Computing – Year 5

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

system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web crawler, content creator, selection, ranking.

vector, drawing tools, object, toolbar, vector drawing, move, resize, colour, rotate, duplicate/copy, zoom, select, align, modify, layers, order, copy, paste, group, ungroup, reuse, reflection

Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator

	Knowledge and skills	Useful Units	Outcomes
Digital Literacy	• use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. • Understand the opportunities networks offer for communication and collaboration. • use search technologies effectively, appreciate how results are selected and ranked, and <u>be discerning in evaluating digital content.</u>	Systems and searching Vector graphics Selection in quizzes	Understand how search engines work and what influences searching Learn how to make simple vector drawings before creating more complex pieces of work. Design a quiz in response to a given task and implement it as a program.
Information Technology	• 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. • <u>use search technologies effectively</u>, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Systems and searching Vector graphics Selection in quizzes	**Cross-curricular links** **<u>Education for a Connected World links</u>** Managing Online Information • I can explain the benefits and limitations of using different types of search technologies e.g. voice-activation search engine. I can explain how some technology can limit the information I am presented with. Privacy and Security • I can explain what a strong password is and demonstrate how to create one **<u>Relationships Education, Relationships and Sex Education (RSE) and Health Education</u>** Internet safety and Harms • Pupils should know how to be a discerning consumer of information online, including that from search engines, is ranked, selected and targeted **<u>Art and Design</u>** • to improve their mastery of art and design techniques, including drawing, painting
Computer Science	• 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.	Systems and searching Vector graphics Selection in quizzes	

			and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]