

RIVERS TRANSITION CHALLENGE 2020

SUBJECT:

Course details: OCR

Qualification: Cambridge TECHNICALS LEVEL 2

Minimum entry requirement is: Grade 4 in Maths, English and Science

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Classroom Code: j5eu56b jj5eu

YOUR CHALLENGES:

**Challenge 1:**

Research and report challenge:

You will need to carry out research on the following storage types:

1. Solid state

2. Flash

3. Hybrid

4. Optical

5. Cloud

Included in your research you will need to include which categories they belong to from:

Internal, external and/or removable storage.

For each type you will need to investigate common uses, their main characteristics with detailed information explaining how data is saved on each device and how this influences how they are used. This will be in the form of a report.

You will also list a range of storage devices, i.e. CD, DVD, memory stick, hard drive, and calculate the number

of files (e.g., a music video or a Powerpoint presentation) that were able to be stored on each. This information

should be used to find the cost/storage ratio of the different devices. The results could be presented on charts

or graphs to most easily compare. For each storage device listed there should be a scenario where that storage device would be the best choice with justification.

**How this links to the specification:** Essentials of IT Unit 1 L/615/1324

**Time guide: 12 hrs**

**Assignment deadline: 22nd May 2020**

**EXEMPLARS:** You will be tested on your research ability and your presentation skills, as well as accurate content knowledge.. You can use any means of presentation for this task (paper, google docs, slides, video, posters, this list is not exhaustive). For this reason, I will not be providing an exemplar as I wish to see your current level of ability and the level at which you will be putting effort into the work. If you require guidance, please email.

**SUPPORT:**

Research using the internet

Teach- ICT website:

[**http://teach-ict.com/2016/GCSE\_Computing/OCR\_J276/1\_3%20storage/secondary/miniweb/index.php**](http://teach-ict.com/2016/GCSE_Computing/OCR_J276/1_3%20storage/secondary/miniweb/index.php) Login details are: CM08QB and binary 7

<https://cambridgegcsecomputing.org/> You will need to sign up (free)

<https://www.youtube.com/watch?v=TQCr9RV7twk&list=PL8dPuuaLjXtNlUrzyH5r6jN9ulIgZBpdo&t=0s>

Also Google how to use graphs in Excel to display the comparison data.(hence the longer time guide)

**Challenge 2:**

Research and report challenge: Your report will be in 3 parts 1) , 2) and 3).

You will need to include the following as the start of your report.

**The definition of cyber security: Cyber security is the processes, practices and technologies which are designed to protect networks, computers, programs and data/information from attack, damage or unauthorised access.**

1. The purpose and importance of cyber security:

What is the purpose of Cyber Security? i.e.: in regard to protecting information and data, keeping information and data confidential, maintaining the integrity of information and data and ensuring the availability of information and data

What is the importance of the following? The need to protect personal data? The need to protect an organisations’ data?, the need to stay safe online? What damage can this do to individuals/ organisations?

This will form your justification for the need (the purpose) for Cyber Security

2. Types of cyber security incidents

Research and explain some of the following types of security incidents : data destruction,. data manipulation,. data modification and data theft. How they are carried out, what forms do they come in?

Find out the different types of attackers i.e.:. cyber criminals, cyber terrorists, hackers, phishers, scammers, what are their motivations? Research incidents that have made the news, analyse the incidents -Are certain incidents carried out by certain types of attackers? What was their motivation? Compare at least 3 new stories.

Do you have any personal experience with one?

3. Discuss the legal implications of Cyber security

1. The Data Protection Act (1998) GDPR

2. The Computer Misuse Act (1990)

3. other relevant legislation

**How this links to the specification: Unit 2 Essentials of cyber security A/615/1352**

**Time guide: 16 hrs**

**Assignment deadline: 26th June 2020**

**EXEMPLARS:** You will be tested on your research ability and your presentation skills, as well as accurate content knowledge.. You can use any means of presentation for this task (paper, google docs, slides, video, posters, this list is not exhaustive). For this reason, I will not be providing an exemplar as I wish to see your current level of ability and the level at which you will be putting effort into the work. If you require guidance, please email.

**SUPPORT:**

Use the internet for research

Helpful links:<https://www.ncsc.gov.uk/section/about-ncsc/what-is-cyber-security>

<https://www.cisco.com/c/en/us/products/security/what-is-cybersecurity.html>

[www.cisco.com/UK](http://www.cisco.com/UK)

<http://www.teach-ict.com/news/news_stories/news_crime.htm>

[www.comptia.org](http://www.comptia.org)

**Challenge 3:**

**Produce a leaflet**

Explain why policies, procedures and agreements are required and also describe how effective they are in your school environment.

Every organisation that uses any form of IT should have a AUP (Acceptable Use Policy), for this challenge I want you to produce a professional information leaflet to inform employers about procedures etc. You are the company Director so you have decided that the leaflet will not only inform them, but will explain the possible dangers and the preventions that need to be put in place to try and stop Cyber Security attacks.

Background: Your company sells Alloy Wheels, you sell to companies abroad ,you can take orders via a website. You have employees that can work from home if they want, you have 20 employees of which there are 2 managers.

You will need to try and cover every eventuality as you could be held responsible for data breaches as the Company Director!

Research into AUP`s first (there is one in your planner) you will need to understand why these are so important.

If using images, ensure they are not copyrighted

**How this links to the specification: Unit 2 Essentials of cyber security A/615/1352**

**Time guide: 8 hrs**

**Assignment deadline: 10th July 2020**

**EXEMPLARS: GRADE Pass:** [**https://www.getsafeonline.org/themes/site\_themes/getsafeonline/download\_centre/Sample\_Acceptable\_Usage\_Policy.pdf**](https://www.getsafeonline.org/themes/site_themes/getsafeonline/download_centre/Sample_Acceptable_Usage_Policy.pdf)

Do not copy this and remember you explaining why and how to prevent. It also needs to directly reflect the needs of your company.

**SUPPORT:** Google how to use Publisher

Use the exemplar, information from challenge 2

HOW DO I HAND IN:

Your work must be handed in via Google Classroom so that it can be assessed and marked accordingly, all of your challenge deadlines are also in there as assignments (1,2 and 3!) You can simply upload the work (by clicking plus and hand in), work can be submitted photographically, written, Sheets and Powerpoints and/or video flickthroughs for instance.

HOW AM I MARKED?

You are graded using Pass, Merit and Distinction. The tasks are tricky because it’s Sixth Form and KS5 study and there is a big jump. You will need to spend significant time learning the concepts and techniques and how to complete a piece of research with references

HOW AM I MARKED?

We would expect new students to any course to be sitting at the bottom of the grading structure, BUT! There are certain activities that you will be familiar with and will do better with even though it's just the start of the course. Please don't worry if you receive Us. Even to get nearly a Pass at a level Technical award is brilliant

WHAT IF I GET STUCK?

Then email me, my email is in the title of this sheet or write on the thread in our classroom, we know some things are tricky and are here to help!

WHAT IF I MISS A DEADLINE OR DON’T HAVE I.T?

THEN YOU NEED TO LET ME KNOW WAY IN ADVANCE SO WE CAN SUPPORT YOU, IF YOU JUST MISS THE DEADLINE YOU ARE RISKING YOUR COURSE OFFER.

SUPPORTING MATERIAL

[Referencing guide](https://drive.google.com/file/d/1dKe6Dv6C4U_T98pKe1ZJZiu0NPhyUL78/view)

[Research guide](https://drive.google.com/open?id=1LGS7inC7Xx1TloMoDPmZ0qAZmyQu5156)

**THATS’S IT! Good luck and don’t miss your deadlines! All 3 deadlines will be in Google Classroom also.**