www.standards.dfes.gov.uk/primary/publications/mathematics/itps/>

LearnHigher – an invaluable new website that has been produced by a number of universities. The link will take you directly to the resource area for students which provides guidance on all aspects of academic and professional development including oral presentations, group work, information literacy, report writing, and numeracy, maths and statistics: <http://www.learnhigher.ac.uk/students.htm>

Marco Polo Classroom Resources: <http://www.thinkfinity.org/EducatorHome.aspx>

Mind Mapping Software – a free online version of Inspiration for you to use as a mind-mapping tool: <http://www.mywebinspiration.com>

NAACE website has lots of information about ICT and curriculum with links to a good range of activities to use with children

Pebblepad is a Personal Learning System that provides scaffolding to help users create records of learning, achievement and aspiration and has a reflective structure underpinning all of its core elements. The following link guides you toward the Pebblepad newsletter, which also details upcoming events and conferences: <http://www.pebblepad.co.uk/default.asp>

Professional development in ICT – you can follow this link to access a suite of modules related to the Pedagogy and practice strand e.g. ICT: Models and modeling, subject leader development e-learning: Challenging the Gaps; Removing barriers to progress in ICT – evaluating, handling data, improving pedagogy, internet literacy, problem solving; ICT unit plan – sequencing instructions:

<http://www.teachfind.com/becta/printer-friendly-becta-schools-professional-development-teachers-21st-century-teacher-use>

Promethean Training: http://www.movies.atomiclearning.com/k12/activprimary_2_pc

Puzzlemaker: <http://www.puzzlemaker.com>

Smart Board Training: <http://www.smarttech.com/trainingcenter/tutorials.asp>

Teacher Training Resource Bank: <http://www.ttrb.ac.uk/>

www.virtual-teacher.blogspot.com provides links to numerous sites relevant to aspects of the ICT curriculum as well as free tutorials. Ofsted reports e.g. e-safety, books and videos

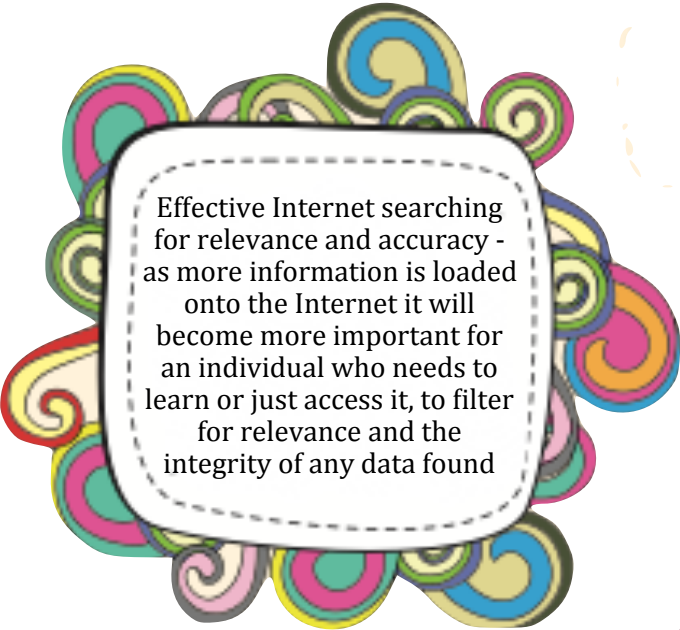
Appendix 1: Checklist for assessing your use of technology

ABOUT YOU	Regularly	Sometimes	Not at all
Do you use ICT to support your planning?			
Do you embed ICT across the curriculum to enhance and extend learning?			
Do you use ICT to communicate information and concepts in high quality lessons?			
Do you use ICT to explore complex ideas and information?			
Do you use ICT to assess pupils and track their progress?			
Do you use ICT to store and analyse pupil data for formative and summative assessment?			
Do you review your own ICT skills and effective use of ICT in learning, teaching and management?			
Do you include clear personal targets for ICT in your performance review?			
Do you protect your personal information and professional status online?			
About your learners	Regularly	Sometimes	Not at all
Do you have high expectations of all learners and outcomes when using ICT?			
Do your learners have personalised, creative and independent learning experiences using ICT?			
Do you use ICT to provide solutions to support learners with special needs?			
Do you assess your learners' ICT capabilities?			
Do you use ICT to involve learners in their own assessment?			
Do your learners have an understanding of e-safety and responsible online behaviour?			

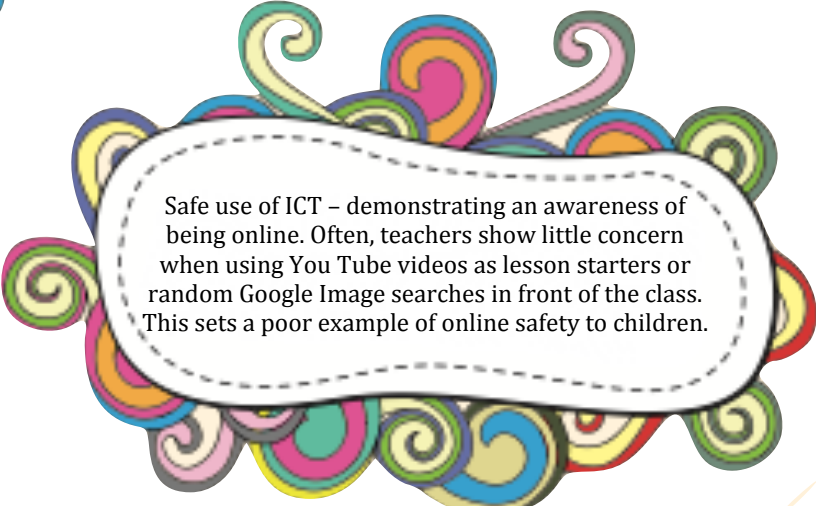
ABOUT YOU	Regularly	Sometimes	Not at all
Do you consider the need to protect your learners' personal information? (e.g. mark sheets)			
Do you manage ICT flexibly to ensure your learners have access to a wide range of ICT resources: in a variety of situations, when needed?			
About learning beyond school	Regularly	Sometimes	Not at all
Do you contribute to the school's vision for using ICT at school and at home?			
Do you use ICT to communicate appropriate information with parents? (e.g. homework, news, events)			
Do you provide parents with information about their child via secure online access? (e.g. reports, attendance)			
Do you help parents understand their e-safety responsibilities?			
Do you share, with learners, the school's vision for using ICT at school and at home?			
Do you use ICT to support and extend learning beyond school? (e.g. learning platform or school website)			
Do you offer wider opportunities for learners to use ICT to continue and/or extend learning beyond school? (e.g. out of hours access to ICT facilities)			
About your role in your school	Regularly	Sometimes	Not at all
Do you use ICT to communicate with colleagues?			
Do you share your practice in ICT with colleagues?			
Do your targets for ICT development inform whole school CPD planning?			
Do you contribute to your school's self-review of its use of technology?			
Do you share your school's vision for ICT, at school and at home, with stakeholders, including governors, and parents?			
Do you support your school's public commitment to improving through technology? (e.g. Next Generation Learning Charter)			

Reviewing your checklist

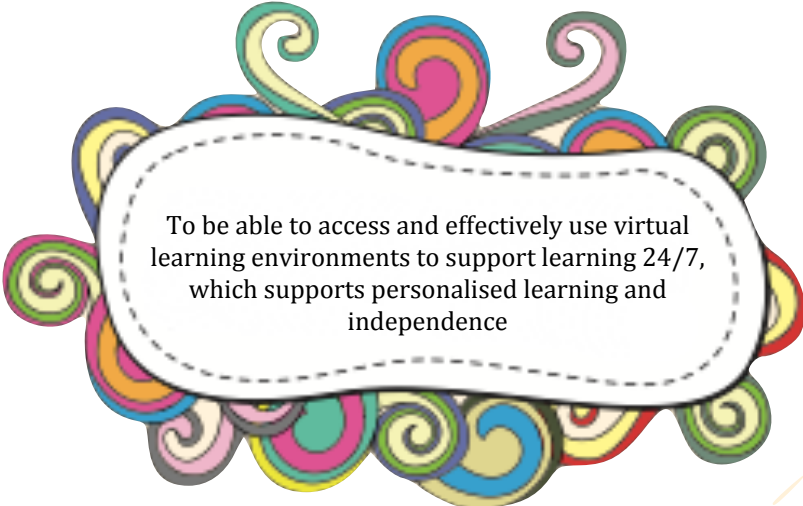
Mainly 'regularly' checks	Mainly 'sometimes' checks	Mainly 'not at all' checks
<ul style="list-style-type: none">• Are there any actions that match your PDR targets?• Have you thought about sharing your practice with colleagues in your school?• Are there any new actions you might find interesting or regular actions that require consolidation?	<ul style="list-style-type: none">• Are there any actions that match your PDR targets?• Are there colleagues in your school who you could work with to develop your practice using technology?• Are there any actions that you feel you should be undertaking more routinely in your practice?	<ul style="list-style-type: none">• Are there any actions that match your PDR targets?• Are there colleagues in your school who you could work with to develop your practice?• Are there any actions that you feel you could tackle with some support from a colleague?



Effective Internet searching for relevance and accuracy - as more information is loaded onto the Internet it will become more important for an individual who needs to learn or just access it, to filter for relevance and the integrity of any data found



Safe use of ICT - demonstrating an awareness of being online. Often, teachers show little concern when using You Tube videos as lesson starters or random Google Image searches in front of the class. This sets a poor example of online safety to children.



To be able to access and effectively use virtual learning environments to support learning 24/7, which supports personalised learning and independence

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