Computer Science grading criteria 1-9

Name _____ Set _____ Teacher _____

	Problem solving	Programming	Communication and the internet	Computer theory
1	Identify solutions to basic problems	Understand how to develop a program	Identify a network	Identify the types of computers
	Understand how algorithms can be used to solve problems	Create a simple program using visual programming software	Understand the importance of a network	Explain how computer systems represent data
	Follow a basic algorithm to solve a problem	Identify variables within a program	Demonstrate how to refine a search	List types of computer hardware
2	Identify the key features of a flow chart.	Identify errors within a program	Describe the different types of networks	Show how to convert binary to denary
	Design a solution using an algorithm	Create a program using text based editors e.g. python	Explain how a network can be secured	Identify input, output, process for a range of computer systems
	Use selection to solve problems e.g. if statements	Develop a program which uses sequencing to meet a user requirement	Use Boolean operators to refine a search	Explain the purpose of computer hardware
3	Analyse how algorithms can be used to solve everyday problems	Construct a program which uses sequencing and selection to meet a user's needs	Analyse the internet between the World wide web and the internet	Show how to convert denary to binary
	Use iterations within an algorithm to solve problems e.g. loops	Describe the types of errors within programs e.g. syntax error	List the network topologies	Describe the types of secondary storage
	Develop an algorithm which uses iteration and selection to solve a problem	Illustrate readability within your code e.g. Sensible variable names / comments	Compare wired vs wireless networks	Identify the types of software within a computer system
4	Use sequencing, selection and iteration within an algorithm to solve a problem	Create a program which uses sequencing, selection and iteration to meet a client's needs and target audience	Discuss the advantages and disadvantages of network topologies	Demonstrate the binary addition and subtraction
	Show an awareness of the target audience when solving a problem	Implement effective readability within a program	List networking protocols	Describe the differences between RAM and ROM
	Describe the purpose of an algorithm	Identify appropriate data types within a program	Identify how information is sent across a network e.g. packet switching	Discuss the need for an operating system within a computer system
5	Can identify patterns within algorithms to solve problems	Develop a program which uses sequencing, selection and iteration showing the use of an array to meet a client's needs and target audience	Evaluate the effectiveness of network topologies	Examine how images are represented within a computer system
	Solve a problem using multiple algorithms to solve the same problem.	Discuss the need for effective readability within a program	Assess the threats to a computer network	List the type of logic gates
	Evaluate the impact of an algorithm when problem solving.	Demonstrate an awareness of validation within a program	Discuss the use of network protocols	Describe the fetch to code execute cycle within the CPU
6	Identify how pseudo code can be used to solve a problem	Develop a program which uses effective use of sequencing, selection and iteration including an array to meet a client's needs and target audience	Identify and describe key network hardware	Demonstrate how to convert Hex to denary and binary
	Discuss how the same algorithm can be used to solve different problems	Effectively test a program to ensure it meets a client needs	Compare and contrast the use of a client server and peer to peer network.	Evaluate the Von Neumann model
	Examine errors within an algorithm	Demonstrate a range of effective validation rules within a program	Discuss the need for a network within an organisation	Evaluate the need for high- level languages
7	Use an array within an algorithm to solve a problem	Construct a program which makes effective use of a multidimensional array	Discuss the need for a disaster recovery plan	Examine how sounds represented within a computer system
	Compare the effectiveness and efficiency of different algorithms	Evaluate the use of an integrated development environment when writing programs	Assess the differences between IP and MAC addresses	Discuss the differences between an interpreter and compiler
	Analyse how algorithms can be used to solve everyday problems	Effectively use testing to assess the success of a program	Explain the need for backups within a computer system	Describe the need cache memory within the CPU

IT grading criteria 1-9

Name _____ Set _____ Teacher _____

	It in the Digital world	Software skills	Planning and designing	Evaluation technique
L1.P (1)	Use IT independently	Choose correct software for a purpose	Explain the need to plan a project	Recognise the importance for reviewing work
	Identify how people interact with computers	Define how to store data in a logical way	Be able to generate a basic plan for a chosen outcome	Be able to state the key requirements of a task
	Compare how IT can be used effectively	Use office tools to develop digital content	Understand the need to organise assets for a project	List some improvements for a task
L1.M (2)	Analyse how IT can be used to enhance learning	Demonstrate an awareness of the quality of digital content collected.	Recognise the need to brainstorm and plan a project before developing	Be able to implement improvements to your work
	Discuss how IT can enhance an outcome	Recognise how to store digital content using appropriate file and folder names	Create a plan for a digital product which meets a criteria	Discuss a range of improvements that could be made to improve a project
	Use IT to solve a problem	Use a variety of office tools to develop digital content	Review how a plan can help with the development of a project.	Understand the reason why work should be reviewed
L1.D (3)	State how IT can help to solve specific problems	Use a range of appropriate software to effectively manipulate and present digital content (office packages and some graphics packages)	Understand the key requirements of a project plan	Make appropriate judgement when improving work
	Compare a range of IT problems	Choose an appropriate method of organising digital content	Develop an appropriate project plan for a specific scenario	Analyse a range of strengths and targets for a project with some understanding of where to go next
	Evaluate how IT packages can impact on a person	Use a range of packages to achieve a goal	Understand the audience and purpose of a plan when developing a project	Demonstrate a clear understanding of the importance of the review cycle
L2.P (4)	State how IT can improve collaboration	Demonstrate recognition of audience and purpose when using software to develop digital content	Be able to identify key design decisions and requirements of a project plan	Compare how reviewing work can allow you to achieve an outcome
	Demonstrate how to collaborate effectively using IT	Combine software packages and internet services to communicate information	Implement a range of information within a plan to meet a given scenario	Effectively employ a range of improvement techniques to your work
	Explain how collaboration can impact on a problem.	Compare the quality of assets used in digital content	Understand the impact that planning will have on the end product	Evaluate the impact of improvements to the original objective
L2.M (5)	Review methods in which you can collaborate in IT	Demonstrate effective judgement and control when merging software to create digital content	Formulate a fully annotate plan which includes a detailed overview of intentions	Evaluate performance towards an outcome with the use of evaluative review
	Demonstrate how to collaborate with someone else within IT	Develop a range of collaborative approaches to sharing digital content for educational purposes	Explain what a product will be intended to look like	Identify an appropriate plan of improvements to clearly meet a criteria
	Summarise how sharing and collaborating information can solve a problem	Adapt assets to fulfil an outcome	Describe a range of important design decisions for the chosen product.	Understand the need for reflecting on reviews
L2.D (6)	State some of the barriers to collaboration in IT	Evaluate the appropriateness of application software to achieve given goals	Develop an effective and clear structure of intended designs for a project	Assess why you must regularly review and evaluate working practice
	Identify the negatives of collaboration within IT	Employ collaboration within creating digital content	Implement an effective plan which will show intentions of a product and final outcomes	Compare a project using evaluative comments and suggest future developments
	Evaluate the effectiveness of using collaboration in IT	Assemble assets for a chosen purpose	Be able explain the reasons behind key inclusions in the plan.	Formulate an effective overview of how review has affected the initial outcome
L2.D* (7)	Compare the drawbacks of relying on digital devices.	Adapt assets to fulfil an outcome	Formulate a fully annotate plan which includes a detailed overview of intentions	Evaluate performance towards an outcome with the use of evaluative review
	Evaluate the impact of digital devices on a specific user	Develop a range of collaborative approaches to sharing digital content for educational purposes	Describe a range of important design decisions for the chosen product.	Identify an appropriate plan of improvements to clearly meet a criteria
	Compare the drawbacks of relying on digital devices.	Demonstrate effective judgement and control when merging software to create digital content	Explain what a product will be intended to look like	Understand the need for reflecting on reviews