

St Edward's Computing Curriculum Map 2016-2017

Subject content - Key stage 1

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 (test) 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.

Subject content - Key stage 2

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
- achieve 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.

Computing is now covered in IPC; therefore there is no set term in which a particular unit is taught.

Children will cover the following objectives throughout the year.

All year groups will complete a specialist unit in the 2nd autumn term.

Year 1

Autumn 2

ICT and Computing (Specialist unit)

- 1.01 Know about some of the applications of ICT and computing in everyday life (3)
- 1.02 Know about some of the ways in which the use of ICT and computing affects people's lives (2)
- 1.03 Be able to use programs, apps and computer networks to find, organise and classify information (2)
- 1.04 Be able to use programs or apps to present information (3)
- 1.05 Be able to enter, save, retrieve and revise information (3)
- 1.06 Be able to work with a range of simple tools such as text, tables, images, sounds and graphs (3)
- 1.07 Be able to plan and give instructions to make things happen using a floor robot, program, or app (2)
- 1.08 Be able to describe what they have done (3)
- 1.09 Be able to use simulations to explore what happens in real and imaginary situations (2)
- 1.10 Understand the importance of using ICT and computing safely and respectfully and how to report any concerns (3)
- **BRAINWAVE UNIT**
- 1.01 Know that they can affect the quality of their own learning
- 1.02 Know about some of the recent evidence and research into the brain and learning
- 1.03 Be able to apply these theories to their own learning and reflect on their importance

Year 2

Autumn 2

Say Cheese!(Specialist unit)

- 1.01 Know about some of the applications of ICT and computing in everyday life (2)
- 1.02 Know about some of the ways in which the use of ICT and computing affects people's lives
- 1.03 Be able to use programs, apps and computer networks to find, organise and classify information
- 1.04 Be able to use programs or apps to present information (2)
- 1.05 Be able to enter, save, retrieve and revise information (2)
- 1.06 Be able to work with a range of simple tools such as text, tables, images, sounds and graphs (2)
- 1.07 Be able to plan and give instructions to make things happen using a floor robot, program, or app
- 1.08 Be able to describe what they have done

- 1.09 Be able to use simulations to explore what happens in real and imaginary situations
- 1.10 Understand the importance of using ICT and computing safely and respectfully and how to report any concerns

Year 3

Autumn 2(Specialist unit)

ICT and Computing

- 2.01 Know about some applications of ICT and computing in different jobs and work situations (2)
- 2.02 Know about some applications and implications of ICT and computing in everyday life (2)
- 2.03 Know about some of the ways in which the use of ICT and computing in different jobs and work situations affects people's lives (2)
- 2.04 Be able to search effectively, using and evaluating information from a variety of sources (2)
- 2.05 Be able to select and use a range of programs or apps to support and present learning in other subjects (2)
- 2.06 Be able to use ICT and computing to control events and write programs that accomplish specific goals (2)
- 2.07 Be able to make choices to gather information and solve problems (2)
- 2.08 Understand that different aspects of ICT and computing can be used safely, responsibly, respectfully and creatively to people's benefit (2)

Year 4

Autumn 2 (Specialist unit)

Painters, pictures and Photographers

- 2.01 Know about some applications of ICT and computing in different jobs and work situations (2)
- 2.02 Know about some applications and implications of ICT and computing in everyday life (2)
- 2.03 Know about some of the ways in which the use of ICT and computing in different jobs and work situations affects people's lives (2)
- 2.04 Be able to search effectively, using and evaluating information from a variety of sources (2)
- 2.05 Be able to select and use a range of programs or apps to support and present learning in other subjects (2)
- 2.06 Be able to use ICT and computing to control events and write programs that accomplish specific goals (2)
- 2.07 Be able to make choices to gather information and solve problems (2)
- 2.08 Understand that different aspects of ICT and computing can be used safely, responsibly, respectfully and creatively to people's benefit (2)

Year 5

Autumn 2 (Specialist unit)

ICT and Computing

- 3.01 Know that the study of ICT and computing is concerned with applying technology to gather, use and exchange information safely and create, design and publish appropriate content (2)
- 3.02 Know about an increasing number of ICT and computing applications for leisure, communication and work (2)
- 3.03 Be able to use search technologies effectively when gathering and interrogating information
- 3.04 Be able to collect, interpret and present their findings (2)
- 3.05 Be able to evaluate and check the validity of their findings
- 3.06 Be able to manipulate and combine different forms of information and data from different sources (2)
- 3.07 Be able to select which programs or apps to use to present information or data in the most effective and appropriate way (2)
- 3.08 Be able to use computer networks for communication and collaboration, exchanging ideas and information in different ways (2)
- 3.09 Be able to design and write programs to accomplish specific goals, working with sequence, selection and repetition to control events (2)
- 3.10 Be able to use ICT and computing to sense physical data (2)
- 3.11 Be able to use ICT and computing-based models and simulations, working with various inputs and outputs (2)
- 3.12 Understand that the quality of information affects the results of any enquiry
- 3.13 Understand the importance of considering audience and purpose when presenting information
- 3.14 Understand that all aspects of ICT and computing need to be used safely, respectfully and responsibly, recognizing unacceptable behaviour and reporting concerns (2)

Year 6

Autumn 2 (Specialist unit)

3D Designers

- 3.01 Know that the study of ICT and computing is concerned with applying technology to gather, use and exchange information safely and create, design and publish appropriate content (2)
- 3.02 Know about an increasing number of ICT and computing applications for leisure, communication and work (2)
- 3.03 Be able to use search technologies effectively when gathering and interrogating information
- 3.04 Be able to collect, interpret and present their findings (2)

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- 3.05 Be able to evaluate and check the validity of their findings
- 3.06 Be able to manipulate and combine different forms of information and data from different sources (2)
- 3.07 Be able to select which programs or apps to use to present information or data in the most effective and appropriate way (2)
- 3.08 Be able to use computer networks for communication and collaboration, exchanging ideas and information in different ways (2)
- 3.09 Be able to design and write programs to accomplish specific goals, working with sequence, selection and repetition to control events (2)
- 3.10 Be able to use ICT and computing to sense physical data (2)
- 3.11 Be able to use ICT and computing-based models and simulations, working with various inputs and outputs (2)
- 3.12 Understand that the quality of information affects the results of any enquiry
- 3.13 Understand the importance of considering audience and purpose when presenting information
- 3.14 Understand that all aspects of ICT and computing need to be used safely, respectfully and responsibly, recognizing unacceptable behaviour and reporting concerns (2)