



Computing and IT

Year 7-11 Subject Learning Scheme 2017-2018



Year 7 KS3	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
<p>Key Learning and Activities.</p> <ul style="list-style-type: none"> • knowledge • skills • experiences • Basic Computing & ICT. Simple Algorithms , debugging, loops and data-types <p>Further Study</p> <ul style="list-style-type: none"> • Advanced Programming in multiple software (HTML & Python) 	<ul style="list-style-type: none"> • Baseline Assessment • Introduction to ICT • E-Safety • ICT skills • Basic Computing Theory 	<p>Unit 1 Computer Hardware and Peripherals</p> <ul style="list-style-type: none"> • Peripherals, inputs, outputs • Storage • Processor & RAM • Computer system • Port & Cables 	<p>Unit 2 Control using Flowol</p> <ul style="list-style-type: none"> • Control outputs • Manage a sequence • Control outputs with input decisions • Use of sub-routines 	<p>Unit 3 Databases</p> <ul style="list-style-type: none"> • Create a table in design view • Select datatypes appropriately • Enter and sort data in datasheet view • Perform a query using keywords • Perform multiple queries and use logical operators • Create reports 	<p>Unit 4 Game Design using Scratch</p> <ul style="list-style-type: none"> • Create Sprites and backgrounds • Simple move commands • Use of forever loops • Use of IF statements • Complex movement commands • Use of variables 	<p>Unit 5 Spreadsheets</p> <ul style="list-style-type: none"> • Create a spreadsheet model • Formatting techniques • Simple Formulae • Simple Functions • Charts & Graphs
<p>Key Activities promoting SMSC and British Values.</p>	<ul style="list-style-type: none"> • A sense of purpose; • Understanding of how individuals relate to each other . • BV – Respect and Tolerance • Rules of Law • E-safety - Recognising moral dimensions to situations. 	<ul style="list-style-type: none"> • A sense of purpose • Taking responsibility for ones’ own actions; • Being able to take on the roles of team leader and team worker. 	<ul style="list-style-type: none"> • Taking responsibility for ones’ own actions; • Understanding how what is learnt in the curriculum relates to life in society. • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones’ own actions; • A sense of purpose • BV – Respect and Tolerance • A sense of purpose 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones’ own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones’ own actions; • A sense of purpose • BV – Respect and Tolerance

	<ul style="list-style-type: none"> • Being able to articulate attitudes and values; • Understanding what is learnt in the curriculum and how this relates to society. • BV – Respect and Tolerance • 	<ul style="list-style-type: none"> • BV – Respect and Tolerance • 	<ul style="list-style-type: none"> • Personal response and accomplishment. 	<ul style="list-style-type: none"> • BV – Respect and Tolerance • 		
Key Homework	E-safety Research	Carry out a research task to identify different types of data storage we use.	Create a hand-drawn flowchart, using correct symbols, to show a sequence of instructions for a given task.	Create a brand new database containing records, data entry form, and queries.	Create a different paddle game independently.	Create a brand new spreadsheet using a basic given model.
Key Assessment incl. dates	Baseline Assessment – written/practical W/B 08/09/14	1 hour written test W/B 03/11/14	Printed evidence of mimics created W/B 05/01/15	1 hour practical Database test WB 02/03/15	Printed evidence of game created WB 04/05/15	One hour practical Spreadsheet test WB 13/07/15

Year 8 KS3	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Key Learning and Activities <ul style="list-style-type: none"> • knowledge • skills • experiences 	<ul style="list-style-type: none"> • Baseline Assessment • File management • E-Safety • Basic Computing Theory 	Unit 1 Computing Theory <ul style="list-style-type: none"> • Computer Components • Network types • Network topologies • Data storage • Binary and Hexadecimal 	Unit 2 Web Design & HTML <ul style="list-style-type: none"> • Website structures and management • Use of Master page • Navigation & hyperlinks • Design features & layout 	Unit 3 Programming with Python <ul style="list-style-type: none"> • Print and input commands • Assigning and recalling variables • Understanding data types • Importing modules 	Unit 4 Multi-media <ul style="list-style-type: none"> • Types of animation and sketching designs • Creating characters using vector tools • Creating suitable background • Designing a stop frame animation 	Unit 5 Spreadsheets <ul style="list-style-type: none"> • Spreadsheet models • If functions • Validation & Goal seek • Profit/loss & VAT • Conditional formatting

			<ul style="list-style-type: none"> • Adding multimedia features • Basic HTML code 	<ul style="list-style-type: none"> • Using value ranges 	<ul style="list-style-type: none"> • Development of animation skills 	
Key Activities promoting SMSC and British Values.	<ul style="list-style-type: none"> • A sense of purpose; • Understanding of how individuals relate to each other . • BV – Respect and Tolerance Rules of Law • E-safety - Recognising moral dimensions to situations. • Being able to articulate attitudes and values; • Understanding what is learnt in the curriculum and how this relates to society. 	<ul style="list-style-type: none"> • A sense of purpose • Taking responsibility for ones’ own actions; • Being able to take on the roles of team leader and team worker. • 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones’ own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones’ own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones’ own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones’ own actions; • A sense of purpose • BV – Respect and Tolerance
Key Homework	E-safety Research and create a poster	Create a datasheet to demonstrate knowledge of Network Topologies	Design and create a website independently	Create a short computer program independently	Create an animation independently	Create a spreadsheet independently
Key Assessment incl. dates	Baseline Assessment – written/practical W/B 08/09/14	1 hour written test W/B 03/11/14	Printed evidence of website created W/B 05/01/15	Printed evidence of learning tasks WB 02/03/15	Printed evidence of animation WB 04/05/15	One hour Spreadsheet practical test WB 13/07/15

Year 9 KS3	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
<p>Key Learning</p> <ul style="list-style-type: none"> • knowledge • skills • experiences <ul style="list-style-type: none"> • Digital Literacy, IIT & Computing. • Computer Architecture • Advanced Programming <p>Further Study</p> <ul style="list-style-type: none"> • GCSE Computing • GCSE ICT 	<p>Investigation and Logo Design</p> <ul style="list-style-type: none"> • Planning activities • Referencing sources • Importance of prototypes • Development tools in DrawPLus • Matching designs to purpose and audience • Logo comparison and peer feedback • Annotation and evaluation for assessment. 	<p>Database structures</p> <ul style="list-style-type: none"> • Database design and datasheet view • Field formats, datatypes and validation • Research techniques • Database queries • Database reports and formatting • Evidencing database views 	<p>Audio editing</p> <ul style="list-style-type: none"> • Script writing, sound effects • Recording techniques • Audio editing on Audacity • Export and sound file formats 	<p>Spreadsheet Models</p> <ul style="list-style-type: none"> • Spreadsheet models - formatting, formulae and functions • Validation and IF functions • Testing and What IF analysis • Charts • Use of spreadsheet model for recommendations 	<p>Digital Designs and Flash Animations</p> <ul style="list-style-type: none"> • Image design in DrawPlus • Simple animation • Layout design in WebPlus • Hyperlinks • Keyframe and Stopframe animations • Cloning, timings and onion skinning • Screen size and adjustment • Export and file formats • Import and positioning 	<p>Web Design and HTML/Web Authoring</p> <ul style="list-style-type: none"> • Storyboard designs • Page setup and master page • WebPlus tools • Import media • Advanced tools • Parent and child pages, navigation bars • Rollovers, galleries, light boxes • Image size and formats • Accessibility
<p>Key Activities promoting SMSC and British Values.</p>	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones' own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones' own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones' own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones' own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones' own actions; • A sense of purpose • BV – Respect and Tolerance 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones' own actions; • A sense of purpose • BV – Respect and Tolerance
<p>Key Homework</p>	<ul style="list-style-type: none"> • Event investigation • Logo prototypes 	<ul style="list-style-type: none"> • Research of 3 possible tracks for the database 	<ul style="list-style-type: none"> • Radio advert research 	<ul style="list-style-type: none"> • Detailed prices of food, drink and activities for event • Sketch designs for layout of recommendations sheet 	<ul style="list-style-type: none"> • Prototype designs • Banner timeline 	<ul style="list-style-type: none"> • Story board sketches • Web page sketches

Key Assessment incl. dates	Detailed review of activities. W/B 20/10/14	Detailed review and evidence of database views. W/B 15/12/14	Detailed review of edited recording including discussion of techniques used. W/B 09/02/15	Dashboard model. Testing and What If question analysis. Recommendations sheet. W/B 30/03/15	Detailed comments and justifications of design choices. W/B 18/05/15	Justifications of design choices and description of techniques used. Mock Exam W/B 13/07/15
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Year 10 KS4	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
<p>Key Learning</p> <ul style="list-style-type: none"> • knowledge • skills • experiences 	<p>CIDA Students gain a clear understanding of the assessment criteria and learn the key skills for the first sections of coursework. These include:- Investigation (Effective research) Image manipulations and development.</p> <p>GCSE Students gain a clear understanding of the assessment criteria and learn the key skills for the first sections of coursework. These include:- Investigation (Effective research) Image manipulations and development.</p>	<p>CIDA Web Design. Students learn important web design principles. This includes:- functionality, accessibility and usability. Students will learn advanced web design tool in order to create an effective website for a given scenario.</p> <p>GCSE Students will learn to use a variety of multimedia software and will be able to independently choice appropriate tools. Students will learn to create and edit movies and be expected to plan effectively using a suitable timeline and storyboard. Students will learn to use a combinations of elements including sound, video and edited images. Students will be expected to analysis a database and produce and develop a professional report</p>	<p>CIDA Students continue to learn the requirements for the controlled assessment. The key learning will include the effective use of bitmap and vector tools and the combination of elements. Students will learn to improve products and make effective use of feedback.</p> <p>GCSE Students will learn to use spreadsheet tools to create model of a real life situation. Students will be expected to research costs and implement an effective spreadsheet model. This will include learning to use functions, formulas and professional formatting tools.</p>	<p>CIDA Web Design. Students will continue to learn important web design principles. They will learn to create professional website that include a variety of stimulating interactive features. These will include creating flash animations and other special features.</p> <p>GCSE Students will learn to create a recommendations report. They will learn the key features of 'report' and learn to present professionally to a professional audience. Students will learn to use a selection of software and select the most appropriate tools for a given task.</p>	<p>CIDA Students continue to learn the requirements for the controlled assessment. The key learning will include how to create a digital advert using effective elements that are suitable for a specific audience.</p> <p>GCSE Students will learn to create a promotional audio clip. They will use a variety of professional sound editing tools to develop and enhance their sound track. Combinations of elements will be used to create a final track that is suitable for audience and purpose. Students will learn to create a multimedia product. This will require skills in designing, building and testing.</p>	<p>CIDA Students continue to learn the requirements for the controlled assessment. The key learning will include how to create an effective e-portfolio and evidence key learning. This will include learning different file formats and how to reduce the file size of elements to be incorporated in their e-portfolio.</p> <p>GCSE Students will complete a final review of their coursework project. This will include discussing whether the products are fit for audience and purpose and whether the CAB requirements were met and feedback was received. Students should also comment on ways in which the final versions could be further improved. Students will learn to evaluate their own performance.</p>
<p>Key Activities promoting SMSC and British Values</p>	<ul style="list-style-type: none"> • Personal response and accomplishment. 	<ul style="list-style-type: none"> • Personal response and accomplishment. 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones' own actions; • A sense of purpose 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for 	<ul style="list-style-type: none"> • Personal response and accomplishment. 	<ul style="list-style-type: none"> • Personal response and accomplishment. • Taking responsibility for ones' own actions; • A sense of purpose

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Key Homework	<p>CIDA SPB Homework (Summative Project Brief)</p> <ul style="list-style-type: none"> • SPB Research • SPB Prototype requirements • SPB Feedback requirements <p>GCSE CAB Homework (Controlled Assessment Brief)</p> <ul style="list-style-type: none"> • CAB Research • CAB Prototype requirements • CAB Feedback requirements 	<p>CIDA</p> <ul style="list-style-type: none"> • Web Page Evaluation • Master Page Design • Web Design Principles <p>GCSE</p> <ul style="list-style-type: none"> • Timeline plan • Prototype designs • Prototype evaluation 	<p>CIDA SPB Homework</p> <ul style="list-style-type: none"> • SPB Research • SPB Prototype requirements • SPB Feedback requirements <p>GCSE</p> <ul style="list-style-type: none"> • Spreadsheet planning • Costs research • Analysis of results 	<p>CIDA</p> <ul style="list-style-type: none"> • Web Page Evaluation • Web Design Principles • Special features of a website <p>GCSE</p> <ul style="list-style-type: none"> • Recommendations plan • Template design • Data analysis 	<p>CIDA SPB Homework</p> <ul style="list-style-type: none"> • SPB Research • SPB Prototype requirements • SPB Feedback requirements <p>GCSE</p> <ul style="list-style-type: none"> • Audio plan and source research • Planning Document • Test Plan 	<p>CIDA SPB Homework</p> <ul style="list-style-type: none"> • SPB Research • SPB Prototype requirements • SPB Feedback requirements <p>GCSE</p> <ul style="list-style-type: none"> • Checklist of requirements • Additional feedback required • Peer comments
Key Assessments inc. dates	<p>CIDA Each section of the controlled assessment will be assessed. All students will receive feedback for all practice and preparation work for the SPB. W/B 20/10/14</p> <p>GCSE Each section of the controlled assessment will be assessed. All students will receive feedback for all practice</p>	<p>CIDA Students will receive 2 mock examinations to assess their understanding of the exam requirement. W/B 15/12/14</p> <p>GCSE All students will receive feedback for all practice and preparation work for the CAB.</p>	<p>CIDA Each section of the controlled assessment will be assessed. All students will receive feedback for all practice and preparation work for the SPB. W/B 09/02/15</p> <p>GCSE All students will receive feedback for all practice and preparation work for the CAB. W/B 09/02/15</p>	<p>CIDA Students will receive 2 mock examinations to assess their understanding of the exam requirement. W/B 30/03/15</p> <p>GCSE All students will receive feedback for all practice and</p>	<p>CIDA Each section of the controlled assessment will be assessed. All students will receive feedback for all practice and preparation work for the SPB. W/B 18/05/15</p> <p>GCSE All students will receive feedback for all practice and preparation work for the CAB. W/B 18/05/15</p>	<p>CIDA Each section of the controlled assessment will be assessed. All students will receive feedback for all practice and preparation work for the SPB. W/B 13/07/15</p> <p>GCSE All students will receive feedback for all practice and preparation work for the CAB. W/B 13/07/15</p>

	and preparation work for the CAB. W/B 20/10/14	W/B 15/12/14		preparation work for the CAB. W/B 30/03/15		
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Year 11 KS4	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
<p>Key Learning</p> <ul style="list-style-type: none"> • knowledge • skills • experiences 	<p>CIDA Students continue to learn the requirements for the controlled assessment. The key learning will include how to effectively evaluate their progress. Students are required to write a final review of their project. This will include reflective comments on feedback given and received.</p> <p>GCSE Students will be able to identify the features of a mobile phone and discuss these features. This will include the ability to identify mobile phone features used for specific purposes. Students will learn the limitations of mobile technology, including storage and energy consumption. Students will identify health and safety risks associated with the use of mobile technology. All students will learn about the different types of computers and peripherals that are available and some of the ways in which the Internet can be used as a tool for school and work.</p>	<p>CIDA Web Design. Students learn important web design principles. This includes:- functionality, accessibility and usability. Students will learn advanced web design tool in order to create an effective website for a given scenario.</p> <p>GCSE All students will learn to discuss the features of GPS devices, including how digital imagers can be stamped with geographical data. Students will learn about wireless hotspots, biometric identification and how to use internet based services. Students will look at the advantages and disadvantages of a variety of entertainment devices from games consoles to digital tv. There will be a clear understanding of copyright, privacy, cybercrime and staying safe on the internet.</p>	<p>CIDA Improvement / Reflection time :- Students continue to learn the requirements for the controlled assessment. The key learning to improve their e-portfolio based on teacher / peer feedback. Improvements will be made autonomously by all students.</p> <p>GCSE Students will learn the health and safety considerations when working on computers. They will learn the benefits and drawbacks of mobile technology and ways of working collaboratively. Students will look at software buying and hosting and effective methods of data backup. Students will identify areas of concern when buying goods on line and look at identification authentication.</p>	<p>CIDA Web Design - Students learn to evaluate a web page they have created under exam conditions. This will include the ability to explain important design decisions, justify choices and suggest further improvements.</p> <p>GCSE Students will learn about health and safety, including:- online, password protection and security measures, reliability of websites, games safety and data protection. Students will learn to consider that technology has both a positive and negative impact on health and well-being.</p>	<p>CIDA FINAL EXAM</p> <p>GCSE Students will take their final exam as part of the full qualification. There will be an opportunity to revise all section and complete several mock exams. Students will receive a pre exam revision booklet that will cover key aspects of their learning.</p>	<p>CIDA -</p> <p>GCSE FINAL EXAM</p>

Key Activities to promote SMSC and British Values.	<ul style="list-style-type: none"> Personal response and accomplishment. Taking responsibility for ones' own actions; A sense of purpose BV – Respect and Tolerance 	<ul style="list-style-type: none"> Personal response and accomplishment. Taking responsibility for ones' own actions; A sense of purpose BV – Respect and Tolerance 	<ul style="list-style-type: none"> Personal response and accomplishment. Taking responsibility for ones' own actions; A sense of purpose BV – Respect and Tolerance 	<ul style="list-style-type: none"> Personal response and accomplishment. Taking responsibility for ones' own actions; A sense of purpose BV – Respect and Tolerance 	<ul style="list-style-type: none"> Personal response and accomplishment. Taking responsibility for ones' own actions; A sense of purpose BV – Respect and Tolerance 	<ul style="list-style-type: none"> Personal response and accomplishment. Taking responsibility for ones' own actions; A sense of purpose BV – Respect and Tolerance
Key Homework:	<p>CIDA SPB Homework (Summative Project Brief)</p> <ul style="list-style-type: none"> SPB Feedback requirements. <p>GCSE</p> <ul style="list-style-type: none"> Mobile research Mobile computer specification Social networking benefits. 	<p>CIDA</p> <ul style="list-style-type: none"> Web Design Principles. Advanced digital tools. <p>GCSE</p> <ul style="list-style-type: none"> Mobile Technology WiFi Advantages and disadvantages of digital devices. 	<p>CIDA CAB Homework (Controlled Assessment Brief)</p> <ul style="list-style-type: none"> CAB Research. CAB Prototype requirements. CAB Feedback requirements. <p>GCSE</p> <ul style="list-style-type: none"> Health and safety Data – Storage and retrieval Online business choice 	<p>CIDA</p> <ul style="list-style-type: none"> Web Page Evaluation. Design justifications. <p>GCSE</p> <ul style="list-style-type: none"> App Design Business security Staying safe online 	<p>CIDA Exam Preparation</p> <p>GCSE Mock exam questions.</p>	<p>CIDA -</p> <p>GCSE FINAL EXAM</p>
Key Assessments Inc Dates	<p>CIDA Each section of the controlled assessment will be assessed. All students will receive feedback for all practice and preparation work for the CAB. W/B 20/10/14</p> <p>GCSE Unit 1 GCSE Mock exam questions. W/B 20/10/14</p>	<p>CIDA Students will receive 2 mock examinations to assess their understanding of the exam requirement. W/B 15/12/14</p> <p>GCSE Unit 1 GCSE Mock exam questions.</p>	<p>CIDA Each section of the controlled assessment will be assessed. All students will receive feedback for all practice and preparation work for the CAB. W/B 09/02/15</p> <p>GCSE Unit 1 GCSE Mock exam questions. W/B 09/02/15</p>	<p>CIDA Students will receive 2 mock examinations to assess their understanding of the exam requirement. W/B 30/03/15</p> <p>GCSE Unit 1 GCSE Mock exam questions. W/B 30/03/15</p>	<p>CIDA FINAL EXAM</p> <p>GCSE Unit 1 GCSE Mock exam questions.</p>	<p>CIDA -</p> <p>GCSE FINAL EXAM</p>

		W/B 15/12/14			W/B 18/05/15	
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