7TH EDITION

PRIMARY COMPUTING & DIGITAL TECHNOLOGIES

KNOWLEDGE, UNDERSTANDING & PRACTICE

**KEITH TURVEY
JOHN POTTER
JEREMY BURTON**
WITH **JONATHAN ALLEN**
& **JANE SHARP**

SAGE | **LearningMatters**

17
Safety; online and off

Chapter objectives

When you have completed work on this chapter, you will have:

- **understood the key areas of risk associated with the concept of online safety;**
- **considered some of the resources available to develop a proactive approach to developing children's awareness of online safety issues;**
- **examined the importance of managing your own online identity and conduct to protect your professional reputation;**
- **considered your responsibility for managing health and safety issues that can arise from the use of technologies in education;**
- **developed strategies to promote children's safe use of the Internet in teaching and learning.**

Introduction

In this chapter, we introduce the important and ever-shifting issues surrounding the safe use of technologies and the internet. We want to highlight the constantly changing nature of this area, as rapid advances in technological devices and the ways in which people communicate and connect via communications networks mean that new risks go hand in hand with burgeoning opportunities (Livingstone et al., 2011). Schools, teachers, parents and children all need to work together to ensure children can safely make the most of the opportunities offered by new technologies. However, schools and teachers in particular have an important role to play in facilitating children's digital literacy and safety skills, which in turn has implications for teachers' professional knowledge and understanding, as we consider in this chapter. This chapter also builds on Chapters 10 and 13 in Section B, which highlighted the different ways of developing children's digital literacy in relation to the internet and social media. As such the online safety element of this chapter relates specifically to the National Curriculum programme of study for computing (DfE, 2013) which states:

Pupils should be taught to:

- KS1 – Use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet.
- KS2 – Use technology safely, respectfully and responsibly; know a range of ways to report concerns and inappropriate behaviour.

In the second half of this chapter, we also address more general health and safety considerations that apply to the use of technologies in schools as well as schools' legal responsibilities with regard to health and safety.

The bigger picture

There are many new varieties of electronic text and forms of communication emerging as technology develops. Blogs, vlogs, instant messaging, mobile phone texting, wikis, tweets and social networking sites provide ever-expanding possibilities for sharing information, images and other media. The use of such tools is only just beginning to be explored in educational contexts and there has been concern about privacy and about who can access information outside a person's chosen contacts. One of the risks is that, without hearing or seeing the other person, children cannot identify them or know if their motivation for making contact is innocent. However, it does not have to be a stranger to the child who puts them at risk – peers or indeed family members in some circumstances could be a source of risk.

Social networking can provide a forum for 'cyberbullying'. This is a term used to describe the use of the internet or mobile networks to harass others. It is extremely upsetting for victims because it intrudes into their private space and it can appear that there is no escape. Incidents can take place at all times of day or night, and at any location, even within the safety of the home. There is guidance for schools on managing this issue in the document *Cyberbullying – Safe to Learn: Embedding Anti-bullying Work in Schools* (published by the DCSF in 2007 and available via **https://www.kidscape.org.uk**). The Child Exploitation and Online Protection (CEOP) Centre is a useful resource for guidance on cyberbullying and the safe use of the internet and social networking. While the issues of cyberbullying and the grooming of children by online predators are great cause for concern these risks do not represent the whole picture.

Identifying the risks

A good starting point as a student teacher is to ensure that your own knowledge and understanding of the risks associated with the internet and other communications technologies is up to date. Some of the dangers inherent in the use of the internet or mobile communications networks are widely known and acknowledged. For example, issues such as online grooming of children and young people, or cyberbullying, understandably garner much attention in the media and are a particularly acute concern to children, parents, teachers and the wider community alike. However, equally pervasive is the plethora of wholly inaccurate and pernicious information available online. This includes versions of history which serve extreme political views and are represented as fact (Holocaust deniers, for example). Furthermore, Livingstone et al.'s (2011) comprehensive European survey of children and young people's use of online networks identifies a far more nuanced picture of newer risks emerging via user-generated content, including hate sites, pro-anorexic sites, self-harm sites, drug forums and suicide sites. Childnet International (2014) have developed a range of useful resources for trainee teachers focusing on the issues of online safety, in which they classify the risks in terms of four broad areas (often referred to as 'the four Cs'):

● *Conduct.* Often children and adults have a false sense of anonymity when online which can lead them to conduct themselves in ways that are inappropriate, putting themselves and others at risk. It is important therefore for children to understand the impact their online activity could have, in order to fully understand the importance of keeping their own and others' information private.

- *Contact.* This includes this risks of online grooming and cyberbullying. It also includes the safe management and review of their online contacts.
- *Content.* This includes any inappropriate material such as pornographic, hateful or violent content. It also includes any material that may be dangerous, illegal, age-inappropriate, inaccurate or biased. Under this category plagiarism and copyright issues are also considered as children, like adults, can put themselves at risk through the illegal use of copyright material.
- *Commercialism.* This includes issues such as junk e-mail, personal privacy and commercial exploitation of children and young people through aggressive marketing strategies and premium rate services.

PRACTICAL TASK   PRACTICAL TASK   PRACTICAL TASK   PRACTICAL TASK

Watch the 'Know IT All' video presentation for teachers available from the Childnet International website at **www.childnet.com/resources/know-it-all-for-primary/teachers-presentation**.

When you have watched each chapter of this video presentation, discuss your response with other student teachers on your course. Ensure that you understand your responsibility to report to the designated child protection officer in school any disclosure which indicates a child may be at risk. You should also make careful notes of any disclosure which you should sign and date.

Developing a proactive stance towards online safety

There are various strategies that schools use to ensure, in the first instance, that children are kept safe while using the internet in school. Internet safety policies exist to ensure, as far as possible, safe access and responsible use of the internet for learners within school. All schools making use of the internet should have an appropriate policy, often called an acceptable use policy (AUP) or a responsible use policy (RUP), which clearly outlines the potential benefits and risks and how these are managed within the school. Policies are usually written and reviewed in consultation with parents and there are model versions available from government websites for education and parents' information sites. Student teachers should familiarise themselves with how these policies operate in their schools and seek further advice from the senior management and/or ICT subject leader.

Since most access to the internet in schools is now supplied under contract by regional broadband consortia (RBCs), the filtering of inappropriate content is often carried out remotely by the local authority or RBC itself. Teachers can often report sites which they feel are harmful, and these are added to the list for blocked access. It may also be appropriate to request the unblocking of sites – as it is quite possible that harmless yet educational sites can be blocked due to the software not discriminating between key words and words contained within words (Sussex, for example). Encouraging a culture where children feel able to report things they see which make them feel uncomfortable fosters a responsible attitude and begins to educate learners about how they would deal with these issues in the wider world beyond the classroom. It is also important to remember that no filtering system is guaranteed to filter out all potentially harmful content.

While the provision for filtering and blocking content together with clear expectations and policies with regard to acceptable internet use in schools can be useful tools in a proactive stance towards online safety, it is questionable whether, in and of themselves, these can empower children and young people to keep themselves safe online beyond school. Increasingly, children are faced with a plethora of online tools and facilities. These are accessed through mobile technologies such as phones, iPads and other tablet devices and MP3 players offering connectivity to the internet, social networks and online applications. In addition, domestic and public spaces are increasingly equipped with both secure and open wireless connectivity, which again can be accessed through a range of devices and applications.

RESEARCH SUMMARY RESEARCH SUMMARY **RESEARCH SUMMARY** RESEARCH SUMMARY

There have been two major research studies into online safety: the Byron Review (2008), and the EU Kids Online study (Livingstone et al., 2011). A vital message emerging from these two research studies into online safety is that it is no longer adequate for teachers and schools to only take a banning and blocking approach to inappropriate content or activity on the internet. Livingstone et al. (2011) found that 38 per cent of 9–12 year olds were using social networking sites under age and the authors of the review question the usefulness of blanket age limits altogether. It is clear that policing the internet, whether in school or in the wider society, is not in itself sufficient, as Byron points out:

Children and young people need to be empowered to keep themselves safe – this isn't just about a top-down approach. Children will be children – pushing boundaries and taking risks. At a public swimming pool we have gates, put up signs, have lifeguards and shallow ends, but we also teach children how to swim.

(Byron, 2008, p.2)

Livingstone et al. (2011) also focus on the need to empower children and young people to keep themselves safe while making the most of the rich opportunities offered by online collaboration tools. However, they also stress the changing nature of the risks associated with the internet and mobile networks, and the importance of 'listening to children to learn what new risks they are experiencing' (Livingstone et al., 2011, p.29). Against this backdrop, it is clear that schools and teachers have an important role to play in equipping children with the critical knowledge, understanding and skills to keep themselves safe online in school and beyond. As discussed in Chapters 10 and 13, the use of the internet in schools together with the access to a range of online collaboration tools within the relatively safe environment of a VLE, places schools in a unique position to address issues of online safety with children.

There is a rich source of materials for supporting teachers in the teaching of online safety in primary schools as you will find by exploring websites such as Childnet International and their Know IT All resources (**www.childnet.com/resources**). Similarly, the Child Exploitation and Online Protection Agency (CEOP) has a lot of useful advice and resources to support teachers in addressing the issue of online safety (*www.ceop.police. uk*/). CEOP operate the Thinkuknow website which again has a wealth of resources for education (**https://www.thinkuknow.co.uk/**). CEOP also have a responsive mechanism

Figure 17.1 CEOP Report Abuse Button

by which children, young people and adults can report abuse when using social media such as Facebook or Messenger. It is important to ensure that children are familiar with the CEOP Report Abuse Button (see Figure 17.1) and how it connects to the CEOP safety centre (**www.ceop.police.uk/safety-centre**).

If you are asked to teach an online safety lesson as a student teacher or NQT you should always seek local advice from other colleagues and read the school's safeguarding policies very carefully to ensure you are familiar with procedures. You should also have an established relationship with the children you are teaching so that you are able to evaluate their responses accurately. Discussing the more sensitive issues of online safety can make some children feel uncomfortable so it is advisable also to teach such lessons when you have support from a teaching assistant who also knows the children well and can offer appropriate support. It is not at all advisable that a new trainee deliver an online safety lesson that looks at the dangers of online grooming with a class of children. However, at some point in your early career you may be required to plan and teach such a lesson. The next practical task is designed to help you begin to think about how you would prepare for this.

PRACTICAL TASK   PRACTICAL TASK   PRACTICAL TASK   PRACTICAL TASK

Watch the following video by CEOP, *Jigsaw: for 8–10 year olds*, at **https://www.youtube.com/watch?v=_o8auwnJtqE**. The video from CEOPs Thinkuknow education programme is designed to help children understand the importance of protecting their personal and private information. It could be used to teach them the importance of setting their online profile to private and emphasising the importance of only talking to people they know and trust in real life. When you have watched this film, think about and discuss with another teacher the following questions:

- **How might you use this video as a teaching resource, e.g. as a one-off lesson or as part of a series of lessons on online safety?**

- **What issues might arise from showing this video to the children?**

- **Who else might you involve in a lesson based on this resource (e.g. another experienced teacher, a teaching assistant, some invited parents)?**

- **How would you follow up this lesson?**

- **How could you involve parents to make sure that the messages and learning from the lesson are followed up positively?**

For further ideas and resources to support your teaching of e-safety in primary schools, Burton (2016) worked with a network of primary school teachers to curate an online resource of the most useful links that the teachers draw on to support their teaching and professional development in this area. These can be found at the following link: **www. theslate.org/learn/e-safety/**.

As a trainee or NQT you can also do a great deal of online safety work with children to equip them with the knowledge, understanding and skills to keep themselves safe online. In Chapter 10, Web Literacy, we examined how children's web literacy can be developed by helping them to understanding how web technologies work. Children will use the internet throughout the curriculum both in and out of school. In school the promotion of safe use of the internet can also be reinforced by following some general principles of good practice.

The internet and especially the world wide web can be enthralling – the temptation for random exploration can be hard to resist. Teachers will need to manage children's tasks in order to ensure both their safety and the productivity of the activity. Use of bookmarked sites only, tightly focused tasks and time limiting can be appropriate strategies.

Reading level and language issues

The vast majority of web pages are aimed at an adult audience and may thus be difficult for some primary children to comprehend. There are a number of strategies teachers can deploy in order to provide material which is accessible to children, including:

- the use of a search tool such as Ask Kids, which is designed to select sites which answer the query posed at an appropriate reading level;
- reviewing any websites to be used before the lesson;
- utilising web pages specifically written for children;
- utilising web pages recommended by other teachers;
- utilising children's work on school web pages.

Teachers may also be concerned about American web pages which display not only differences in vocabulary but also differences in the spellings of words. Children are exposed to US (and Australian) vocabulary through television, as are adults, and appear to have little difficulty with comprehension. Alternative spellings may provide more of a challenge, although they can also provide a teaching and learning opportunity. Teachers can make explicit the differences and discuss these with children – for instance, searching for information on the theme of 'colour' in a US-based search tool may be unproductive, although a parallel search using the US spelling could also be attempted.

Currency and authenticity

There is a lot of concern about the currency and authenticity of materials available on the world wide web. The potential to access up-to-the-moment satellite weather photographs, breaking world news stories, images from space as they are received from missions or real-time videos of bird eggs hatching is exhilarating. However, there are lots of websites which are not regularly maintained and in which the information displayed may be outdated. This can be frustrating and schools must also do their bit to ensure that

their own web pages are current. Many web pages include information giving the date on which they were last updated. This can be a useful guide.

Authenticity is often harder to assess. Anyone can upload information to the world wide web or circulate it via e-mail, newsgroups or listservs. There is no editing process, as there is with any published book, newspaper or magazine, and thus material, particularly from unfamiliar sources, must be viewed critically. It may be partial, misleading or inaccurate. Comparing information from the internet with that from other sources for substantiation and corroboration can be a teaching and learning objective in itself. Some high-quality websites are subject to an editing process, such as the BBC **(www. bbc.co.uk)** and newspapers (e.g. **www.guardian.co.uk).** Children need to be taught about these issues so that they can be critical and discerning in their use of content.

IN THE CLASSROOM

A class of Year 4 children are exploring the following website **http://zapatopi.net/treeoctopus/.** They have identified that the site and the content of the site is not authentic but they are analysing the strategies that have been used to make this appear an authentic website. For example, they identify the use of formal style of language and technical vocabulary. They then go onto to discuss how they can cross reference to other sources to try to validate the authenticity of the web page. Think about how you could use a site like this to develop children's knowledge and understanding about how to question and validate the information they find on the world wide web.

Advanced search techniques

Another way to promote children's safe use of the internet is through teaching them how to search more efficiently and effectively. Most search tools support both keyword and categorised searching. For many users, especially when starting out, search tools can be frustratingly unproductive. Perseverance and the use of some advanced or Boolean searching strategies will usually turn up something useful. The term 'Boolean' originates from the nineteenth-century English mathematician George Boole because the search strategies themselves are based on a form of logic that he developed.

Boolean searching involves the use of operators such as AND, OR and NOT. These can be used to refine searches by combining or excluding words or phrases:

- AND narrows a search such that only sites that contain both keywords will be displayed, e.g. information AND technology;
- OR widens a search to include sites containing one or other, or both, of the keywords used, e.g. information OR technology;
- NOT narrows a search by excluding sites containing the keyword which follows it, e.g. information NOT technology.

Often the Boolean operators must be in upper case, although it is important to check in the search tool being used. Some tools use the plus and minus sign (+/–) to provide similar functions. Other useful strategies supported by a number of search tools include:

- the use of quotation marks around phrases, such as "information technology" – this will ensure that only sites in which the words appear in this order are found;
- wild cards, which are symbols that can be entered at the beginning or end of keywords or phrases, such as 'tech', and the search engine will then look for matches which contain words beginning with tech, but with a range of endings, such as technology, technologies, techniques and technical. The symbol used varies between search tools.

Search tools vary enormously. They also develop and change. It is worthwhile exploring the guidance given by the tools themselves – there is usually a wealth of information pointing towards more efficient and effective use. You could also use the website **www.searchenginewatch.com** which is a comprehensive listing of search engines together with tutorials and rankings of the various services.

Professional issues for teachers

If student teachers and teachers are to keep up to date with both the new risks and opportunities that developments in new forms of communication might yield, then their own safe and critical use of such technologies is to be welcomed. Furthermore, social networking sites and tools are used by many student teachers to keep in touch with friends and family while away from home. They are also a useful tool for forming new friendships and networks both professionally and socially. However, it is the tendency of these social and professional networks to converge that can pose risks to students' and professional teachers' reputations alike.

You should take care over what information you share online, including any photographs of your social life. Remember that children and their parents may look you up online. They might also request to become friends with you on social networking sites. To protect your professional reputation, ensure that you understand the privacy settings you use for any online content you upload or any online communities you participate in. Consider carefully what information you include in any online profiles, professional or personal.

It is important to follow all relevant guidelines on communicating with children and their parents/carers, for example on using your own personal mobile or any mobile phone issued by the school, the local authority or nationally. Many schools do now use various text-messaging services to update parents on events at school or even their child's progress. However, this is very different from using your own mobile phone to contact parents. Many schools have a school mobile phone for use on trips or contacting parents in case of emergency. However, common sense also dictates that in the case of a serious emergency the child's immediate safety should come before the need to follow any school protocol regarding what mobile phone to use.

With the increasing emergence of digital mobile technologies such as smartphones and tablet devices such as iPads, innovative teachers and schools will want to explore the educational potential of these devices. You need to remember that such devices can store a great deal of personal and professional data, which needs to be managed effectively and safely to ensure the protection of those in your care and, ultimately, your own professional reputation.

PRACTICAL TASK   PRACTICAL TASK   PRACTICAL TASK   PRACTICAL TASK

Visit the KnowITAll for trainee teachers website at the following link **www.childnet.com/kia/trainee teachers**.

Work through the two sections Social Networking Guide for Teachers, and Teachers and Technology Checklist, and use the checklists to carry out an audit of your own knowledge and understanding. Audit your own 'digital identity' by carrying out a search on your name using public search engines. After consulting this material, make some time to discuss your response with other trainees on your course.

Health and safety

So far in this chapter we have examined the safety issues surrounding the use of the internet and new forms of communication tools. However, there are also a number of traditional health and safety considerations that apply to the use of computers and other aspects of ICT equipment in schools. There are legal requirements that student teachers need to be aware of. However, the extent to which legislation deals with specific aspects of the use of ICT in schools is limited and so we will also cover some practical considerations which contribute to the sense of responsibility for health and safety that every good teacher will have in her classroom.

Legal requirements

Under the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety at Work Regulations 1999, employees – which includes classroom teachers – must:

- take reasonable care of their own and others' health and safety;
- co-operate with their employers;
- carry out activities in accordance with training and instructions;
- inform the employer of any serious risks.

While the current health and safety legislation resides primarily in documents issued by the Health and Safety Executive (see Further Reading), and while ultimate responsibility lies with senior leaders, teachers need to think beyond the strictly legal to consider what constitutes good practice.

Room layout

Only a few primary schools were designed from the outset to accommodate computers, and so in many cases the siting of equipment is at best a compromise with the overall physical arrangements of the classroom. The convention in the primary school originally was for computers to be dispersed around the school, usually one, two or possibly three to each classroom. Where they are positioned among the desks, tables, chairs, bookshelves and cupboards will to some extent be dictated by circumstances, but even so there are guidelines worth following. None of these is more than common sense, but they bear summarising.

It is important that the computer is positioned so that the monitor is not subject to reflection, either from artificial light or from sunlight. Not only is glare distracting, but it may also cause headaches and strain if users are subjected to it for long.

The computer should be as close to a power supply as possible, keeping the length of electrical flex to a minimum in order to reduce proportionately the risk of someone tripping over it. If the cable supplied is too long, and an alternative of more appropriate length is unavailable, it is preferable to loop and tape or tie the surplus together (but to minimise the build-up of a magnetic field the loop should not be too tight).

For convenience, many schools have bought trolleys so that computers can be moved easily from room to room. These are fine as long as they are designed well with the work surface at an appropriate height for the children – which won't be the same throughout a primary school – and with sufficient area for the 'footprint' of your equipment. The dimensions merit checking as trolleys may not have convenient workspace for overflow, especially if the expectation is for more than one child to be using the computer at any time. Again, attention must be paid to ensure that cables are not flapping loosely around the system.

The question of space often becomes even more acute in those schools that have decided to dedicate a room to an ICT suite. The challenge is to accommodate children and computers in a room that was in all likelihood designed with only children in mind. Rows of computers are often arranged around the wall, with little space for writing or source materials – or a co-worker.

Additionally, turning to face the teacher is hard for the children. Possibly associated with a lack of space may be problems caused by excessive heat and humidity. Computers give off a significant amount of heat and fumes, especially if grouped together, and consideration of improved ventilation may become important. Schools may need to give consideration to the installation of air-conditioning units.

THE BIGGER PICTURE   THE BIGGER PICTURE   THE BIGGER PICTURE   THE BIGGER PICTURE

When you are planning to reorganise your classroom, keep in mind the requirements of health and safety (of both children and adults, including your own!). Take advice from other teachers and senior staff, and the site manager or caretaker. Also, bear in mind the safeguarding agenda, for example don't cover external or corridor windows and glass panels in doors completely with displays or posters. It is considered safer for children to have sightlines available, and it is also in your best interests as it reduces the possibility of any misunderstanding or false allegations. Always adhere to school policies in these areas.

Setting up the computer

Linking the components that make up a single computer system, one that is either new or has been dismantled for a move, is not difficult and there is no reason to be disconcerted by this task. However, as with all electrical equipment, there is a potential hazard if care is not taken, and the obvious precaution is to ensure that the equipment is disconnected at the mains before making any adjustments to the cables that make up the system.

Computers in operation are not drawing much power from the mains, which means that a single computer, monitor and peripherals can share just one socket without problem. However, a gang, rather than a splitter (which is more likely to become dislodged if leads are accidentally bumped), should provide this access. Also, one gang per socket is the

rule, and gangs should not be daisy-chained. In a room in which several stations are planned, professional advice should be sought. Both tidiness and safety will dictate that mains leads, and any data cables for networking, should be concealed in trunking, with as little flex as possible lying on the work surface.

Data from the computer to the monitor are run through an RGB cable, RGB representing red, green and blue – the colours used to make up the picture on the screen. Usually, the cable has 15-pin D-shaped connectors at either end, with the direction of the cable made obvious by the configuration of the pins.

The same is true for the connection of other peripherals. Computer manufacturers over the last few years have gone out of their way to make clear which device goes into which socket, often using colour coding to assist. The keyboard and mouse, which are standard input devices, often have reserved sockets. However, they may alternatively be supplied to connect through USB (universal serial bus) ports. These are a more efficient alternative to the older nine-pin serial port (which you will still find on some computers). Most peripherals – printers, cameras, memory sticks, scanners – are now manufactured with USB connections.

They are usually efficient and require no manual installation of supporting software. All of the above makes the assumption that the equipment is sound and in good working order. Old or frayed leads must be replaced, and you must be vigilant in watching for any acci-dental damage, such as cuts to plastic insulation or wear to plugs, that may have been sustained. If repairs, rather than connecting and setting up ICT equipment, are involved, then professional help should be sought.

Danger, children at work

Teachers must be clear that, while ultimate legal duty for health and safety in the classroom lies with employers, in practice they are responsible for the safe operation of computers in their classrooms. A cable that has not been correctly attached is a potential hazard and on a daily basis only the teacher is in a position to check this. For the same reason, none of the setting up discussed in the previous section should be delegated to primary age children.

Apart from electrical safety, computer equipment is often heavy and should be moved only by an adult. Yet children are going to be the main computer users in your classroom, and so they too need to know how to work efficiently and safely at the computer. For older Key Stage 2 children this may extend to switching the computer on themselves, and perhaps even to switching on at the mains too. However, the teacher must be on hand to supervise either of these tasks.

Monitors have improved considerably in quality over recent years but it is still not advisable for children (or adults) to sit in front of a screen for extended periods. There is no substantive evidence that eyesight is adversely affected by spending a long time in front of a VDU (visual display unit), nor is the level of radiation emitted close to breaching safe levels set out in international recommendations. However, reading a screen for long periods without a break can cause a headache.

Teachers need also to be aware of rare, but serious, effects that can arise. A few people suffer from photo-sensitive epilepsy which is triggered by flickering light. However, they can often still work successfully with a monitor, especially given that the quality of this

equipment has improved so substantially over the last decade. Similarly, some people experience skin irritations as the result of working with monitors. The cause of this response may be a range of factors, possibly attributable to the computers drying out the atmosphere, in which case air flow and humidity into the room should be improved.

Another reason to discourage extended time in front of the computer is to make it practical for the user to maintain good posture. Slouching, while generally unattractive and unhealthy, will also be detrimental to the relationship of the user's wrists with the keyboard. The lower arms should be held off the desk and be about horizontal. Children in the classroom are unlikely to be using a computer continuously long enough to be susceptible to repetitive strain injury, but if they can be encouraged to sit properly at the computer from early on it will stand them in good stead for the future. For similar reasons, an ergonomic chair with adjustable height and backrest is recommended. This will enable children – who vary tremendously in height – to sit with their feet on the floor (or on a rest) and with their thighs parallel to the ground.

Newer technologies

In recent years there has been an influx of various technologies in the classroom, including interactive whiteboards, visualisers, laptop charging stations or trolleys, hand-held devices and more recently tablet devices such as iPads. All of the general safety issues raised in this chapter also apply to varying degrees with these newer technologies. Trailing cables, the location and storage of equipment, together with the length of time spent using technological equipment must be managed effectively by the teacher to minimise any risks to children. Equipment with powerful light sources such as visualisers and data projectors linked to interactive whiteboards must also be monitored carefully to ensure that children or teachers are not exposed to glare. It is important when using the interactive whiteboard that both teachers and children are aware of the potential danger of staring directly into the light source. Standing to one side rather than directly between the board and the data projector when facing the class reduces this risk.

Mobile devices such as handheld devices and iPads can also pose new safety issues. The fact that these devices are light and carried around easily can lead users to use the devices while on the move. Although the technology may be mobile, children should be discouraged from using such equipment on the move.

A SUMMARY OF **KEY POINTS**

➢ **New technologies and applications, whether virtual or real, bring new opportunities and new risks.**

➢ **Children need to be empowered to make safe use of new communications technologies within and beyond the school environment.**

➢ **Teachers, children and parents need to work together to develop awareness of online safety and the skills to protect themselves.**

➢ **There is a wealth of online safety support and materials available to schools, teachers, parents and children.**

➢ **There is a range of strategies that teachers can use to promote the safe use of the internet.**

> ➢ **Trainees and NQTs need to monitor and maintain their own high standards of conduct when using social media.**

> ➢ **Under relevant legislation, you must take reasonable care of your own and others' safety, cooperate with your employer regarding health and safety, carry out acts in accordance with training/instructions provided, and inform the employer of any serious risks.**

> ➢ **You must take care where ICT equipment is placed in your classroom and how you and your children use it.**

M-LEVEL EXTENSION > > M-LEVEL EXTENSION > > M-LEVEL EXTENSION

Consider whether any of the health and safety recommendations provided in this chapter, included in the examples in other chapters of the book and raised by the reference materials and further reading suggestions provided below apply more widely than in ICT. What other subjects are likely to need similar levels of attention to the safeguarding of children? How can you increase your awareness of health and safety issues now and when you are awarded QTS?

REFERENCES REFERENCES **REFERENCES** REFERENCES **REFERENCES** REFERENCES

Burton (2016) *E-Safety.* Available at **www.theslate.org/learn/e-safety/**.

Byron, T. (2008) *The Byron Review: Safer Children in a Digital World.* London: DCSF. Available from **www.education.gov.uk/publications/standard/publicationdetail/page1/DCSF-00334-2008**.

Child Exploitation and Online Protection Centre (CEOP) Available at **http://ceop.police.uk/**.

Childnet International (2007) *E-safety: An Introduction for Trainee Teachers*. Available from **www.childnet.com/kia/traineeteachers/trainers.aspx**.

Childnet International (2011) *Know IT All for Trainees and NQTs*. Available from **www.childnet.com/kia/traineeteachers/**.

Childnet International (2014) Supporting Young People Online: Information and Advice for Parents and Carers. Available at **www.childnet.com/parents-and-carers**.

DCSF (2007) *Cyberbullying – Safe to Learn: Embedding Anti-bullying Work in Schools*. Available from **www.kidscape.org.uk**.

DfE (2013) *National Curriculum in England: Primary Curriculum*. Available from **https://www.gov.uk/government/publications/national-curriculum-in-england-primary-curriculum**.

Livingstone, S., Haddon, L., Görzig, A. and Olaffson, K. (2011) *EU Kids Online: Full Report*. London: LSE. Available from **www.lse.ac.uk/media@lse/research/EUKidsOnline/Home.aspx**.

Search Engine Watch (2016) Available at **www.searchenginewatch.com**.

FURTHER READING FURTHER READING FURTHER READING FURTHER READING

Acts and Regulations – see **www.legislation.gov.uk**.

DfE (2011) *Teachers' Standards*. Available at **www.education.gov.uk/publications**.

Health and Safety Executive (2006) *Working with VDUs Revision 3.* Downloadable leaflet from the HSE website **www.hse.gov.uk**.

Health and Safety Executive: **www.hse.gov.uk/services/education/index.htm**. For information on classroom risk assessment, school trips, work-related stress, slips and trips in school and a range of resources.