S2 Computing Science					
WB	**Content**	**Organiser**	**Es and Os**	**Benchmark**	**Homework**
1 June	Computer Animation • Intro to animation using Pivot • Stopframe animation using drawplus • Stopframe animation using drawplus	Using digital products and services in a variety of contexts to achieve a purposeful outcome	I can explore and use the features of a range of digital technologies, integrated software and online resources to determine the most appropriate to solve problems. TCH 3-01a	Uses the most appropriate applications and software tools to capture, create and modify text, images, sound, and video to present and collaborate.	
2 June	Computer Animation • Keyframe animation using Drawplus • Keyframe animation using Drawplus • Mini project on Keyframe or stopframe animation	Using digital products and services in a variety of contexts to achieve a purposeful outcome	I can explore and use the features of a range of digital technologies, integrated software and online resources to determine the most appropriate to solve problems. TCH 3-01a	Uses the most appropriate applications and software tools to capture, create and modify text, images, sound, and video to present and collaborate.	

3 June	Computer Animation • Mini project on Keyframe or stopframe animation • Mini project on Keyframe or stopframe animation • Mini project on Keyframe or stopframe animation	Using digital products and services in a variety of contexts to achieve a purposeful outcome	I can explore and use the features of a range of digital technologies, integrated software and online resources to determine the most appropriate to solve problems. TCH 3-01a	Uses the most appropriate applications and software tools to capture, create and modify text, images, sound, and video to present and collaborate.	
5 Aug	Computer Systems • Hardware basics including binary • Processor and Von Neumann Architecture • Memory and Von Neumann Architecture	Understanding and analysing computing technology	I can describe the structure and operation of computing systems which have multiple software and hardware levels that interact with each other. TCH 3-14b	Demonstrates an understanding of the von Neumann architecture and how machine code instructions are stored and executed within a computer system	
6 Sep	Microbit • Introduction to microbit(parts of the microbit and using the block	Understanding and analysing computing technology	I can describe the structure and operation of computing systems which have multiple software and hardware levels that interact with each other. TCH 3-14b	Demonstrates an understanding of the von Neumann architecture and how machine code instructions are stored and executed within a computer system	Hardware and animation 1

	editor • Using the display • Variables and inputs from sensors		I can explain the overall operation and architecture of a digitally created solution TCH 4-14b	Demonstrates an understanding of how computers represent and manipulate information in a range of formats	
7 Sep	Microbit • More complex programs • Mini Project • Mini Project	Designing, building and testing computing solutions Understanding and analysing computing technology	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a I can describe the structure and operation of computing systems which have multiple software and hardware levels that interact with each other. TCH 3-14b	Writes code which receives and responds to real world inputs (in a visual language). Demonstrates an understanding that computers translate information processes between different levels of abstraction	
8 Sep	Computer Systems • Components of a network system • How data is sent on a network • Encryption and compression	Understanding and analysing computing technology	I can describe the structure and operation of computing systems which have multiple software and hardware levels that interact with each other. TCH 3-14b	Demonstrate an understanding of how computers communicate and share information over networks including the concepts of sender, receiver, address and packets. Understands simple compression and encryption techniques used in computing technology	
9 Sep	Computer Systems	Searching, processing	I can use digital technologies to process and manage information	Gathers, evaluates and combines	Hardware and

	• Selecting the correct hardware – Project • Selecting the correct hardware – Project Selecting the correct hardware - Project	and managing information responsibly	responsibly and can reference sources accordingly. TCH 4-02a	data and information from a range of sources to create a publication, presentation or information resource.	animation 2
10 Oct	Computer Security and staying safe Online • How safe are you online and digital footprint • Biometrics and Firewalls • Encryption an security	Cyber resilience and internet safety	I can explore the impact of cyber-crime for business and industry and the consequences this can have on me. TCH 4-03a	Evaluates the digital footprint of industry and identifies good practice Identifies the main causes of security breaches in industry.	
11 Oct	Computer Security and staying safe Online • Malware, bots and viruses • Computer related laws and examples of	Cyber resilience and internet safety	I can explore the impact of cyber-crime for business and industry and the consequences this can have on me. TCH 4-03a	Demonstrates understanding of how cyber security breaches in industry can impact on individuals Demonstrates understanding of how industry collects and uses personal data ethically and how this relates to data	

	breaches • Safe disposal of data and devices			security legislation.	
12 Oct	Creating Websites • How the Internet works and anatomy of a browser • Hardware • Revision of HTML tags and wireframing	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds web pages using appropriate mark-up languages.	
13 Nov	HTML • Using images (alt, width and height) • Linking to other pages using (a) tag • Creating ordered and unordered lists	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds web pages using appropriate mark-up languages.	HTML 1
14 Nov	Creating Websites • Using foreground and background colours • Using DIV tag	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds web pages using appropriate mark-up languages.	

	and STYLE tags				
15 Nov	Creating Websites • Create a school website • Create a school website • Tables extension	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds web pages using appropriate mark-up languages.	HTML 2
16 Nov	Creating Websites • Tables extension • Adding interactivity with Javascript	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions. TCH 4-15a	Design and build web pages which includes interactivity.	Assessment 1
17 Dec	Game Design and Development • Top 5 Games • Tutorial 1 & 2 • Heroes & Villains	Designing, building and testing computing solutions	I understand language constructs for representing structured information TCH 3-14a I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds a program using a visual language combining constructs and using multiple variables. Can find and correct errors in program logic.	
18 Dec	Game Design and Development • Tutorial 3 • Tutorial 4 • Tutorial 5	Designing, building and testing computing solutions	I understand language constructs for representing structured information TCH 3-14a I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements	Designs and builds a program using a visual language combining constructs and using multiple variables. Can find and correct errors in program logic. Writes code which receives and	

			TCH 3-15a	responds to real world inputs	
19 Dec	Game Design and Development • SDD Process • Tutorial 6 • Polygons • Tutorial 7	Designing, building and testing computing solutions	I understand language constructs for representing structured information TCH 3-14a I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds a program using a visual language combining constructs and using multiple variables. Can find and correct errors in program logic. Writes code which receives and responds to real world inputs	
20 Jan	Game Design and Development • Tutorial 8 • Variables • Tutorial 9	Designing, building and testing computing solutions	I understand language constructs for representing structured information TCH 3-14a I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds a program using a visual language combining constructs and using multiple variables. Can find and correct errors in program logic. Writes code which receives and responds to real world inputs Interprets a problem statement, and identifies processes and information to create a physical computing and/or software solution.	
21 Jan	Game Design and Development • Tutorial 10 • Top 5 Enemies • Tutorial 11 pt.1 • Tutorial 11 pt.2	Designing, building and testing computing solutions	I understand language constructs for representing structured information TCH 3-14a I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds a program using a visual language combining constructs and using multiple variables. Can find and correct errors in program logic. Writes code which receives and responds to real world inputs	

				Interprets a problem statement, and identifies processes and information to create a physical computing and/or software solution.	
22 Jan	Game Design and Development • Tutorial 11 pt.3 • Personalise/Catch Up • Showreel and Certificates	Designing, building and testing computing solutions	I understand language constructs for representing structured information TCH 3-14a I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Designs and builds a program using a visual language combining constructs and using multiple variables. Can find and correct errors in program logic. Writes code which receives and responds to real world inputs Interprets a problem statement, and identifies processes and information to create a physical computing and/or software solution.	
23 Jan	Computer Security and staying safe Online • Design and Create Website on Internet Safety and environmental issues • Design and	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions. TCH 4-15a	Design and build web pages which includes interactivity.	Security 1

	Create Website on Internet Safety and environmental issues • Design and Create Website on Internet Safety and environmental issues				
24 Feb	Computer Security and staying safe Online • Design and Create Website on Internet Safety and environmental issues • Design and Create Website on Internet Safety and environmental issues • Design and	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions. TCH 4-15a	Design and build web pages which includes interactivity.	

	Create Website on Internet Safety and environmental issues				
25 Feb	Database • Introduction to flat file database (structure) • Field types and creating first access table from a data dictionary • Using filters to find information quickly	Understanding and analysing computing technology Designing, building and testing computing solutions	I understand language constructs for representing structured information TCH 3-14a I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Demonstrates an understanding of structured information in programs, databases or webpages Identifies a set of characteristics describing a collection of related items that enable each item to be individually identified Represents and manipulates structured information in programs, or databases for example, works with a list data structure in a visual language, or a flat file database.	Security 2
26 Feb	Database • Sorting a database • Using queries • Problem solving using access	Understanding and analysing computing technology Designing, building and testing computing	I understand language constructs for representing structured information TCH 3-14a I can select appropriate development tools to design, build, evaluate and refine computing solutions based on	Identifies a set of characteristics describing a collection of related items that enable each item to be individually identified Represents and manipulates	

	database	solutions	requirements TCH 3-15a	structured information in programs, or databases for example, works with a list data structure in a visual language, or a flat file database.	
27 Feb	Database • Database project at level 3/4 • Database project at level 3/4 •	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Represents and manipulates structured information in programs, or databases for example, works with a list data structure in a visual language, or a flat file database.	Database 1
28 Mar	Programming in VB.Net • User interface and the form and toolbox • Working with text and variables • Practical work	Designing, building and testing computing solutions		Understands basic control constructs such as sequence, selection repetition, variables and numerical calculations in a textual language • Demonstrates an understanding of how visual instructions and textual instructions for the same construct are related • Identifies and explains syntax errors in a program written in a textual language	Revision homework 2
29 Mar	Programming in	Designing, building and testing	I can select appropriate development tools to design, build, evaluate and	Writes a program in a textual language which uses variables	

	VB.Net • Types of variables • Using textboxes for input and output • Practical work	computing solutions	refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions. TCH 4-15a	within instructions instead of specific values where appropriate.	
30 Mar	Programming in VB.Net • Practical work • Arithmetic and concatenating text and variables • Practical work	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions. TCH 4-15a	Writes a program in a textual language which uses variables within instructions instead of specific values where appropriate.	
31 Mar	Programming in VB.Net • Designing using pseudocode, DFD and structure diagrams • Using Inputbox for input • Practical work	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions. TCH 4-15a	Creates a design using accepted design notations for example, pseudocode storyboarding, structure diagram, data flow diagram, flow chart	Assessment 2
32 April	Programming in VB.Net • Simple selection using the IF	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments	Debugs code and can distinguish between the nature of identified errors e.g. syntax and logic.	

	statement • Practical work • Using conditional loops		to justify my decisions. TCH 4-15a	Writes test and evaluation reports	
33 April	Programming in VB.Net • Practical work • Using Fixed loops • Complex conditions using AND, OR and NOT with selection	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions. TCH 4-15a	Writes a program in a textual language which uses variables and constructs such as sequence, selection and repetition. Can make use of logical operators – AND, OR, NOT.	
34 May	Programming in VB.Net • Practical project "Scotland's got Talent" – this covers aspects of level 3 and 4 Outcome for programming • Practical project • Practical project	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements TCH 3-15a	Interprets a problem statement, and identifies processes and information to create a physical computing and/or software solution. Can find and correct errors in program logic	
35 May	Programming in VB.Net • Practical project	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions based on requirements	Interprets a problem statement, and identifies processes and information to create a physical computing and/or software	

	• Practical project • Practical project		TCH 3-15a	solution. Can find and correct errors in program logic	
36 May	Programming in VB.Net • Practical project • Practical project • Practical project	Designing, building and testing computing solutions	I can select appropriate development tools to design, build, evaluate and refine computing solutions to process and present information whilst making reasoned arguments to justify my decisions. TCH 4-15a	Identifies and explains syntax errors in a program written in a textual language Analyses problem specifications across a range of contexts, identifying key requirements. Writes a program in a textual language which uses variables and constructs such as sequence, selection and repetition Creates a design using accepted design notations for example, pseudocode storyboarding, structure diagram, data flow diagram, flow chart. Debugs code and can distinguish between the nature of identified errors e.g. syntax and logic. Writes test and evaluation reports.	