

10th October 2017

Dear Parent/Carer,

R.E. Year 11 Computer Science – Homework Schedule

You may be aware that your child is currently completing their controlled assessment as part of their Computer Science GCSE. This assessment is worth 20% of the overall GCSE and is completed in class time in controlled conditions.

Whilst students are completing this section of the GCSE, it means that time for theory and exam preparation lessons are not available until after Christmas. To avoid this becoming an issue, the department have devised a homework schedule which involves students watching a series of videos before each lesson for the remainder of the academic year. Students can then practice exam technique and discuss theory elements of the course as a starter task in each lesson, before continuing with their controlled assessment.

This approach will only be successful if all students are on board and are willing to watch videos when they are scheduled. Missing a video will mean that your child will be disadvantaged in the lesson and may mean that additional 1-2-1 support is required.

For this reason, the department have devised a plan as detailed on the next two pages. This plan will coincide with student's Computer Science lessons and will allow students to discuss the theoretical elements and address any misconceptions / concerns in the classroom.

The department would really appreciate your support in ensuring that your child watches the videos in time for their lesson. The videos are easy to access, they are available on YouTube and through our OneNote portal (see page two).

If you have any questions please contact Mr Gourlay at agourlay@corbytechnicalschool.org.

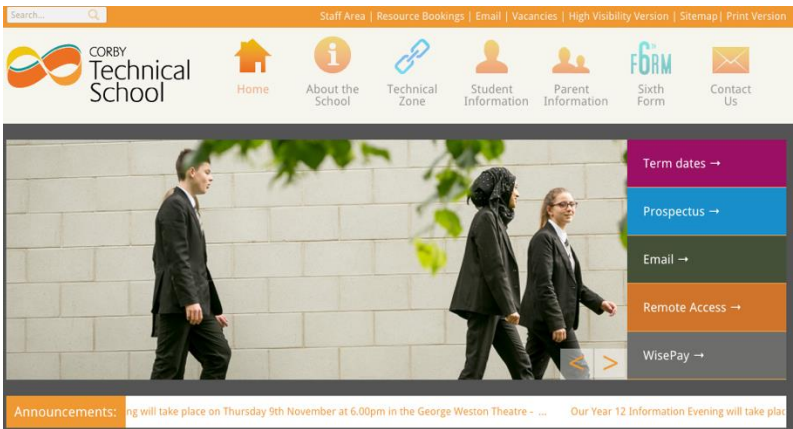
Yours sincerely,



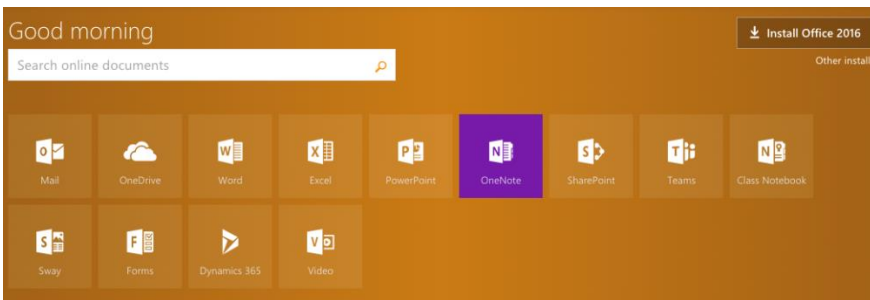
Mrs A Reynolds
Principal

Accessing Flipped Classroom Resources

1. Go to the Corby Technical School website and click “Email”



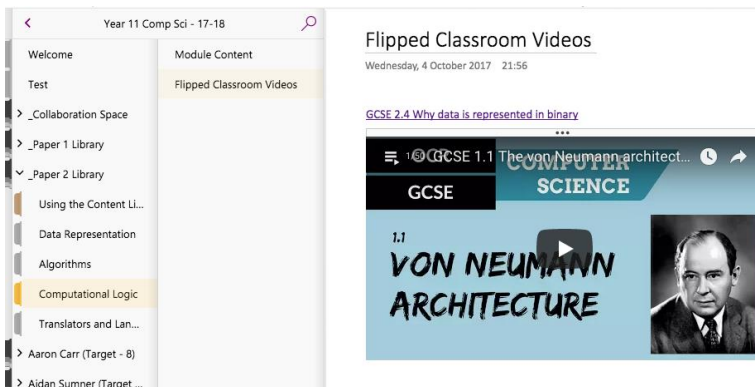
2. Select OneNote from the options available



3. In the menu that appears, students should click on “Class Notebooks” and select the “Year 11 Comp Sci – 17-18” workbook

Recent My Notebooks Shared with Me **Class Notebooks**

4. Students can then select either Paper 1 or Paper 2 and select the unit they wish to study. Within each unit there is a “Flipped Classroom Videos” section that contains all the videos for that unit.



Flipped Classroom Schedule

It is imperative that students view these videos in the allocated weeks. Failure to do so will result in difficulty completing exam questions in the classroom.

Term 2

Before Week 1 – Lesson 1	Paper 2 - Data Representation Units
Before Week 1 – Lesson 2	Paper 2 - Data Representation Binary to Denary Conversion Binary Additions
Before Week 2 – Lesson 1	Paper 2 - Data Representation Binary Shifts for multiplication and division
Before Week 2 – Lesson 2	Paper 2 - Data Representation Hexadecimal conversions Check Digits
Before Week 3 – Lesson 1	Paper 2 - Data Representation Character Sets Image Representation
Before Week 3 – Lesson 2	Paper 2 - Data Representation Sound Representation Compression
Before Week 4 – Lesson 1	Paper 2 - Computational Logic Why data is represented in Binary Simple Logic Diagrams
Before Week 4 – Lesson 2	Paper 2 - Computational Logic Truth Tables Computing Related Mathematics
Before Week 5 – Lesson 1	Paper 2 - Algorithms Abstraction Decomposition
Before Week 5 – Lesson 2	Paper 2 - Algorithms Linear Search Binary Search
Before Week 6 – Lesson 1	Paper 2 - Algorithms Merge Sort Insertion Sort
Before Week 6 – Lesson 2	Paper 2 - Algorithms Pseudocode and Flow Diagrams
Before Week 7 – Lesson 1	Paper 2 – Translators and Languages Classification of Programming Languages Translators
Before Week 7 – Lesson 2	Paper 2 – Translators and Languages Facilities of an IDE
Week 8	Mock Week – Revision as needed

Term 3

Before Week 1 – Lesson 1	Paper 1 - System Security and Software Forms of Attack Threats posed to networks
Before Week 1 – Lesson 2	Paper 1 - System Security and Software Identifying and Preventing Vulnerabilities
Before Week 2 – Lesson 1	Paper 1 - System Security and Software Systems Software Operating Systems 1
Before Week 2 – Lesson 2	Paper 1 - System Security and Software Operating Systems 2
Before Week 3 – Lesson 1	Paper 1 - System Security and Software Utility System Software
Before Week 3 – Lesson 2	Paper 1 - Ethical, Legal, Cultural and Environmental Concerns How to investigate and discuss Computer Science technologies, considering ethical, legal Stakeholders
Before Week 4 – Lesson 1	Paper 1 - Ethical, Legal, Cultural and Environmental Concerns Environmental Impact
Before Week 4 – Lesson 2	Paper 1 - Ethical, Legal, Cultural and Environmental Concerns Legislation
Before Week 5 – Lesson 1	Paper 1 - Ethical, Legal, Cultural and Environmental Concerns Cultural Issues Privacy
Before Week 5 – Lesson 2	Paper 1 - Ethical, Legal, Cultural and Environmental Concerns Open Source vs Proprietary
Before Week 6 – Lesson 1	Paper 1 – Wired and Wireless Networks Types of Network Performance of Networks
Before Week 6 – Lesson 2	Paper 1 - Wired and Wireless Networks Client Server and Peer to Peer Hardware to connect to a LAN
Before Week 7 – Lesson 1	Paper 1 - Wired and Wireless Networks The Internet Virtual Networks
Before Week 7 – Lesson 2	Paper 1 – Network Topologies, Protocols and Layers Star and Mesh Network Topologies WIFI Ethernet
Before Week 8 – Lesson 2	Paper 1 - Network Topologies, Protocols and Layers Addressing and Protocols Concept of Layers Packet Switching

Term 4

Before Week 1 – Lesson 1	Paper 1 – Systems Architecture The Von Neumann Architecture
Before Week 1 – Lesson 2	Paper 1 – Systems Architecture How common characteristics of CPUs affect their performance Embedded Systems
Before Week 2 – Lesson 1	Paper 1 - Memory RAM and ROM The need for Virtual Memory
Before Week 2 – Lesson 2	Paper 1 - Memory Flash Memory
Before Week 3 – Lesson 1	Paper 1 - Storage Common Types of Storage Data Capacity and Calculations
Before Week 3 – Lesson 2	Paper 1 - Storage Suitable Storage Devices The Need for Secondary Storage

Lessons post Week 3 will be spent revising for both exams and practising exam technique.

Your child will sit their Computer Science exams on the following dates.

J276/1 Computer Systems

Monday 14th May 2018

J276/2 - Computational thinking, algorithms and programming

Thursday 17th May 2018

Both exams take place in the first week of the May holidays