WELCOME TO LOCKS HEATH JUNIOR SCHOOL

INTRODUCTION TO THE COMPUTING CURRICULUM

FRIDAY 7TH JUNE 2019

Fareham&Gosport PrimarySCITT

Aims of this morning:

- To understand the Computing curriculum
- To understand specific terminology in Computing
- To unpick the three different strands of Computing
- To be aware of software that can support Computing in the classroom

Introductions

What devices do you regularly use?

What part of Computing do you think is most important for children?

What are the aims of the current computing curriculum?

The national curriculum for computing aims to ensure that all pupils:

- 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.

In KS1

Pupils 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.

Computing un-plugged!

Let’s write an algorithm for getting the teddies dressed!

The build-a-bears need all their clothes put on…

What would your algorithm sequence be?

In KS2

Pupils 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.

Teaching children to understand how computer networks work

Let’s have a break!

What are the three strands of the Computing Curriculum?

Computational thinking and programming

Understanding algorithms
Creating and debugging programs
Using logical reasoning to explain how programs work

Digital Literacy

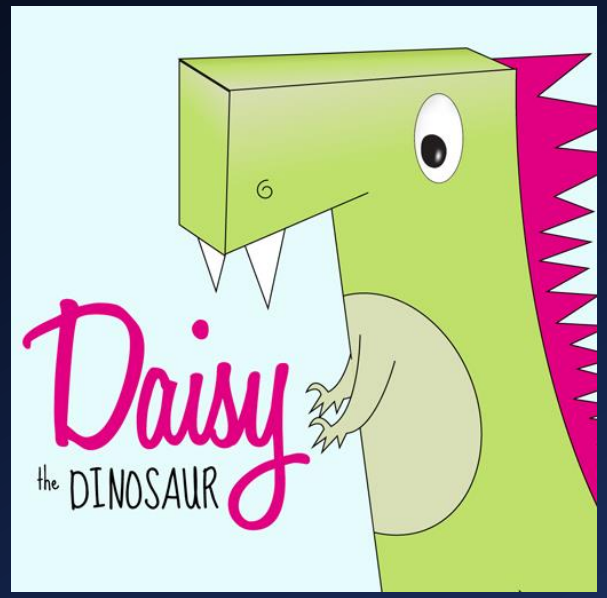
Use technology to store, retrieve and manipulate digital content
Select and use a range of software to accomplish given goals

Information Technology

Recognise common uses of information technology beyond the school
Use technology safely and respectfully
Understand how computer networks work

Coding Language

Teaching children how to use algorithms to program a game or sprite



https://code.org/api/hour/begin/frozen

To program and control a character's movements

Let's try using Microsoft Kodu to design a world and program a character using an algorithm to respond to an input in order to move.

Just like with the children, demonstrate the skill and allow them to **PLAY**.

If they are confident with the skill, can they go deeper with their understanding by extending their thinking?

Reflection

- What did you find most useful today?
- What will you try and use in your practice?
- What would you like to know more about?

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