Age Related Expectation – Computer Science

Magna Academy Poole
an Aspirations Academy

	End of KS2	Year 7	Year 8	Year 9	Year 10	Year 11
Demonstrate research and critical thinking skills	I undertake some research, but am unable to identify which parts might be helpful in improving my knowledge or work.	I am able to undertake meaningful research and identify which parts are relevant to my work.	I can undertake a wide range of research which makes a significant impact on my knowledge and the development of my ideas.	I can independently identify a wide range of research areas, critically chosen for relevance and benefit to my work. I can also critically analyse the reliability of sources.	Understanding of theories and principles of Computer Science: I am able to moderately to consistently investigate hardware, logical operations, communication, data representation and data types, operating systems, principles of programming, software engineering, program construction, security and data management and the impacts of digital technology on wider society.

Computational Thinking and Programming: I have a moderate to consistent ability to solve problems, to understand algorithms and programming constructs, programming languages, data structures and data types and security and authentication. | Understanding of theories and principles of Computer Science: I can demonstrate a consistent ability to effectively investigate hardware, logical operations, communication, data representation and data types, operating systems, principles of programming, software engineering, program construction, security and data management and the impacts of digital technology on wider society.

Computational Thinking and Programming: I can demonstrate a highly developed ability to skilfully solve problems, to understand algorithms and programming constructs, programming languages, data structures and data types and security and authentication. |
Analyse and compare media products and the contexts in which they are produced and consumed	I can analyse products or texts that I see, and am beginning to demonstrate the links between products in my writing.	I can analyse and compare products and texts that I see, and can make brief links to the contexts in which I consumed.	I am able to analyse and compare products thoroughly and in detail, and can make links to the context in which the texts were created and consumed.	My analysis and comparison of media products is insightful, (with embedded references to media theories). I can make pertinent comments about the influence context has on a product.		
Develop practical skills by creating products	I can demonstrate basic skills in filming and editing media products .	I can demonstrate competent skills in setting up the composition of a shot, camera handling, video and image editing etc.	I can demonstrate creative and assured skills in production work, including using a range of camera shots, editing techniques and transitions effectively.	I can demonstrate a highly creative and innovative ability to create media products in their production work, successfully experimenting with a range of ideas in all areas of production.		
Use media theory to influence practical work and vice versa	I am beginning to quote theories and link them to my practical work. I produce well-planned	I am beginning to quote theories and link them to my practical work. I can produce	I can confidently refer to media theories within my practical work, and identify clear	I consistently refer to a wide range of media theory in my practical work, and can succinctly		

					Software Development Knowledge and Skills: have a moderate to consistent ability to produce a programmed solution to a problem.	Software Development Knowledge and Skills: I have a consistent to highly developed ability to produce a programmed solution to a problem.
	pre-production e.g. storyboards, scripts, plans and sketches.	well-planned pre-production e.g. storyboards, scripts, plans and sketches.	links between them. I am able to produce detailed and creative pre-production, showing understanding of the target audience.	justify its inclusion. My pre-production is highly creative, with a clear targeting towards audience impact.		
'Blockly' style coding and programming, utilising GUI (Focus: Language)	I am able to identify text-based languages, and I may be able to solve a very simple problem with one of them.	I can use a text-based language to solve a simple problem.	I can use a text-based language to solve a realistic and complex problem.	I can highlight similarities and differences between the two languages studied.	I must analyse the problem, design a solution to the problem, develop a final programmed solution, test the solution and give suggestions for further development of the solution. Throughout the production of the solution I am required to produce a refinement log that evidences the development of the solution.	I must analyse the problem, design a solution to the problem, develop a final programmed solution, test the solution and give suggestions for further development of the solution. Throughout the production of the solution I am required to produce a refinement log that evidences the development of the solution.
'Blockly' style coding and programming, utilising GUI (Focus: Functions)	I can identify a limited number of functions (print, input etc.), with support.	I can use a small number of functions (print, input etc.) without support and in the appropriate position.	I can use a variety of functions in the appropriate place.	I can use a variety of functions in the appropriate place and troubleshoot non-working scripts.		
'Blockly' style coding and programming, utilising GUI (Focus: Selection & Iteration)	In pseudo-code, I can produce statements with appropriate help.	I can use an IF statement without support and in the appropriate position.	I can use an IF... ELSE IF... ELSE structure to extend my selection programming.	I can nest several IF statements within an IF... ELSE IF... ELSE structure to create a more complex selection statement.		
'Blockly' style coding and programming, utilising GUI (Focus: Variables & Lists)	I know what variables are and I can identify data types.	I can create a programme with at least 5 variables and explain the difference between the 3 main data types.	I understand the difference between variables and lists. (I can set up a list.)	I can use Lists in the appropriate place within a realistic programme.		