COMPUTING Knowledge Organiser: Continents and Oceans

SAINT JOHN'S

Computing – Year 1

Computing intent

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.

Vocabulary

algorithm, program, interactive, website, internet,
digital, online, device, search, organise, retrieve,
present, image, text, password, login, username,
private, safe, respect, online safety,
debug, create, logic, code, precise, instructions, steps,
predict, create, organise, store, manipulate, retrieve, data

	Knowledge and skills	Useful Units	Outcomes
Digital Literacy	• 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. • recognise common uses of information technology beyond school	iAlgorithm – unplugged activities to support understanding of algorithms iSafe – eSafety iDraw – exploring digital art iModel – introduction of modelling	Exploring and creating digital art Manipulating and storing data Programming a toy Using a computer model Representing data Use algorithms
Information Technology	• use technology purposefully to create, organise, store, manipulate and retrieve digital content	iProgram – programming physical and virtual toys iWrite – creating, manipulating and storing digital text iData – introduction to data representation iDraw - exploring digital art iModel – introduction of modelling	**Cross-curricular links** iAlgorithm – DT, English, Maths, Music, PE iSafe – PSHE iDraw – Art iModel – Art, English iProgram – English, Geography, Maths iWrite – English iData - Maths
Computer Science	• understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions • use logical reasoning to predict the behaviour of simple programs • create and debug simple programs	iAlgorithm – unplugged activities to support understanding of algorithms iProgram – programming physical and virtual toys iWrite – creating, manipulating and storing digital text iData – introduction to data representation	