LEEN MILLS PRIMARY SCHOOL

COMPUTING POLICY

Computing at Leen Mills

Delivering a relevant, engaging and challenging computing curriculum is an important focus for us at Leen Mills Primary. We aim to combine Quality First teaching alongside pupil-led leadership to provide a modern, dynamic and relevant computing curriculum. We work alongside many high quality external providers such as Atom IT, Barefoot Computing, 2Simple, George Spencer Alliance and Apple Regional Training Centres to ensure both our technologies and content are engaging and up-to-date. We review our hardware and software on a regular basis to make sure our pupils have access to the most useful educational tools and apps. We also ensure teachers and staff are well informed, trained and confident to deliver the computing curriculum.

Integrating the computing curriculum

To make the computing curriculum more integrated to other aspects of the school curriculum we have combined computing with E-safety, Science and Engineering and Design and Technology. All of these subjects share similar characteristics and content and we believe it is important to raise the profile of all of these areas by providing opportunities for our children to learning within a wider framework of areas.

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. 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 to create programs, systems and a range of content. 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.

At Leen Mills we provide a wide range of computing resources to engage, challenge and benefit our children.

We provide access to:

- Bee-Bots early year robots
- Apple iPads with integrated educational Apps
- Laptop PCs with access to Microsoft Word, PowerPoint, Publisher and Excel
- Computer controlled aerial drones
- Lego Education We-Do Kits
- Unplugged Computer lessons

What are our aims in teaching Computing?

Our aims are that all pupils:

- Will have access to all new and relevant educational Apps and resources (updated termly through Atom it)
- Will be able to learn both tabet-based typing and keyboard typing through both school iPads and PC laptops.
- Build up proficient skills with Microsoft Word and PowerPoint through a once-a-term typed literacy unit in each year group.
- Can independently and collaboratively find problems in algorithms and change the code to fix and improve the program.
- Can identify and understand key computing terms (outlined by Barefoot computing resources)

How do Pupils Learn Computing.?

A class set of laptops and I pads are available on a rota basis for all classes to use. In addition every classroom has access to a laptop with appropriate software, programs and internet access for the age range and abilities in the class. We believe that computing must be presented in practical contexts which will be relevant to the children's experiences; Pupils must have "hands on" experience.

We have also prepared a range of 'unplugged' computer lessons that require no physical hardware or software. These lessons include the use of computational language and thinking.

Developing and Monitoring the Computing Curriculum

We are aware of the importance of keeping both our hardware (laptops, iPads, drones, Bee-Bot robots etc.) and our software (Microsoft Office, iPad apps etc.) up to date regularly. Our pupil leadership team are responsible for reviewing and removing new or unwanted apps. Atom IT are currently responsible for managing software updates on all our devices and keeping them free of viruses, bug or harmful malware. The Computing coordinator is responsible for communicating with both the pupil leaders and Atom It staff members to keep the school's technology relevant, up-to-date and efficient.

The computing coordinator is also responsible for the computing budget and alongside the Head teacher, Office manager and Atom IT will regularly check to update, repair or replace existing hardware and software. Larger orders involving multiple devices (laptops, iPads, and Smart screens) require a written business case review that takes into account the benefits and potential risks of purchasing new technologies and their impact on the school.

The computing coordinator also has a responsibly under monitoring and development to keep the staff team up-to-date with the computing curriculum and newer technologies. Staff training is at least delivered once per term with in-house (computing coordinator/pupil leadership team) or external provider training (Barefoot Computing, Purple Mash etc.)

Monitoring of the computing curriculum takes many forms. Pupil leadership teams review unused or unpopular educational apps termly to ensure content is relevant. Planning and timetabling must be displayed on Office 365 or the school internal server for the computing coordinator to review. Evidence of many lessons can be found on internal saved servers (Microsoft Word, Kodu Game Lap) and internet server histories but may also be found in pictures and photos of work (screenshots or children working on technologies in class).

<u>Assessment of Computing.</u>

Many computing lessons are structured with mixed ability pupils who choose their own level of challenge. With many pupils having a wide range of access to computing technologies at home we must not assess pupils within solely their year group but also give rapid-graspers the opportunity to challenge themselves or take on a coaching role through mixed ability work or through pupil leadership teams.

Teachers follow schemes of work for programs such as Hour of Code.org, Tynker, Scratch and Lego Education that have progressive and differentiated challenges for children to choose based on their own competencies.

'I can' statements are used as computing non-negotiables for KS1, lower KS2 and upper KS2. All year groups have access to these statements as tools for assessment.

KS1

I can...	
	✓
Understand what **algorithms** are and have made my own set of instructions (Crazy character activity)	
create and **debug** simple programs (using Kudo Game Lab or Scratch)	
predict the behaviour of simple programs (Beebots)	
create, organise, store, edit and retrieve digital content (using Microsoft word, excel or PowerPoint)	
Recognise and use a range of **Apps** using an **ipad** (iphoto, ianimate, moviemaker etc)	
use the SMART **e-safety code** to keep myself safe.	
Log on independently and follow instructions to open up a programme	
Type on a keyboard; using space marks, capital letters and other forms of punctuation.	

Lower KS2

I can...	
	✓
Design, write and **debug** programs (**Kudo** Game lab and **Scratch** Animated series pack)	
Spot **patterns** and repetition in programs and **evaluate** them (Shapes, Crystals and Flowers lesson pack)	
Use **logical reasoning** to explain how some simple **algorithms** work and **debug**, **simplify** or edit an algorithm (Crazy characters)	
Understand **computer networks** including the internet and **evaluate** how they offer for communication and **collaboration** (research project via ianimate or MoiveMaker)	
Use **search** technologies effectively, appreciate how results are selected and ranked by evaluating digital content (Google and Ask search engines)	
Use a variety of software (including ipads) on a range of devices to **design** and **create** a range of **programs** and present data and information (Numbers App & Dinosaur Fossil animation pack)	
Use Microsoft Office and similar software to create things such as PowerPoint presentations, word processed work, excel spreadsheets and Photo Stories (digital literacy unit)	

Upper KS2

I can...	
	✓
Design, write and **debug** programs that accomplish specific goals (The Solar System activity pack)	
Problem solve by **decomposing** programs into smaller parts (Animated poem activity)	
Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs (Scratch, Kudo Game lab)	
Understand **computer networks** including the internet and **evaluate** how they offer for communication and **collaboration** (research project via ianimate or MoiveMaker)	
Use **search** technologies effectively, appreciate how results are selected and ranked by evaluating digital content (Google and Ask search engines)	
Use a variety of software (including ipads) on a range of digital devices to **design** and **create** a range of **programs**, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information (Numbers App & Dinosaur Fossil animation pack)	
Use Microsoft Office and similar software to create things such as PowerPoint presentations, word processed work, excel spreadsheets and Photo Stories (digital literacy unit)	

Internet and E-safety

The Schools' approach to the internet and it's safe use is contained in a separate policy document. Please see our school's e-safety policy.
Our staff and pupils are kept up-to-date with safe and proper usage through termly staff meetings, emails, newsletter updates, assemblies and through the school website and Dojo page.

Signed: ~~T.Konsek Computing Coordinator~~

Dated: ~~September 2018~~