



Computing

Year 8

GFS Assessment Level	Assessment Criteria					
	Modelling	Programming (visual programming language)	Computer Systems	Data Analysis(using Excel)	Analysis	E-Safety(Focus: Digital Drama and Fair use of online content)
M2	Create a simple model for a complex problem.	Write programs to create a new system in a text based language and debug statements. Select and use programming tools suited to my work in a variety of contexts, translating specifications expressed in an ordinary language into a language required by the system.	Understand the need for data compression and how to perform this.	With ease, use a range of advanced techniques/features in data handling applications to analyse data. Outcomes are accurate and generated efficiently.	Assess the validity of my program by considering or comparing alternative solutions	Recognise the importance of fair use of content. Recognise what is acceptable and unacceptable behaviour when using technologies online e.g. On gaming and social networks. Create a list of Do's and Don'ts.
M1	Recognise similarities in more complex problems required by combining a set of functions.	Create my own data structure. Use pre-constructed modules of code to build a system.	Justify how compression affects the size of a file.	Analyse and perform more complex searches for information e.g. using Boolean and relational operators in a spreadsheet file.	Analyse a problem and divide it into all its sub-problems and show this as a diagram. Describe and predict the	Demonstrates use of computers safely and responsibly, knowing a range of ways to report unacceptable

		Assess the validity of my program by considering or comparing alternative solutions.			outcomes of more complex algorithms for example searching and sorting	content and contact when online when using social networks like Facebook, Instagram.
S3	Produce a model which fits some aspects of these problems by applying a set of functions.	Select and use programming tools suited to my work in a variety of contexts, translating specifications expressed in an ordinary language into a language required by the system. Identify similar problems and explore how the same algorithm could be used for both problems.	Examine the relationship between resolution and colour depth, and how these can affect file size.	Explore why sorting data in a spreadsheet file can improve searching for information.	Take a problem and divide it into a main sub-problem. Analyse and present an algorithm for a given task.	I understand the importance of communicating safely and respectfully online. I know that information should be kept private. Is able to apply this in real life especially when communicating on social networks.
S2	Modify solutions to one problem and adapt them for similar problems. Recognise similarities in given problems. Produce a model which fits some aspects of these problems.	Use procedures, functions with parameters in my programs. Explain and write more complex algorithms e.g. searching and sorting algorithms. Create program interfaces to make predictions and vary the rules within the programs.	Explain what a character set is and how it can be used for sound, images and numbers.	Investigate on the filters required to extract a subset of data and query data.	Demonstrate the need for care and precision of syntax and typography in giving instructions.	Knows how to identify and report inappropriate conduct when communicating on social networks.

		Independently write or debug a short program.				
S1	Recognise similarities between simple problems and the ways in which they can be solved.	Use variables, lists and simple procedures correctly in my programs. Explore the effects of changing the variables in a model or program. Develop, try out and refine sequence of instructions and show efficiency in framing these instructions. Make use of procedures without parameters in my programs. Manipulate strings and select appropriate data type.	Solve-convert binary digits to ASCII.	Explain the difference between data and information and relate it to a worksheet and report.	Describe what is meant by a computational table. Think through an algorithm and predict an output	Use digital devices and the internet safely and responsibly in all projects. Fair use of digital content online.
D2	Trace instructions and predict what the result will be. Think through an algorithm and predict its output.	Use selection and repetition correctly in my programs. Give instructions involving selections and repetitions. Analyse and represent symbolically a sequence of events. Demonstrate the need for care and	Explain the relationship between data representation in text file and data quality. Convert 6 to 8 bit binary digits to denary and denary to binary independently.	Classify and use appropriate validation rules.	Describe the goals of a given problem. Test my work and suggest how I can improve it.	Identify the risks of working online. Identify ways of how to keep my personal details safe when in a social network or online games.

		precision of syntax and typography in giving instructions.				
D1	Read a sequence of instructions and predict what the result will be. Develop and improve my instructions.	Plan a sequence of instructions for something I want to happen. Produce a linear sequence of instructions to make things happen. Identify algorithms and its purpose.	Explain how numbers and images are represented in a computer (bit patterns) Convert 6 to 8 bit binary digits to denary and denary to binary with assistance.	Identify different data validation rules with appropriate examples	Describe some of the goals of a given problem. Perform some testing on my work.	Identify some of the risks of working online. Identify some of the ways of how to keep my personal details safe when communicating in a social network.
E2	Read a sequence of instructions and have some success at predicting what the result will be. Identify some areas that can be improved in my instructions.	Plan a simple sequence of instructions for something I want to happen. Produce a simple linear sequence of instructions to make things happen. Identify algorithms.	Explain the relationship between data representation in picture file and data quality. Convert 4 bit binary digits to denary and denary to binary independently.	Understand the organisation of data in a Spreadsheet software and establish a link between cell, cell address, row, column, worksheet and workbook.	Perform some testing on my work.	State some of the risks of working online. State some of the ways of how to keep my personal details safe when using online networks for playing games and social networks.
E1	Read a sequence of instructions and have limited success at predicting what the result will be. Identify a couple areas that can be improved in my instructions.	Plan a simple sequence of instructions for something I want to happen. Create a limited sequence of instructions Identify algorithms.	Understand that binary is the way digital computers represent all data. Convert 4 bit binary digits to denary and denary to binary with assistance.	Name and define the key terms such as cell, cell address, row, column, worksheet and workbook.	Identify some of the goals of a given problem.	State a risk of working online when using social networks. State a way of how to keep my personal details safe. State a fact that the human element contributes to the risks of using

						computers. Realise that there is a benefit of accessing technology.
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