

COMPUTING & E-SAFETY

Computing



NEW CURRICULUM EXPECTATIONS

- Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems.
- The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming
- Building on this knowledge and understanding, pupils are equipped to use information technology
- Computing also ensures that pupils become digitally literate (able to use, and express themselves and develop their ideas through, information and communication technology)at a level suitable for the future workplace and as active participants in a digital world. To create programs, systems and a range of content.



COMPUTING AIMS ?

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology



CONFUSED ? KEYWORDS

- **Abstraction:** Reducing complexity by focusing on the essential features of an algorithm or data representation and omitting unnecessary detail.
- **Algorithm :**A precise step by step method for solving a problem. A process or set of rules to be followed in calculations or other problem-solving operations often by a computer.
- **Debug :** To find, remove and / or change errors in computer code
- **E-safety :** Understanding and applying rules to mitigate against the risks to personal safety and privacy of personal information in using digital devices of all kinds
- **Logic :** A systematic approach to reasoning. The rules that underlie an algorithm used for an application. Can also refer to digital components in computer hardware.
- **Program :** * Software that operates a PC and does various things, such as writing text (word-processing program), keeping accounts (accounts program) and drawing pictures (graphics program). A stored set of instructions encoded in a language understood by the computer that does some form of computation, processing input and/ or stored data to generate output.

*To create or modify a program.

*A sequence of instructions for a computational device, written in an appropriate programming language, for implementing an algorithm that manipulates appropriate data representations for solving a problem.



E-Safety



E-SAFETY

Why is the Internet so great?

Discover



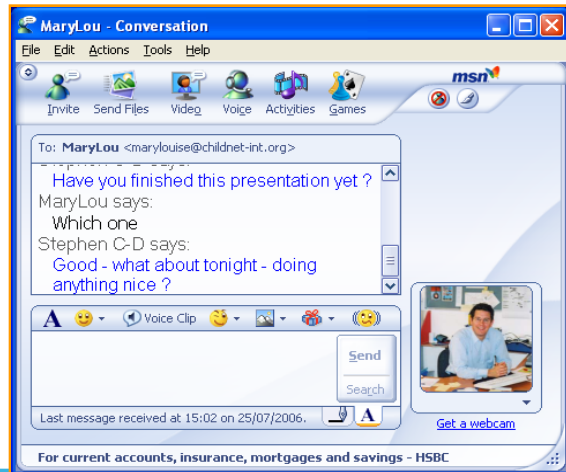
Connect



Create



The biggest library in the world.



Brings people together.



Anyone can become a publisher.

DIFFERENT USAGE

PARENTS / CARERS/ STAFF

Mostly email & web
for research



CHILDREN

Interactive chat, IM,
Music, Games, Blog



Know IT All

28% of parents who use the internet describe themselves as beginners compared with only 7% of children

SUPERVISION

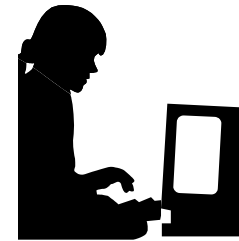
IN SCHOOL

Supervised, filtered
& monitored



OUT OF SCHOOL

Often no
supervision, filtering
or monitoring



Know IT All

- 30% of students report having received no lessons at all on using the internet.
- 79% of young people use the internet privately without their parent's supervision

WHAT ARE THE RISKS?

Hacking, viruses
and security

Content -
Inappropriate websites

Contact -Cyber
bullying - Grooming



73% of online adverts are not clearly labelled making it difficult for children and adults to recognise them

57% of children have come into contact with inappropriate material accidentally.

4 in 10 pupils trust most of the information on the internet.

1/3 of young people have received unwanted nasty comments online. Only 7% of parents think their child has received such comments.

WHAT YOU CAN DO...

Hacking, viruses
and security



- ☺ Install software to protect your computer's security - Norton Anti-Virus or free software provided by Virgin/BT etc...(depending on your Internet Service Provider)(for Home Computer)
- ☺ Be careful which sites you visit /ask children to visit-discuss sites on a regular basis.
- ☺ Discuss with children that downloading files can lead to viruses that damage the computer.
- ☺ Check sites for extra security (padlock or HTTPS).

WHAT YOU CAN DO...

Content -
Inappropriate websites



- ☺ **Talk to your children** about what to do if they do come across something unpleasant.
- ☺ Use child-friendly **search engines** such as **Yahoo! Kids**, **Google Primary**, **Ask Kids**, **KidsClick** or **AOL Kids**.
- ☺ Regularly check the 'History' on a computer.
- ☺ Find **appropriate sites** to visit and try not to overreact – lots of inappropriate content viewed accidentally

WHAT YOU CAN DO...

Contact -Cyber
bullying - Grooming



- ☺ **Get involved** with your children online and encourage balanced use - set time limits
- ☺ Make sure they know **who to talk to** if they feel uncomfortable
- ☺ Talk about the consequences of giving out **personal info** or making **information public**
- ☺ Keep the **computer in a family room**(for home use)

SMART RULES



SAFE - Keep safe by being careful not to give out personal information - including full name and email address - to people who you don't trust online.



MEETING - Meeting up with someone you have only been in touch with online can be dangerous. Only do so with your parent's/carer's permission and even then only when they can be present.



ACCEPTING - Accepting e-mails, IM messages or opening files from people you don't know can be dangerous - they may contain viruses or nasty messages!



RELIABLE - Someone online may be lying about who they are, and information you find on the internet may not be true. Check information and advice on other websites, in books or ask someone who may know.



TELL - Tell your parent/carer or teacher if someone or something makes you feel uncomfortable or worried, or you or someone you know is being cyberbullied.