DRAYTON MANOR HIGH SCHOOL

Success at Sixth Form – Subject Specific Tips

Subject	**Computer Science**

Class and homework expectations

Students should bring the following items to each lesson:

- Homework from previous lesson
- Working folder with PLC
- Pens
- Programming challenges on shared One Drive

Homework will generally be given every lesson with the expectation that at least 3 hours of private study each week should go towards this homework and general revision of all topics that have been covered. Topics will get assessed throughout the year through these pieces of homework and regular half termly assessments.
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Scheme of Work

Year 12

Computing principles (01)
The characteristics of contemporary processors, input, output and storage devices.
Software and software development.
Programming.
Data types, data structures and algorithms.
Legal, moral ethical and cultural issues.

Algorithms and problems solving (02)
Elements of computational thinking.
Problem solving and programming.
Algorithms.

Year 13

Computer systems (01)
The characteristics of contemporary processors, input, output and storage devices.
Software and software development.
Programming.
Data types, data structures and algorithms.
Legal, moral ethical and cultural issues.

Algorithms and programming (02)
Elements of computational thinking.
Problem solving and programming.
Algorithms.

Programming project (03)
The learner will choose a computing problem to work through according to the guidance in the specification.
Analysis of the problem; Design of the solution; Developing the solution; Evaluation

Assessment Objectives

AO1	AO2	AO3
Demonstrate knowledge and und erstanding of the principles and concepts of computer science, including abstraction, logic, algorithms and data representation	Apply knowledge and understanding of the principles and concepts of computer science including to analyse problems in computational terms	Design, program and evaluate computer systems that solve problems, making reasoned judgements about these and presenting conclusions

Assessment

The course is assessed as follows:

- Computing principles (01) – 2hr 30mins written exam – 40% of total A Level
- Algorithms and problems solving (02) – 2hr 30mins written exam – 40% of total A Level
- Programming project (03) – non exam assessment – 20% of total A Level

How to do well in the subject in Year 12 and 13

- Students should continually be writing functional programs using advanced techniques
- Students should attend all lessons and catch up with any work missed from the files on the network
- Students should make detailed notes on each chapter of their textbook
- Students should practice past paper questions and aim to improve exam skills
- Students should revise topics after each lesson
- Students should always create and use plans when answering long answer questions
- Students should set our clear point paragraphs in an organised structure.

Support available

- Regular one-to-one mentoring with each student to make sure they are on track and address any misconception or issue in a personalised way.
- Students are able to access the ICT suites any time after school by informing a member of staff in the department
- Drop in support during lunchtime and break at the ICT office
- Revision classes will be scheduled in the run up to the exam

How parents can help support

- Please help your son or daughter to organise their folder and keep it up to date
- Ask to demonstrate which computer programs they have designed and coded
- Check that they are doing their homework
- Talk to them about technology advancements in different industries
- Encourage them to complete past paper questions to aid revision
- Encourage them to read online articles regarding technology such as wired.co.uk

Helpful websites or resources

https://isaaccomputerscience.org/

teach-ict.com

bbc.co.uk/news/technology

www.wired.co.uk