Year 7	Year 8	Year 9	Algorithmic Thinking	Programming Skills	Knowledge and Understanding	
		9	Identify all key requirements from a scenario and develop an appropriate and logical algorithmic solution. Create a logically sound algorithm with correct syntax and relevant programming constructs.	Form a complete program for a given scenario using a combination of programming constructs. Confidently applying programming skills from bands A-D without guidance. Can produce a robust, maintainable, well tested program.	Define / State	Understand, retain and apply knowledge independently.
					Describe / Explain	Can form a suitable answer using explanations based on some contextual reasons and / or causes.
					Discuss	Discuss with reasonable knowledge and understanding with some context the impact of the given scenario.
	9	8	Identify all key requirements from a scenario and develop an appropriate and logical algorithmic solution. Create a logically sound algorithm with mostly correct syntax and relevant programming constructs.	Form a complete program for a given scenario using a combination of programming constructs. Confidently applying programming skills from bands A-D with minimal guidance on more complex constructs. Can produce a robust, maintainable, well tested program.	**Achieve all of the below with occasional and basic teacher input.**	
					Define / State	Understand, retain and apply knowledge independently.
					Describe / Explain	Can form a suitable answer using explanations based on some contextual reasons and / or causes.
					Discuss	Discuss with reasonable knowledge and understanding with some context the impact of the given scenario.
9	8	7	Identify all key requirements from a scenario and develop an appropriate algorithmic solution. Create a logically sound algorithm with mostly correct syntax and relevant programming constructs.	Form a complete program for a given scenario using a combination of programming constructs. Confidently applying programming skills from bands A-D with structured guidance on more complex constructs. Can produce a robust, maintainable, well tested program.	**Achieve all of the below using structured teacher prompts and input.**	
					Define / State	Understand, retain and apply knowledge independently.
					Describe / Explain	Can form a suitable answer using explanations based on some contextual reasons and / or causes.
					Discuss	Discuss with reasonable knowledge and understanding with some context the impact of the given scenario.
8	7	6				

			Identify some key requirements from a scenario independently and can develop an appropriate algorithmic solution. Create a sequential algorithm with mostly correct syntax and relevant programming constructs.	Form a partially complete program for a given scenario using a combination of programming constructs. Confidently applying programming skills from bands A-C. Can produce a maintainable, well tested program with robust features.	Define / State	Partially understand, retain and apply knowledge independently.
					Describe / Explain	Can form a suitable answer using basic explanations referencing some context.
					Discuss	Discuss with reasonable knowledge and some context the impact of the given scenario.
7	6	5	Identify some key requirements from a scenario with guidance and can develop an algorithmic solution. Create a sequential algorithm with syntax errors using some relevant programming constructs, and correct errors unprompted.	Form a partially complete program for a given scenario using a combination of programming constructs with guidance from the teacher verbally / in structured forms. Confidently applying programming skills from bands A-C. Can produce a maintainable, well tested program with robust features.	**Achieve all of the below occasionally using structured scaffolding and teacher input.**	
					Define / State	Partially understand, retain and apply knowledge independently.
					Describe / Explain	Can form a suitable answer using basic explanations referencing some context.
					Discuss	Discuss with reasonable knowledge and some context the impact of the given scenario.
6	5	4	Identify some key requirements from a scenario independently and can develop an algorithmic solution. Create a sequential algorithm with syntax errors using some relevant programming constructs and with mild guidance can correct errors.	Form a program for a given scenario using a combination of basic programming constructs. Confidently applying programming skills from bands A-B. Can produce a maintainable and well tested program.	Define / State	Retain and apply knowledge independently
					Describe / Explain	Can form a reasonably accurate answer using basic explanations.
					Discuss	Discuss with basic knowledge and limited understanding the impact of the given scenario.
5	4	3	Identify some key requirements from a scenario independently and can develop an algorithmic solution with guidance.	Form a program for a given scenario using a combination of basic programming constructs.	**Achieve all of the below always using structured scaffolding and teacher input.**	
					Define / State	Retain and apply knowledge independently

			Create a sequential algorithm with syntax errors using some relevant programming constructs and with heavy guidance can correct errors.	Confidently applying programming skills from bands A-B. Can produce a maintainable and well tested program. Completing the above with verbal and structured support from the teacher.	Describe / Explain	Can form a reasonably accurate answer using basic explanations.
					Discuss	Discuss with basic knowledge and limited understanding the impact of the given scenario.
4	3	2	Given key requirements, can develop an algorithmic solution to a scenario. Create a basic algorithm with syntax errors, showing limited use of programming constructs. Lacking in sequential and logical thought but able to spot errors.	Form a program for a given scenario using a combination of basic programming constructs with support. Confidently applying programming skills from band A. Can produce a program with consideration of maintainability and testing shown.	Define / State	Partially retain and apply knowledge with prompts.
					Describe / Explain	Can form an answer using basic explanations
					Discuss	Discuss with basic knowledge and limited understanding the impact of the given scenario with no context.
3	2	1	Given key requirements, can develop an algorithmic solution to a scenario with guidance. Create a basic algorithm with syntax errors, showing a limited use of programming constructs. Lacking in sequential and logical thought and unable to spot errors.	Form a program for a given scenario using a combination of basic programming constructs with support. Confidently applying programming skills from band A. Can produce a program with consideration of maintainability and testing shown. Completing the above with verbal and structured support from the teacher.	**Achieve all of the below always using structured scaffolding and teacher input.**	
					Define / State	Partially retain and apply knowledge with prompts.
					Describe / Explain	Can form an answer using basic explanations
					Discuss	Discuss with basic knowledge and limited understanding the impact of the given scenario with no context.

2	1	U	Given key requirements, can develop an algorithmic solution to a scenario when elements of the algorithm already exist and heavy guidance is provided. Can identify in an algorithm where sequence, selection and iteration exist in a prewritten algorithm with guidance.	Can describe in general terms what is happening in a basic program and replicate basic constructs with many syntax errors. Programs formed have no focus on maintainability or testing.	Define / State	Infrequently retain and apply knowledge.
					Describe / Explain	Can form an answer using basic descriptions.
1	U		Can identify in an algorithm where sequence, selection and iteration exist in a prewritten algorithm with guidance. Can explain why sequence, selection and iteration are used in rudimentary terms and can replicate sequence in an algorithm with guidance.	Can describe in general terms what is happening in a basic program but not replicate independently. Programs formed have no focus on maintainability or testing.	**Achieve all of the below always using structured scaffolding and teacher input.**	
					Define / State	Infrequently retain and apply knowledge with prompts.
					Describe / Explain	Can form an answer using basic descriptions.
U			Can identify in an algorithm where sequence, selection and iteration exist in a prewritten algorithm with guidance. Can explain why sequence, selection and iteration are used in rudimentary terms but cannot replicate.	Can describe in general terms what is happening in a very basic program but not replicate independently. Programs formed have no focus on maintainability or testing.	Infrequently retain and apply knowledge with heavy input from teacher or structured resource.	