

## Year 11 Homework/revision schedule 2019-20

### Computer Science

#### Revision techniques:

In 2013, research from four universities published a review of hundreds of studies that explored the most effective strategies to lead to long-term learning.

#### What works:

- **Hard work** gets grades. Students that spend at least two hours a night on their homework/revision are statistically more likely to get better grades. It is important that you follow the homework/revision schedule set by the teachers.
- **Retrieval practice** (the testing effect) requires you to answer a question. It is proven to be the most effective revision strategy. Examples of strategies used in retrieval practice are:
  - Use flashcards (Quizlet) and quizzing to practise recalling information from topics.
  - Use mind-maps, knowledge organisers, or Cornell notes to quiz – read, cover, write. You are aiming to recall all of the information on the revision resource in order to reproduce it from memory.
  - Answering short retrieval questions or multiple choice quizzes
- **Spacing** involves learning a little information regularly, rather than trying to learn a lot in a single day. Recent research has found that the use of spacing resulted in a 10% to 30% difference in final test results compared to students who did lots of cramming. Spacing out revision gives you enough time to forget previously learnt information, meaning that when this information is re-visited and re-learnt it is more likely to be transferred to your long-term memory. We have adapted the homework schedule so that tasks will be broken up into 30-40 minute chunks. This allows time for you to forget, quiz and recall information. Each subject may set all weekly tasks at one time but you should organise your daily schedule so that you are breaking the tasks up into chunks throughout the week.
- **Interleaving** involves mixing up the topics you will study within a subject. Recent research has shown how effective this technique is. Interleaving helps you make links between different topics as well as discriminate between different types of problems.

Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Option D	Option A	Option B	English	Option C		Maths
Maths	English	Science	Maths	Science		English
Science	Science	Option C	Science	Option B		Science
Independent revision	Independent revision	Option D	Option A	Independent revision		MFL

Your teachers have prepared a revision programme that incorporates all of the techniques mentioned above. The homework set from January until June will be the minimum amount of revision required in preparation for the GCSE examinations.

#### Remember, when completing any independent revision, these strategies do not work:

- Re-reading your notes
- Highlighting your notes
- Making summaries of your notes

The schedule below shows what tasks should be completed in the weeks leading up to the GCSE examinations

Y11 Computer Science Revision Timetable	January	February	March	April	May	June	
	Week beg: 6 <sup>th</sup> Jan Task 1: Quizzing, hardware & topologies (KO 15) Task 2: Cornell notes, virtual networks & protocol layering Task 3: Practice questions, types of software and classification	Week beg: 3 <sup>rd</sup> Feb Task 1: Flashcards, cyber security risks (KO 19) Task 2: Cornell notes, primary memory and secondary storage (KO 8/9) Task 3:	Week beg: 2 <sup>nd</sup> March Task 1: Quizzing, Networking hardware & topologies (KO 15) Task 2: Cornell notes, wireless networking Task 3: Practice questions, compression of images and sound	Week beg: 6 <sup>th</sup> April (Easter) Task 1: Complete component 1 paper, mark and correct Task 2: Cornell notes, types of software Task 3: Quizlet quizzing, networking protocols.	Week beg: 4 <sup>th</sup> May Task 1: Complete component 1 paper, mark and correct Task 2: Complete component 1 paper, mark and correct		
	Week beg: 13 <sup>th</sup> Jan Task 1: Quizzing, networking scale (KO 14) Task 2: Cornell notes, fetch-decode-execute cycle & CPU components Task 3: Practice questions, conversions between number systems	Week beg: 10 <sup>th</sup> Feb Task 1: Cornell notes, identifying and preventing vulnerabilities Task 2: Practice questions, network security Task 3: Practice questions, trace tables	Week beg: 9 <sup>th</sup> March Task 1: Practice questions, fetch-decode-execute cycle Task 2: Practice questions, interpreting algorithms & identifying errors Task 3: Practice questions, client-server and peer to peer networks	Week beg: 13 <sup>th</sup> April (Easter) Task 1: Complete component 2 paper, mark and correct Task 2: Legislation governing computer use.  Task 3: Practice questions, layering and selecting protocols	COMP 1 EXAM Monday 11 <sup>th</sup> May 2020 COMP 2 EXAM Thursday 14 <sup>th</sup> May 2020 Week beg: 11 <sup>th</sup> May Task 1: Practice questions, facilities of an IDE & errors Task 2: Practice questions, designing algorithms Task 3: Practice questions, validation of data.		
	Week beg: 20 <sup>th</sup> Jan Task 1: Flashcards, CPU components & registers (KO 7) Task 2: Cornell notes, producing robust programs, testing & errors Task 3: Practice questions, networking protocols & protocol layering	Week beg: 17 <sup>th</sup> Feb (half term) Task 1: Exam pack 1 – Creating algorithms Task 2: Exam pack 2 – ethical, moral, legal and cultural issues (extended response questions) Task 3: Exam pack 3 – Systems software & Application software	Week beg: 16 <sup>th</sup> March Task 1: Quizzing, networking protocols (KO 16) Task 2: Cornell notes, representing images, sound and characters. Task 3: Practice questions, using SQL to query a database	Week beg: 20 <sup>th</sup> April Task 1: Cornell notes, facilities of an IDE and translator software Task 2: Practice questions, searching & sorting algorithms Task 3: Practice questions, ethical, cultural and environmental concerns			
	Week beg: 27 <sup>th</sup> Jan Task 1: Quizzing, comparing secondary storage mediums & logic gates (KO 9) Task 2: Cornell notes, structure of an operating system Task 3: Practice questions, legal & cultural issues	Week beg: 24 <sup>th</sup> Feb Task 1: Flashcards, networking protocols (KO 16) Task 2: Practice questions, Logic diagrams & truth tables Task 3: Practice questions, functions & procedures	Week beg: 23 <sup>rd</sup> March Task 1: Cornell notes, converting between binary, denary and hexadecimal. Task 2: Practice questions, number conversions and unit conversions. Task 3: Practice questions, moral & ethical issues	Week beg: 27 <sup>th</sup> April Task 1: Cornell notes, the internet and WWW. Task 2: Practice questions, using SQL to query a database Task 3: Practice questions, designing algorithms			
			Week beg: 30 <sup>th</sup> March Task 1: Cornell notes, encryption methods Task 2: Practice questions, encryption methods Task 3: Practice questions, types and scale of networks				
		<p><b>Retrieval practice</b> (the testing effect) requires you to answer a question. It is proven to be the most effective revision strategy. Examples of strategies used in retrieval practice are:</p> <ul style="list-style-type: none"> <li>▪ Answering short questions</li> <li>▪ Flashcards (or Quizlet)</li> <li>▪ Quizzing (from knowledge organisers)</li> <li>▪ Getting people to test you</li> </ul>		<p><b>Interleaving</b> involves mixing up the topics you study within a given subject. Recent research has shown how effective this technique is</p> <p><b>Spacing</b> involves learning a little information regularly, rather than trying to learn a lot in a single day.</p>	<p><b>Revision advice:</b></p> <ul style="list-style-type: none"> <li>▪ Eat breakfast</li> <li>▪ Positive mind-set</li> <li>▪ Be resilient</li> <li>▪ Put your phone away</li> <li>▪ Turn off the TV and music</li> <li>▪ Get a good night's sleep – every night!</li> <li>▪ Take breaks</li> </ul>		