Key Stage 2	Intent:
At the Key Stage 2 level, children are expected to receive a high-quality education in ICT. This encompasses a comprehensive exposure to both teaching and learning in the field. The primary aim is to nurture their understanding of ICT concepts while expanding their proficiency in the associated vocabulary. Schools are encouraged to follow the National Curriculum for computing, providing children with access to a diverse range of computing-related units. This exposure helps children explore various aspects of ICT, including problem-solving, debugging, algorithm comprehension, coding, and data representation in multiple formats. Furthermore, children should become acquainted with a wide spectrum of hardware and software tools and their applications in broader society, equipping them with practical knowledge. An important component of their learning journey is the ability to use programming languages and code computer software, which greatly enhances their computational thinking skills. In addition to the technical aspects of ICT, children are introduced to the critical concept of E-safety. They gain an understanding of the potential dangers and risks associated with online activities and learn essential steps to ensure their own safety and that of others in the digital world.	Students learn computer Science and IT skills because it provides them with transferable academic, practical and analytical skills which can be used throughout life. It allows students to make informed decisions as well as opening doors to higher education and beyond. Knowledge and content are delivered according to a wider selection of topics which builds upon the main skills and principles within the main scientific disciplines at KS3. At KS4, students are taught through subject specialisms in order to develop a wider appreciation of the knowledge, content and skills underpinning each specific discipline.

Year 7

	Autumn 1:	Autumn 2:	Spring 1:	Spring 2:	Summer 1:	Summer 2:
Topic/Focus (2 hrs per fortnight)	**Smart Skillz I:** 1. Loging and Web quest 2. Passwords 3. Storing and Sharing 4. E-Safety 5. Cyber Security 6. Assessment	**Scratch – E-Safety** 1. Introducing to Scratch 2. Introducing to variables 3. Sequence and Selection 4. Introducing to micro:bits 5. Final project (Cyber Security)	**Gorleston Tourist Board leaflet** 1. Read and analyse a brief 2. Writing for a purpose 3. Collecting, organising and repurpose resources 4. Plan with purpose 5. Produce a final project	**Lighthouses - algorithms and data** 1. Introduced to a spreadsheet, retrieve and reuse data 2. Create a presentation to show the data 3. Understand the code behind the light houses 4. Understand Algorithms 5. Sequence and repetition 6. Final project (miratime – Micro:bits)	**Inside computer:** 1. Computers and how they can be defined 2. Hardware and Software 3. Computers and binary numbers to store data 4. Convert data Binary to denary 5. The basis of computers systems 6. Names and jobs of some of these components	**Stop frame animation – Maritime** 7. know what stop frame animation is 8. Understand Stop frame works 9. Frame rates 10. Plan short frame project 11. Apply organisational skills 12. D.I.R.T. respond to feedback
Sequencing	After an introductory session looking at using computers and storing work (to make sure all pupils can access and save work and are aware of safe working practice). Pupils work through series of different scenarios covering key aspects of e-safety, acceptable use policy and organisational skills. Pupils practice safe use of school resources. e.g. email, Classcharts, Teams and internet search.	This unit introduces computational thinking, algorithms, and based programming, with reference to ks2 programming coverage. The use of micro:bits allows the role of different hardware components to be introduced (followed up in year 8 Lighthouses - algorithms and data The unit also leads towards the ks4 Computer Science where programming and computational thinking is a foundation skill.	This unit builds on KS2 and Smart Skillz unit by providing opportunities to work through a real-world Scenario, allowing pupils to apply the research and organisational skills thought in the previous unit. The unit also leads towards the ks4 Imedia where pupils are asked to work through a brief. (R093/R094)	This unit builds on KS2. Basic history of lighthouses (KS2 and outside school) the used of basic ideas around algorithms when programming using Scratch (KS2 (some)); Year 7 Smart Skillz I and Scratch. Also leads to programming and algorithms (Year 8/9 Python units; Year 8 Microbits and data; GCSE Comp Science) and spreadsheet use (Year 8 Microbits and data; Year 9 Band Manager) as well as use of lighthouse images (Year 8 Smart Skillz II (Photoshop))	This unit builds on prior learning like use of computers, including micro:bits with a simple interface. Cross curriculum links with Mathematics: binary mathematics and Science will not have covered electrical circuits by the time this unit is taught, although some children may have used simple circuits at KS2 or at home. This unit will lead to computer Science unit 3 (data representation) and 4 (computer systems) with use of Boolean variables.	This unit builds on prior learning: likely to have come across stop frame animation at home – Shaun the Sheep etc. Working as a group (KS1 and KS2) and leads to Keyframe animation (Year 8 animation), producing animated GIFs (Year 9 Smart Skillz III), using storyboards and scripts (iMedia) and understanding of the film and animation production process (iMedia)

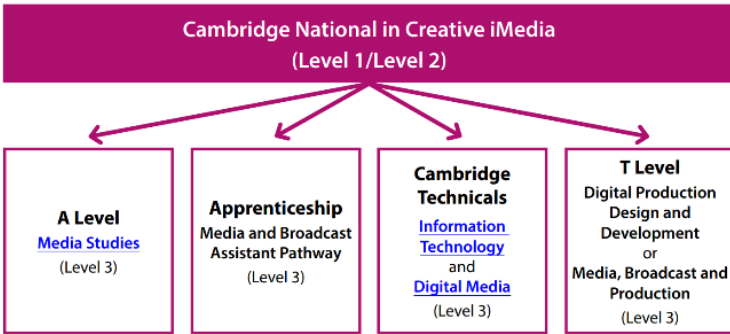| **Extended Learning**	Homework – once a term and after school club linked with DT. The after-school club runs every week and aims to link computing with real life scenarios. e.g. DT and Science.					
Cultural capital	Organisational and research skills PSHE – e-safety elements Maritime Curriculum – webquest tasks have a maritime theme Links to careers opportunities in the creative industries	Problem solving Maths, DT and Science – the importance of algorithm style instructions to complete a task (e.g. food tech) This could include abstraction of ideas Maritime curriculum – depending on context	Research skills History – local history Geography – local area, tourism industry Art, photography, media studies – use of and manipulation of images of the local area. Maritime curriculum – focus on tourism industry	Research skills History – local history – Gorleston lighthouses Geography – location of lighthouses Maritime Curriculum – focus on lighthouses has an obvious maritime theme	Maths – use of binary maths Science – electrical circuits and switches	Teamwork skills (particularly applicable to PE and Science) Variable – depending on theme chosen for animation – linking with Maritime Curriculum.
Formal Assessment	End of unit review - Including practical skills assessment and presentation of work, knowledge assessment.					

Year 8						
	Autumn 1:	Autumn 2:	Spring 1:	Spring 2:	Summer 1:	Summer 2:
Topic/Focus (2 hrs per fortnight)	**Smart Skillz II – Photoshop** 1. Review: Organise, Save and Rename files effectively. 2. Retrieval of previous work 3. How to use graphics for purpose 4. File formats and their application 5. Editing techniques 6. Use of preproduction documents to fulfil a project brief	**Algorithms and data – Maritime** 1. know how to use a spreadsheet to retrieve and reuse the data in another product 2. create a basic presentation using animated images 3. understand the importance of lighthouses and the ways in which flash patterns are used 4. know what an algorithm is and apply ideas of sequence and repetition. 5. Use flowol to model a real-world system and experiment with micro:bit using the information collected 6. be able to download, rename and store programs from the micro:bit Python editor D.I.R.T: be able to evidence work using screenshots	**Stop frame animation (intro level) – Maritime** 1. Know what stop frame animation is and understand the basics of how stop frame animation is produced. learn about the idea of frame rates. 2. Work co-operatively to plan a short stop-frame animation. Understand the need to organise as a group in order to achieve a goal. 3. Create and edit basic stop-frame movies 4. Feedback: Present work to others to produce feedback provide feedback to others **(D.I.R.T)** 5. Understand the importance of feedback and reviewing work in the production process Ideally be able to source sound effects and music and add it to an animation	**Stop frame animation – Maritime** 1. know what stop frame animation is. 2. Understand Stop frame works 3. Frame rates 4. Plan short frame project 5. Apply organisational skills D.I.R.T. respond to feedback	**Vector graphics – Visual identity** 1. The idea of vector graphics – what they are, how they are made, how they might be used. 2. how to use Illustrator to create and edit vector graphics 3. know what is possible to create using Illustrator. know how to use a variety of tools in Illustrator. 4. Introduce the idea of visual identity, brand identity and how logos are used by organisations 5. How to evidence and share work, use of suitable file naming and folders 6. Using and creating design sketches and/or visualisation diagrams to fulfil a project brief	**Web development - Place on the coast** 1. Know that websites are coded using HTML* and that web browsers render them and how to use Notepad and HTML to create a webpage 2. Research websites to understand their suitability and types of Devices and connection methods to access them 3. How to use Dreamweaver to create websites and know how to use a variety of tools in Dreamweaver 4. Understand how to store and how important to use a good naming convention 5. Plan a website based on the brief 6. Evaluate your project.

Sequencing	• Use of file naming and folders (Year 7 Smart Skillz I) • Familiarity with using graphics and managing files and folders (Year 7 GTB; basic use in other products) • Understanding that binary numbers are used to encode digital files (Year 7 Computers) • Simple use of Photoshop tools (Year 7 GTB, Year 7 Lighthouse factfile) • Use of lighthouse iconography (Year 7 Lighthouses) • Using design documents in other projects (Year 7 GTB, Year 7 Stop-Motion animation) • Creation of galleries of evidence (Year 8 Vector and the Web, Year 9 CD Cover, iMedia portfolios) • more advanced uses of Photoshop (Year 9 CD Cover) • Use of Vector graphics (Year 8 Vector and the Web; Year 9 CD Cover) • Design and create a graphics product (iMedia R094) • Use of tools to create graphics by editing and combining graphics (iMedia R094) • Types of graphics files (Year 10 iMedia R093; GCSE CompSci 3.3.6) • Copyright issues and the importance of complying with copyright (iMedia all units, including R093)
Extended Learning	Homework – once a term and after school club linked with DT. The after-school club runs every week and aims to link computing with real life scenarios. e.g. DT and Science.
Cultural capital	• Art and Photography – Rule of thirds, types of graphics files, use of tools in Adobe suite, export and use of images from a graphics package • Media Studies –creation of graphics to meet a brief • Geography – coastal features and landscapes used in photographs • Vocational – Saving, Retrieval of files using suitable file naming and locations and sharing of digital files showing evidence of work • Copyright issues and the importance of complying with copyright • Issues relating to the sourcing of suitable digital images – filetype and filesize • Showcasing images from across the world, from the local (Gorleston beach, Orford Ness), to the global (Peggy's Cove) • Cultural importance of travel (personal stories of travel from teaching staff) • Links to careers opportunities in the creative industries • Maritime – Discussion of industries in coastal areas, including tourism, selection of photographs from coastal environments and use of iconography of lighthouses
Formal Assessment	End of unit review - Including practical skills assessment and presentation of work, knowledge assessment

Year 9

	Autumn 1:	Autumn 2:	Spring 1:	Spring 2:	Summer 1:	Summer 2:
Topic/Focus (2 hrs per fortnight)	**Smart Skillz III - Animated GIFs** 1. Review how to organise, save and rename files effectively. 2. Recycle previous work – key meta skill in the context. 3. know how to save and export files from Photoshop and how to reuse them elsewhere 4. How to use graphics in other products – exporting GIFs for use in a gallery created in PowerPoint 5. Know how to evidence, share and review work 6. Understand the importance of feedback and reviewing work	**Python - Turtle graphics** 1. Retrieval: what an algorithm is and different ways of producing them 2. Retrieval: the ideas of sequence, selection and repetition 3. Know how to use IDLE to write program code in Python 4. Apply programming to real scenarios. Apply Inputs, print functions, Selection, Sequence and repetition. 5. Debugging – analysing and correcting syntax logic and runtime errors 6. Evidence and feedback	**Codebreaking - Programming and Algorithms** 1. Review: Examples of codebreaking techniques. 2. Plan: (NEA) your code braking using python 3. Create: code your own project 4. Debug: your code 5. Evaluate and feedback your code	**Comic books - E safety** 1. Know the conventions associated with comic books 2. Understand the brief: Analysing and decomposing the instructions 3. Planning for a purpose. Understand and apply pre-production documents: Mood board, spider diagram, visualisation diagram and storyboards. 4. Sources: primary and secondary and legislation. copyright free graphics for use 5. Create a basic comic book graphics. 6. Review basic comic book graphics (e-safety)	**Planning - CD Cover –** 1. Review: research different CD covers analyse and identify the different genres, styles, target audience 2. Analyse the brief: Who's the target audience? What does the brief ask you to do? 3. Source: resources and assets needed for the project. 4. Plan: Using the different pre-productions documents. Mood board Spider Diagram Visualisation diagram Storyboard 5. Create: the CD Cover based on your planning 6. Evaluate and feedback: Does your planning match the brief and the target audience	**Budgeting for the release of the CD Cover** 1. Understand spread sheets: - cells, Tables, formulas, conditional formatting 2. Budget your event: 3. Create and populate the template: Location, Bands line up, How many stages, Basic facilities, Number of visitors. 4. Create an informative leaflet 5. Evaluate the feasibility of the event 6. Feedback

Sequencing	• Use of file naming and folders (Year 7 Smart Skillz I) • Familiarity with using graphics and managing files and folders (Year 7 GTB; basic use in other products) • Understanding that binary numbers are used to encode digital files (Year 7 Computers) • Simple use of Photoshop tools (Year 7 GTB, Year 7 Lighthouse factfile) • Use of lighthouse iconography (Year 7 Lighthouses) • Using design documents in other projects (Year 7 GTB, Year 7 Stop-Motion animation) • Creation of galleries of evidence (Year 8 Vector and the Web, Year 9 CD Cover, iMedia portfolios) • more advanced uses of Photoshop (Year 9 CD Cover) • Use of Vector graphics (Year 8 Vector and the Web; Year 9 CD Cover) • Design and create a graphics product (iMedia R094) • Use of tools to create graphics by editing and combining graphics (iMedia R094) • Types of graphics files (Year 10 iMedia R093; GCSE CompSci 3.3.6) • Copyright issues and the importance of complying with copyright (iMedia all units, including R093)
Extended Learning	Homework – once a term and after school club linked with DT. The after-school club runs every week and aims to link computing with real life scenarios. e.g. DT and Science.
Cultural capital	• Art and Photography – Rule of thirds, types of graphics files, use of tools in Adobe suite, export and use of images from a graphics package • Media Studies –creation of graphics to meet a brief • Geography – coastal features and landscapes used in photographs • Vocational – Saving, Retrieval of files using suitable file naming and locations and Sharing of digital files showing evidence of work • Copyright issues and the importance of complying with copyright • Issues relating to the sourcing of suitable digital images – filetype and filesize • Showcasing images from across the world, from the local (Gorleston beach, Orford Ness), to the global (Peggy's Cove) • Cultural importance of travel (personal stories of travel from teaching staff) • Links to careers opportunities in the creative industries • Maritime – Discussion of industries in coastal areas, including tourism, selection of photographs from coastal environments and use of iconography of lighthouses
Formal Assessment	End of unit review - Including practical skills assessment and presentation of work, knowledge assessment

Cliff Park
ORMISTON ACADEMY

Year 10 imedia						
2 year course (120 guided learning hours)	Cambridge National in Creative iMedia equips students with the wide range of knowledge and skills needed to work in the creative digital media sector. They start at pre-production and develop their skills through practical assignments as they create final multimedia products. Cambridge Nationals - Creative iMedia Level 1/Level 2 - J834 - OCR – 1 X Examined assessment (40% of the course) + 2 Non-examined assessment (60% of the course) R093 Creative iMedia in the media industry (40%) + R094 Visual identity and digital graphics (25%) **(Mandatory Unit) + R095** Characters and comics (35%)					
	Autumn 1:	**Autumn 2:**	**Spring 1:**	**Spring 2:**	**Summer 1:**	**Summer 2:**
Topic/Focus (2 hrs per fortnight)	**R093**: Media industry sectors and products (TA1) **R093**: How style, content and layout are linked to the purpose. Client requirements and how they are defined (TA2) **R093**: Audience demographics and segmentation (TA2) **R093**: Media codes used to convey meaning, create impact and/or engage audiences (TA2)	**R093**: Work planning and documents used to support ideas generation (TA3) **R093**: Documents used to design/plan media products (TA3) **R094**: Purpose, features, elements and design of visual identity **R094**: Graphic design concepts and conventions **R094**: Properties of digital graphics and use of assets	**R094**: Techniques to plan visual identity and digital graphics **R094**: Tools and techniques to create visual identity and digital graphics **R094**: Technical skills to source, create and prepare assets for use within digital graphics	**R094**: Techniques to save and export visual identity and digital graphics (with integrated **R093** TA4 distribution considerations and file formats) **R094**: NEA Assessment (working on)	**R094**: NEA Assessment (Working on and submit for moderation) **R095**: Topic Area 1: Plan characters and comics 1.1 Character features and convention 1.2 Conventions of comics 1.3 Resources required to create characters and comics 1.4 Pre-production and planning documentation and techniques for characters and comics	**R095**: Topic Area 2: Create character and comics 2.1 Techniques to obtain and create components for use within comics 2.2 Technical skills to create comics 2.3 Techniques to save and publish characters and comics
Sequencing	- OCR Level 1/Level 2 Cambridge National in IT - OCR Level 1/Level 2 Cambridge National in Enterprise and Marketing - GCSE Art and Design - GCSE Computer Science - GCSE Media Studies - GCSE Business Studies					
Extended Learning	Homework, P6 to allow students to progress, recall and fill gaps in knowledge.					
Formal Assessment	2 mandatory units and choose 1 optional unit. The two mandatory units are: **Unit R093:** Creative iMedia in the media industry This is assessed by taking an exam 40% of the final grade. **Unit R094:** Visual identity and digital graphics. This is assessed by completing a set assignment (35%). **Topics include** There are 5 optional units to choose from. (35%)					

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ORMISTON ACADEMY

Year 11 imedia						
2 year course (120 GLhours)	Cambridge National in Creative iMedia equips students with the wide range of knowledge and skills needed to work in the creative digital media sector. They start at pre-production and develop their skills through practical assignments as they create final multimedia products.					
	Autumn 1:	**Autumn 2:**	**Spring 1:**	**Spring 2:**	**Summer 1:**	**Summer 2:**
Topic/Focus (2 hrs per fortnight)	**R095:** 3.1 Techniques to check and review characters and comics 3.2 Improvements and further developments **R095:** NEA Completion	**R095:** NEA Completion **R095**: NEA Assessment (Working on)	**R095:** Submit**Error! Bookmark not defined.** for moderation **R093**: Distribution platforms and media to reach audiences (TA4) **R093**: Properties and formats of media files (TA4)	**R093**: Sources of research and types of research data (TA2) **R093**: The legal issues that affect media (TA3)	**R093**: Job roles in the media industry (TA1)	**R093**: Revision and mock papers/tests **R093**: Examination (Terminal unit)
Sequencing	• OCR Level 1/Level 2 Cambridge National in IT • OCR Level 1/Level 2 Cambridge National in Enterprise and Marketing • GCSE Art and Design • GCSE Computer Science • GCSE Media Studies • GCSE Business Studies					
Extended Learning	Homework, P6 to allow students to progress, recall and fill gaps in knowledge.					
Formal Assessment	2 mandatory units and choose 1 optional unit. The two mandatory units are: **Unit R093:** Creative iMedia in the media industry This is assessed by taking an exam 40% of the final grade. In this unit you will learn about the media industry, digital media products, how they are planned, and the media codes which are used to convey meaning, create impact and engage audiences. Topics include: The media industry, Factors influencing product design, Pre-production planning and Distribution considerations **Unit R094:** Visual identity and digital graphics. This is assessed by completing a set assignment. In this unit you will learn to how to develop visual identities for clients and use the concepts of graphic design to create original digital graphics to engage target audiences. **Topics include** Develop visual identity, Plan digital graphics for products, Create					

visual identity and digital graphics. There are 5 optional units to choose from. Each optional unit has the same structure to your learning, but the conventions and practical skills are tailored to the media product being studied.

Year 10 Computer science						
2 year course (two exam at the end)	This specification has been created to get students working with real-world programming and provides a good understanding of the fundamental principles of computing. It focuses upon students' computational thinking, decomposition and abstraction. This provides an academically challenging specification for of all ability levels. It has a nonexamined assessment based around Python programming project creation, as well as a computational thinking paper, and a theoretical computing knowledge paper. AQA	Computer Science and IT	GCSE	Computer Science					
Topic/Focus (2 hrs per fortnight)	Unit 1: Algorithms and problem solving	Unit 2: Programming	Unit 3: Data representation	Unit 4: Computer systems	Unit 5: Computer Network	Unit 6: cybersecurity Unit 7: ethical legal and environmental impacts of computers
Sequencing	Unit 1 and unit 2 build on work done in year 8 and 9 on programming (Scratch, Python etc) as well as the introduction to computer science microbit uit in year 9. They lead towards the NEA and towards paper 1 in particular.	Unit 1 and unit 2 build on work done in year 8 and 9 on programming (Scratch, Python etc) as well as the introduction to computer science microbit unit in year 9. They lead towards the NEA and towards paper 1 in particular.	Unit 3 builds on work done with graphics, as well as year 7 and 8 spreadsheet work. It includes understanding of binary as well as how computers represent and compress text, sound and image information. Therefore, it builds on the imedia preparation too.	Unit 4 builds on work in year 8 on computer hardware and software, as well as microbit work. Pupils gain understanding of how hardware and software operate together, including within the CPU. It therefore luies at the heart of understanding computer functionality.	Unit 5 builds on website building work, as well as the year 9 microbit work. The unit covers how hardware and software layers and protocols are used to allow communication between computers.	Unit 6: this unit links to PSHE and whole school work on e-safety, as well as units such as year 7 e-safety. It also links very closely to the previous computer science unit (networks), and elements of it are taught concurrently. Unit 7: this unit is quite short. It covers the law, environment and ethics, so links to PSHE, as well as personal social spiritual and moral aspects of all computing lessons.
Extended Learning	Programming practice	Programming practice	Extended learning booklet	Extended learning booklet	Extended learning booklet	Extended learning booklet

Cultural capital	Ada Lovelace, Charles	Grace Hopper, Alan Turing,	Big Data,	Englebert, Von Neumann, Turing, Flowers, Babbage,	Tim Berners-Lee	CEOP, The law and
Formal Assessment	Unit assessment based on Babbage, Jacquard loom unit 1.	Practice mini-NEA. Short assessment based on paper 1 exam questions	Unit assessment – exam style questions.	Unit assessment - exam style questions.	Unit assessment – exam style questions.	End of year assessment covering all units (1-7).

Year 11 Computer Science						
2 year course (2 Exam at the end of the two year course)	This specification has been created to get students working with real-world programming and provides a good understanding of the fundamental principles of computing. It focuses upon students' computational thinking, decomposition and abstraction. This provides an academically challenging specification for of all ability levels. It has a nonexamined assessment based around Python programming project creation, as well as a computational thinking paper, and a theoretical computing knowledge paper. AQA	Computer Science and IT	GCSE	Computer Science					
Topic/Focus (2 hrs per fortnight)	NEA and mock preparation: Concurrent coverage of NEA skills and preparation for mock exams - using examination questions to revisit learning for units 1-7.	NEA and mock preparation: Concurrent coverage of NEA skills and preparation for mock exams – using examination questions to revisit learning for units 1-7.	NEA submission in early January. Revisiting units 1-4 based on mock feedback. Revision units focussed on areas of weakness identified - this half particularly on paper 1.	Revisiting units 3-7 based on mock feedback. Revision units focussed on areas of weakness identified - this half particularly on paper 2.	Final Revision	
Sequencing	Practice exam questions. Home programming practice.	NEA test table and program completed, building on Python work in year 10 and learning in year 10 for units 1 and 2. Mock revision building on year 10 learning	Sequence decided by mock results- generally paper 1 is practised by completing paper 1 questions, paper 2 is helped by knowledge acquisition for units 3-7. the learning links directly to A level computer science.	Sequence decided by mock results- generally paper 1 is practised by completing paper 1 questions, paper 2 is helped by knowledge acquisition for units 3-7. the learning links directly to A level computer science	Preparation based on previous 2 year course.	
Extended Learning	NEA part 1 completed (project design)	Revision and home research to inform programming design.	knowledge grids and exam questions set for home tasks.	knowledge grids and exam questions set for home tasks. Intervention and catch up classes		

Progression Grid 2023: Computing

Formal Assessment	Half term assessment based on practice exam questions from papers 1 and 2 for units 1-7	NEA catch up classes offered NEA part 2 complete. Mock using past papers for paper 1 and paper 2	End of half term assessment based on exam questions	Mock papers for paper 1 and 2	Final examinations - paper 1 and paper 2 - in May	