

## ELEANOR PALMER PRIMARY SCHOOL COMPUTING POLICY

### Computing at Eleanor Palmer

This policy document sets out the school's aims, principles and strategies for the delivery of Computing at our school. As well as being an important curriculum requirement, the ability to use technology effectively and safely is a vital life skill in modern society. Computing is taught by class teachers and specialists, interlinking the skills of the subject within our curriculum, as seen in our Computing progression map.

### What principles underlie the teaching of Computing at Eleanor Palmer?

Through our carefully shaped curriculum, we aim to create children that have the **skills to use technology safely and discerningly**. Children must be equipped with the tools to work appropriately online, and to know what to do when they encounter a problem. **Problem solving**, as seen in other key STEAM areas, is built into teaching in every year group, encouraging the confidence to have a go and building increasing resilience. We also want our children to be digitally **creative**, having engaged with a range of software and technology that links widely to their topic and broader learning.

Computing covers three key areas - Computer Science, Online Safety and Digital Literacy. Full details of content and progression are in our 'vertical' curriculum plan - at the end of this document:

#### Computer Science

- In EYFS, children use iPads and Beebots to develop language of control and direction.
- Throughout KS1, they develop sequences of instructions, moving to Scratch Junior in Year 2.
- In KS2, children use more advanced sequences of commands, creating animations and games using variables and more complex scoring systems.

#### Digital Literacy

- Throughout their time at Eleanor Palmer, children will develop their ability to work on iPads and laptop computers, accessing the network independently from Year 3.
- Children will be taught to use a range of software, often producing outcomes linked to their topics, such as WWII newspaper reports in Year 6 or Amazon documentaries in Year 5.

#### Online Safety

- At Eleanor Palmer we take safety very seriously and incorporate teaching children about being aware of the potential dangers of working online, particularly using search engines, fake news, digital footprint and online reputation.
- This links closely with the PSHE Curriculum, taught throughout the year in every class.

### The practicalities of planning and resourcing

We have 45 laptops, split over two trolleys, both located in the Junior Resource Area. We also have a trolley of 30 iPads in the Photocopier Resource Room. All equipment can be booked for class use via a booking system, which can be found in the Computing section on our school network. All year groups have a class login. This means they can save in a specific file on the network, which will be aided in KS1 and become more independent in KS2. We also have a set of 6 BeeBots and 18 ProBots to teach early programming in KS1.

Teachers are expected to log faults themselves at <http://www.camdensitss.org.uk/log-a-fault> , which is monitored by our IT technician service.

### **Inclusion**

Eleanor Palmer is an inclusive school. Special care is be taken by staff to ensure that all children have equal opportunity to succeed in Computing. Technology is used to support children with SEN and to make the curriculum more accessible to them, e.g. through accessing teacher's IWB notes on a tablet or through reinforcing mathematical skills by playing maths games such as Interactive Resources. TAs are trained in the use of technology to support children with SEN and strategies are identified in children's 'My Plan', e.g. using Strip Design to create social stories or a weekly timetable. The differing backgrounds children have in computing capability may offer challenge to teachers. Children who have access to a variety of technology outside school often have greater skills. By observing children's developing computing capability, teachers ascertain what tasks and expectations would best support their learning.

Lacey Cousins  
IT Lead  
March 2020

# COMPUTING AT ELEANOR PALMER

## EARLY YEARS

### COMPUTING TEACHING AND LEARNING AT ELEANOR PALMER

At Eleanor Palmer, computing is taught by class teachers, making links with other curriculum subjects where they are natural and engaging, and teaching discrete lessons where this will be more effective.

At the heart of computing is computer science, which is enriched by termly visits to the Camden City Learning Centre - a specialist centre in our borough where our children are able to work alongside a wide range of specialist teachers with an ever-developing set of equipment. Computing also shares deep links with maths, science and design technology, so we often encompass some or all these areas in larger STEAM projects. Classes learn computing using our suites of laptops and iPads, and Bee-bots and Probots.

Online safety is valued by everyone in our school community and we aim for all children to leave Eleanor Palmer with the knowledge and skills to stay safe online. We review online safety on a regular basis during assemblies, in lessons and on an individual basis.

### ENRICHMENT

Termly visits to the City Learning Centre (CLC)

### NC CONTENT - PUPILS IN EYFS SHOULD BE TAUGHT TO . . .

- recognise that a range of technology is used in places such as homes and schools
- select and use technology for particular purposes
- know how to operate simple equipment
- show an interest in technological toys with knobs or pulleys, or real objects
- show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images

### NURSERY KEY LEARNING

#### COMPUTER SCIENCE

Explore action and response with electronic toys and through games that develop instructional language e.g. Simon Says  
Explore programming using BeeBots  
Move graphics on screens within a game context (2Simple, Busy Things)

#### ONLINE SAFETY

Understand that the internet can be accessed by people around the world and that it can be used to communicate and find things out  
Consider safe boundaries for using digital equipment and the internet - how much time should we spend and which trusted adults help us

#### DIGITAL LITERACY

Take ownership of work by typing their name on an iPad  
Take photographs and talk them through with others; tell stories using pictures

### RECEPTION KEY LEARNING

#### COMPUTER SCIENCE

Start to use the language of control - turn, left, right, forwards, backwards, stop, go and wait  
Make choices using remote control devices, cameras and iPads  
Programme BeeBots with increasing independence  
Use iPads to record learning, independently

#### ONLINE SAFETY

Learn more about communicating online, knowing how and why, and understanding that we can say no online just as we do in real life  
Understand that people can be unkind online, as in real life, and that we should always speak to a trusted adult about this  
Begin to search for information online with adult support  
Know that some information is personal (name, age, address, school) and know who we should and shouldn't share this with

#### DIGITAL LITERACY

Understand the parts of computers and networks, exploring the keyboard, mouse and home screen  
Type a key word into a search engine



# COMPUTING AT ELEANOR PALMER

## KEY STAGE 1

### NC CONTENT - PUPILS IN KS1 SHOULD BE TAUGHT TO ...

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies/movements or new images
- know that information can be retrieved from computers.

### ENRICHMENT

Termly visits to the  
City Learning Centre (CLC)



#### YEAR 1 KEY LEARNING

##### COMPUTER SCIENCE

Verbally then physically sequence a series of instructions for a Beebot, making predictions  
Manipulate objects on screen to develop a game (Busy Things, Tunnel Trouble, Maze)

##### ONLINE SAFETY

Discuss how we might be made to feel when we're online and which trusted adults we'll speak to if we're uncomfortable  
Know that things we put on the internet can be copied and begin to explore the concept of ownership  
Search independently for a key word or phrase  
Create a series of rules for behaviour that keeps us safe online, including learning about passwords

##### DIGITAL LITERACY

Use a whole class login to access the network  
Learn about website permissions and how to choose 'no'  
Explore when and why email might be used to communicate, first with people we know

#### YEAR 2 KEY LEARNING

##### COMPUTER SCIENCE

Control ProBots for a specific purpose, writing instructions and exploring alternatives  
Add animation and audio to games created in 2DIY  
Edit an existing file on Scratch Junior, adding controls and values to control a sprite  
Manipulate objects on screen, linking to physical programming completed on J2E Turtle

##### ONLINE SAFETY

Understand that things online can be true or untrue, including people's online identity  
Discuss the benefits and difficulties of online information lasting a long time  
Give examples of bullying behaviour online  
Review and discuss rules that keep us safe online  
Know about the variety of devices we can connect to the internet and how these can be protected by passwords

##### DIGITAL LITERACY

Type a short email to someone  
Explore a website to find information: scrolling, selecting a new page, navigating back.  
Understand that we need to save our work and that it belongs to us, but things we find online belong to others



# COMPUTING AT ELEANOR PALMER

## KEY STAGE 2

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### NC CONTENT - PUPILS IN KS2 SHOULD BE TAUGHT TO ...

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) 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
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

#### YEAR 3 KEY LEARNING

##### COMPUTER SCIENCE

Programme Robots and Scratch Junior with independence, including advanced sequences of commands and editing these programmes to change, extend or stop.

Explore the repeat command to make algorithms more efficient on ZCode

##### ONLINE SAFETY

Explore the idea of our online identity, considering the effects this might have in real life and online

Search online for information about ourselves, discussing what we should and shouldn't share online

Know that people do not always know who they communicate online with in real life, but they may connect over similar interests; highlight the risks

Know what online bullying is and how this may happen, including who to speak to if it does

Use key phrases to search for information online, evaluating the reliability of sites

Explain why spending too much time online can have a negative impact

Understand and give reasons why a password is important and how/why it should be kept secure

Know why copying someone's work from the internet can cause problems

##### DIGITAL LITERACY

Explore communication through use of blogs - writing their own entries for the website

Take account of purpose, audience and tone when writing emails

Understand how to open different software independently on computers, including the save and open function



#### YEAR 4 KEY LEARNING

##### COMPUTER SCIENCE

Plan systematic and efficient ways to programme a sequence, using a wider range of commands in Flowol, ZCode and Scratch, including forever, when and if

##### ONLINE SAFETY

Discuss appropriate ways to conduct yourself online, knowing that the identity of who we speak to may not always be true

Understand that others can find information about you online and how this could have been created, copied or shared by others

Know how and where online bullying may take place and how to report this

Evaluate the difference between opinions and facts in what we find online, considering when each one is useful

Describe some of the ways we are encouraged to buy online, including in-app purchases

Review how technology use needs a healthy limit, considering that it may distract us from other things

Consider what a 'strong' password is and understand how and why internet use may be monitored

##### DIGITAL LITERACY

Understand how to open and save a file through the network

Increase speed of touch typing through 2Type

Consider how the internet is now a main source of news

### ENRICHMENT

Termly visits to the City Learning Centre (CLC)



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# COMPUTING AT ELEANOR PALMER

## KEY STAGE 2

### YEAR 5 KEY LEARNING

#### COMPUTER SCIENCE

Programme both digitally and physically to complete a specific series of commands efficiently, including a scoring game in Scratch  
Work to a specific brief and for an audience, creating a series of levels each with a clear objective using FlowIt  
Plan and create an animated, multimedia presentation around a familiar narrative

#### ONLINE SAFETY

Understand how identity can be copied, modified or altered online, making responsible choices based on context  
Make positive contributions to online communities  
Search for an individual online and make a summary of the information, considering how fair our judgements are  
Describe how to get help for someone who is being bullied online including how to block people  
Develop healthy scepticism about what is found online, considering the terms mis-information, dis-information and hoax  
Understand that technology can affect sleep and how this can be protected  
Discuss how apps may read and share private information and how to make informed choices about whether we agree with this, including location services  
Assess and justify when it is suitable to use the work of others

#### DIGITAL LITERACY

Understand that email is not always used for good, considering the purpose of spam mail  
Learn how to cite sources when we do use content found online  
Develop confidence in a range of Microsoft Office programmes

## ENRICHMENT

Termly visits to the City Learning Centre (CLC)

### YEAR 6 KEY LEARNING

#### COMPUTER SCIENCE

Build and programme digitally to control a physical object using Scratch or Python  
Create and sequence appropriate animations, audio and graphics to a purposeful brief  
Peer test to improve a designed and published game

#### ONLINE SAFETY

Describe ways in which media can influence ideas about identity and gender, challenging those that are inappropriate  
Understand responsibility for the well-being of both ourselves and others in an online community, asking for help when needed  
Consider ways to build a positive online reputation and how this will be important in the future  
Learn ways to evidence online bullying, such as recording or screen-grab functions, as well as learning a range of ways to deal with difficult online situations  
Use search technology effectively, demonstrating ways to be discerning in evaluating online content  
Describe common systems that regulate age-related content, such as PEGI ratings and parental warnings, considering why these are used and important  
Understand what to do if you fear that a password has been lost or stolen

#### DIGITAL LITERACY

Review the use of Microsoft Office software alongside Google Drive, considering the positive and negative attributes of both  
Write and send purposeful emails relating to an appropriate topic  
Select a programme to present work digitally, having assessed purpose and audience

### INTENDED OUTCOME BY THE END OF YEAR 6

Children will leave EP with a firm foundation of computing skills that will enable them to progress into young adulthood. They will have an awareness of the opportunities and risks associated with the online world, as well as the independence to make informed choices when faced with difficult situations.

Children will be confident at working digitally, in a range of computing software including those developed by Microsoft, Google and Apple.

They will be able to programme both physical and digital objects, understanding the terminology involved in these processes and how they are used in the wider world.

