COMPUTER SCIENCE CURRICULUM INTENT

Computer Science has an important role in our society. It enables students to be able to apply problem solving in their everyday lives and the place of work; it develops the ability to take a challenging problem, break it down and work through the practical efficient solutions using a clear set of instructions. The world has changed dramatically, and we need to equip students with the skills to protect themselves in a challenging world with personal privacy and ethical issues. Society will be more reliant on technology, therefore our students will need the knowledge and skills to interact with this technology; from big data to algorithms, their lives will be impacted by technology.

At Swanlea, students will study a range of topics that are necessary to life in a digital world, such as computational thinking, problem solving, robotics and algorithms through a balanced curriculum designed to appeal to all students. We aim to develop a deep understanding by delivering a spiral curriculum where topics are built upon in subsequent years. Pupils are encouraged to be problem solvers and be able to respond positively to changes in society both in terms of technological developments and current national concerns. Problem solving at a complex level can be hard to visualise therefore we aim to use physical systems to help students to solve problems. The more challenging problems can be solved as students can see the problem and the possible solutions, for example, solving a maze by using a robot.