Goldwyn Ashford - Computing
Subject Statement and Long Term Plan

Computing – Statement of Intent

Purpose of study

A high-quality computing and ICT education equips pupils to use computational thinking and creativity to understand and change the world. Computing and ICT have deep links with mathematics, science, and design and technology. At Goldwyn, we strongly believe that all students need to have competence in the use of computers and common programmes in order to transition into further education and the workplace.

Our whole curriculum is shaped by our school vision which aims to enable all students, regardless of background, ability, additional needs, and to flourish to become the very best version of themselves they can possibly be. We teach the National Curriculum, supported by a clear skills and knowledge progression. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children.

To ensure a broad range of skills and understanding, Computing is taught across three main strands: digital literacy, computer science and information technology. As part of information technology, students learn to use and express themselves and develop their ideas through ICT for example writing and presenting as well as exploring art and design using multimedia.

Within digital literacy, students develop practical skills in the safe use of ICT and the ability to apply these skills to solving relevant, worthwhile problems for example understanding safe use of internet, networks and email.

In computer science we teach students to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. Also, to analyse problems to computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

We also teach a progression of Computing vocabulary to support students in their understanding. At Goldwyn School, we give students access to a wide range of good quality resources and provide cross curricular opportunities for them to apply their Computing knowledge and skills. Online safety is taught as a unit at the start of each academic year and revisited regularly to ensure students are educated regarding current or new online threats.

The implementation of this curriculum ensures that when children leave Goldwyn School, they are competent and safe users of ICT with an understanding of how technology works. They will have developed skills to express themselves and be creative in using digital media and be

equipped to apply their skills in Computing to different challenges going forward. To reflect these skills and areas of competency, all students will undertake the Level 1 and 2 Functional Skills in ICT examination, awarded by Pearson Edexcel.

Edexcel level 1 and 2 Functional Skills ICT

The Edexcel Level 1 and Level 2 Functional Skills ICT qualifications are assessed by a single paper-based test at each level, which is completed at a computer. This is assessed as a Pass or Ungraded, if the occasion arises that this is the case, there will be an opportunity for the student to resit the examination, with a maximum number of attempts predetermined by the examination board.

Level 2 Functional Skills GCSE Equivalency

Functional Skills at Level 2 is equivalent to a GCSE grade 4 (C on old grading system). Functional Skills is a qualification which is widely accepted as a GCSE equivalent.

Computing Department: Long Term Plan

At Goldwyn School we believe that Computing and the use of ICT is central to the education of all children. We aim to give each pupil the opportunity to apply and develop their technological understanding and skills across a wide range of situations and tasks. Pupils are encouraged to develop a confident and safe approach to Computing and the use of ICT, with the understanding of the capabilities and flexibility of their resources.

With the knowledge that Computing and ICT will undoubtedly continue to form a major part in the children's life at home, in further education and places of work, we ensure the Computing and ICT experiences and abilities that the children are equipped with at Goldwyn, are effective and transferrable life skills.

Term	1	2	3	4	5	6
Year 7	**Project** Fusion Project of combined Computing and ICT. Safe computer and internet use webpage using Notepadd++ and HTML coding **Stage 3-5 (backfill 1 and 2)** understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy;	**Project** Mixed up fairytales Stop Motion **Stage 3-5 (backfill 1 and 2)** undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users	**Project** My Journey to _____ Students choose a country or region to visit, find between 8 and 15 locations to visit, find images of these, save these in a Word Document, create a PowerPoint presentation with a map, plotting their locations, then create a Spreadsheet to plan their route and the distances **Stage 3-5 (backfill 1**	**Project** Interactive information kiosk for the parts of the computer **Stage 3-5 (backfill 1 and 2) some may be able to work to stage 7.5** understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	**Project** Binary basics, team challenges, peer tasks, spreadsheet model creation **Stage 3-5 (backfill 1 and 2)** understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out	**Exam prep/Exam** **Key Learning (KSU)** -investigate the working characteristics and the functional and chemical properties of ingredients with developing detail. -understand that certain ingredients form specific functions and can explain these in developing detail. -adapt recipes competently and accurately using this knowledge. -understand that when

recognise inappropriate content, contact and conduct, and know how to report concerns **Skills for Future Learning** Saving, folder structure, staying safe, learning about programming in preparation for complex spreadsheets	AND create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability **Skills from Prior Learning** Saving, folder structure, safety with images (people in the background) **Links to Future Learning** Creative task to embed the importance of sequencing, saving correctly, folder and file structures	**and 2)** design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems AND SOME OF understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits **Skills from Prior Learning** HTML and programming, structure of formulas, effective research **Links to Future Learning** Creative task to embed the importance of sequencing, saving correctly, folder and file structures. Direct links to Pearson	Skills from Prior Learning Effective research **Links to Future Learning** Effective research, use of Presentation Software, audience consideration, layout, formatting all directly linked to the requirements of the Pearson FS Level 1 and 2	simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal] **Skills from Prior Learning** Computational thinking in HTML and Formulas **Links to Future Learning** Computational thinking in preparation of formulas in Pearson FS Level 1 and 2	food it cooked it changes the properties of the food and can explain this in developing detail -understand and can explain in developing detail the different cooking methods and the effect that they have on all foods and any nutritional benefits/downfalls off certain methods of cooking. -understand and can explain in developing detail why sometimes recipes don't work out. E.g. a cake that doesn't rise or a lumpy sauce.

			FS Level 1 and 2 via multiple programme use to complete a task, formulas (=sum(_:_), =average(_:_), =min(_:_), =max_:_)			
Year 8	**Project** Fusion Project of combined Computing and ICT. Safe computer and internet use webpage using Notepadd++ and HTML coding **Stage 6-10** understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns **Skills for Future Learning** Saving, folder structure, staying safe, learning about programming in preparation for complex spreadsheets	**Project** Stop Motion with multiple scenes, credits and audio **Stage 6-10** undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users AND create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability **Skills from Prior Learning**	**Project** Pay Spreadsheet **Stage 6-10** design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems AND SOME OF understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits **Skills from Prior Learning** HTML and programming, structure of formulas, effective	**Project** Interactive information kiosk for a chosen topic, i.e. SS Breat Britain **Stage 6-10** understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems **Skills from Prior Learning** Effective research **Links to Future Learning** Effective research, use of Presentation Software, audience consideration, layout, formatting all directly linked to the requirements of the	**Project** Binary addition and subtraction, team challenges, peer tasks, spreadsheet model creation **Stage 6-10** understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal] **Skills from Prior Learning** Computational thinking	**Project** HTML from Notepad++ multiple pages with Homepage and links and project **Stage 3-5 (backfill 1 and 2)** use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions **Skills from Prior Learning** HTML from term 1 and general computational thinking

		Saving, folder structure, safety with images (people in the background) **Links to Future Learning** Creative task to embed the importance of sequencing, saving correctly, folder and file structures	research **Links to Future Learning** Creative task to embed the importance of sequencing, saving correctly, folder and file structures. Direct links to Pearson FS Level 1 and 2 via multiple programme use to complete a task, formulas (=sum(_:_), =average(_:_), =min(_:_), =max_:_)	Pearson FS Level 1 and 2	in HTML and Formulas **Links to Future Learning** Computational thinking in preparation of formulas in Pearson FS Level 1 and 2	**Links to Future Learning** Computational thinking in preparation of formulas in Pearson FS Level 1 and 2

Year 9	Project	Project	Project	Project	BOOK EXAMINATIONS	EXAMINATIONS
	Zoo Spreadsheet **Functional Skills Level 1/2 (Edexcel/NCFE) Core Skills** Spreadsheets and Data **Links to Future Learning** =sum =vlookup =if =average =min =max Absolute Cell Referencing =click Formatting Filenames and folder structures	Abandoned Zoo and choice of topic, from Window Cleaner, Lost Animal or Outlet Expansion. Create Flyer in Publisher **Functional Skills Level 1/2 (Edexcel/NCFE) Core Skills** Leaflets, Factsheets and Brochures **Skills from Prior Learning** Filenames, folder structures, formatting **Links to Future Learning** Formatting and filenames	January 2018 Past Paper Level 2 REVISED JAN 2022 TO NOV 10 L1 **Functional Skills Level 1/2 (Edexcel/NCFE) Core Skills** Presentations **Skills from Prior Learning** Formatting **Links to Future Learning** Formatting and filenames	January 2018 Past Paper Level 1 **Functional Skills Level 1/2 (Edexcel/NCFE) Core Skills** Spreadsheets **Skills from Prior Learning** Formatting and formulas **Links to Future Learning** Formatting and filenames	**Project** June 2012 Past Paper Level 2 **Functional Skills Level 1/2 (Edexcel/NCFE) Core Skills** Effective Internet Research and Newsletters **Skills from Prior Learning** Keywords and evidencing, layout and formatting **Links to Future Learning** Formatting for task 2 and 3	**Functional Skills Level 1 (Edexcel/NCFE) Core Skills** MOCKS and EXAMINATION for Level 1
Year 10	Project	Project	Project	Project	Project	EXAMINATIONS
	Event Spreadsheet **Functional Skills Level 1 (Edexcel/NCFE) Core Skills** Spreadsheets and Data **Links to Future**	Create Flyers in Publisher, an exploration of formatting features **Functional Skills Level 1/2 (Edexcel/NCFE) Core**	May 2012 Past Paper Level 2 REVISED JAN 2022 TO NOV 10 L1 **Functional Skills Level 1 (Edexcel/NCFE)**	June 2013 Past Paper Level 1 **Functional Skills Level 1 (Edexcel/NCFE) Core Skills** Spreadsheets	November 2013 Past Paper Level 2 **Functional Skills Level 1/2 (Edexcel/NCFE) Core Skills** Effective Internet	**Functional Skills Level 1 (Edexcel/NCFE) Core Skills** MOCKS and EXAMINATION for Level 1

	Learning =sum =vlookup =if =average =min =max Absolute Cell Referencing =click Formatting Filenames and folder structures	Skills Leaflets, Factsheets and Brochures **Skills from Prior Learning** Filenames, folder structures, formatting **Links to Future Learning** Formatting and filenames	Core Skills Presentations **Skills from Prior Learning** Formatting **Links to Future Learning** Formatting and filenames	**Skills from Prior Learning** Formatting and formulas **Links to Future Learning** Formatting and filenames	Research and Newsletters **Skills from Prior Learning** Keywords and evidencing, layout and formatting **Links to Future Learning** Formatting for task 2 and 3	
Year 11	**PLAN EXAMINATION DATES** **Project** May 12 Past Paper Level 2 **Functional Skills** Level 1 (Edexcel/NCFE) Core Skills Presentations **Skills from Prior Learning** Formatting **Links to Future Learning** Formatting and filenames	**BOOK EXAMINATIONS** **Project** June 2013 Past Paper Level 2 **Functional Skills** Level 1 (Edexcel/NCFE) Core Skills Spreadsheets **Skills from Prior Learning** Formatting and formulas **Links to Future Learning** Formatting and filenames	**EXAMINATIONS** **Project** Jan 2018 Past Paper Level 2 **Functional Skills** Level 1 (Edexcel/NCFE) Core Skills Presentations **Skills from Prior Learning** Formatting **Links to Future Learning** Formatting and filenames	**RESITS/LEVEL 2** **Project** June 2013 Past Paper Level 2 **Functional Skills** Level 1 (Edexcel/NCFE) Core Skills Spreadsheets **Skills from Prior Learning** Formatting and formulas **Links to Future Learning** Formatting and filenames	**RESITS/LEVEL 2** **Project** November 2013 Past Paper Level 2 **Functional Skills** Level 1/2 (Edexcel/NCFE) Core Skills Effective Internet Research and Newsletters **Skills from Prior Learning** Keywords and evidencing, layout and formatting **Links to Future Learning**	**RESITS/LEVEL 2** Study Leave

				Formatting for task 2 and 3	