



Aspire Achieve Thrive

Half Term 1

Digital IT

Year 11

Name: _____

Tutor: _____

Year 11 Homework Timetable

Monday	Ebacc Option D	Option C	Modern Britain	
Tuesday	English	Tassomai	Option B	Option A
Wednesday	Sparx	Science	Modern Britain	Option C
Thursday	Ebacc Option D	Tassomai	Option B	
Friday	Sparx	Science	English	Option A

Block A	Block B	Block C	Block D
Art Dance Drama Media Studies Music Photography	Business Studies Child Development Catering Computer Science Drama Health & Social Care IT Media Studies Sociology Sport	Art Business Studies Geography Health & Social Care History Catering Photography Sport Travel & Tourism	French Geography History

Tassomai - 2 Daily Goals per week

Sparx - 4 tasks of Sparx per week

Year 11 Homework Plan

Week/Date	Homework Task	Examination Question Topic
Week 1 Monday 5th September 2022	Cornell Notes Types of network Cloud computing	Types of Networks and Cloud Computing
Week 2 Monday 12th September 2022	Cornell Notes Modern Teams Stakeholders	Modern Teams and Communicating with Stakeholders
Week 3 Monday 19th September 2022	Cornell Notes Why systems are attacked External threats to data	Why Systems are Attacked and External Threats
Week 4 Monday 26th September 2022	Cornell Notes Internal threats to data User Access Restrictions	Internal Threats and User Access Restrictions
Week 5 Monday 3rd October 2022	Cornell Notes Data level protection Finding weaknesses	Data Level Protection and Finding Weaknesses
Week 6 Monday 10th October 2022	Cornell Notes Defining responsibilities and parameters Disaster Recovery	Disaster Recovery
Week 7 Monday 17th October 2022	Cornell Notes Shared data Environmental concerns	Shared Data and Environmental Concerns

Week 1: Types of Network and Cloud Technology		
Keywords	Knowledge	
Ad-hoc network: allows computers to connect together without going through a central access point such as a router Open Network: Wi-fi in public places which doesn't usually require a password PAN: Personal Area Network Blackspots - Geographical features blocking signals The Cloud: storing and accessing data and programs over the internet Cloud Storage: to store and manage files and data Cloud Computing: accessing software through a browser	<u>Strengths and Weaknesses of Ad-Hoc Networks</u> + Easier to connect devices so setting up the network is simpler + Cheaper due to lack of central access point	
	- Only supports slower transfer speeds - Less secure due to limited control over users	
	<u>Features of Cloud Storage:</u> Sharing and setting of access rights Availability <u>Uses of Cloud Computing:</u> Online Applications Single Shared Instance of a File	
	Synchronisation of cloud and individual devices Scalability Consistency of versions between users Collaboration Tools and Features	
	<u>Things that can impact the selection of suitable cloud technologies:</u> - The Platform: The type of device used can impact which cloud computing service is most suitable - Number and Complexity of Features: Different services will offer different features – some of these may be more complex or simple than those on other services - Paid v Free Services - Interface Design: The design of an application will have a major impact on its useability and its success - Available Devices: Is the application not only available, but easy to use on different services	
Week 2 Modern Teams and Stakeholders		
Keywords	Knowledge	
Disaster Recovery Policy: A plan that businesses put in place to limit the damage caused when bad things happen Compatibility: Does the new system work with existing data and devices Modern teams: Technology has meant that nowadays working teams can collaborate and communicate across the world Stakeholders: Someone who has an interest in a business/organisation There are a number of ways that a business can communicate with its stakeholders and these are known as communication platforms such as websites, email, social media and voice communication.	<u>Factors involved in selection of cloud technology for a business:</u> Disaster Recovery Policy Security of data Compatibility Maintenance Getting up and running quickly Performance Considerations - speed of connection, responsiveness to users, complexity of tasks performed etc	
	<u>Benefits of worldwide and multicultural teams</u> + Greater potential workforce + Respect for cultural differences + Greater creativity + Local awareness	
	<u>Impact of worldwide teams</u> Inclusivity: Modern technologies have enabled individuals with difficulty moving, to work in areas they were previously unable to. Flexible Work Schedules: Modern technologies have allowed workplaces to move from the traditional working week. Flexible Working Locations: Not needing to be in a physical office space or specific location has changed the way organisations work.	
Week 3 Why Systems are Attacked and External Threats to Data		
Keywords	Knowledge	
System Attack: a deliberate action, carried out by someone with malicious intent, targeting an organisations data or digital system Threat: an incident (deliberate or unintended) which results in data loss or disruption to services External Threat: a threat which comes from outside the organisation Malware: Malicious software designed to cause damage Hacking: Where an individual gains access to a system without the permission of the system owner/administrator.	<u>Why are systems attacked</u> Challenge/for fun Industrial espionage Financial gain (direct and indirect) Personal attacks Disruption Data/information theft <u>Impacts of a security breach</u> - Data loss - Public image damage - Financial loss - Reduction in productivity <u>External threats</u> Unauthorised access Social Engineering - conning people into giving away data/information Phishing Shoulder surfing Malware	<u>Malware</u> Virus: a piece of malicious code that attaches itself to a legitimate program which is activated when the legitimate program is run. Worm: Similar to a virus but doesn't attach to a program. Worms can copy themselves and spread through an internet or network connection Trojan: Malicious code hidden inside legitimate software which users are tricked into downloading when they want something else. Botnet: a number of connected devices linked together to carry out a repetitive task Ransomware: Malware which infects a device and encrypt files saved on it and asks for a fee to decrypt them Spyware: Gains access to the device and works in the background to steal data through methods keylogging White hat hacking - performed by security professionals to find exploits in a system for the purpose of implementing a cybersecurity solution Black hat hacking - gaining access to the system without the permission of its owner.

Week 1: Types of Network and Cloud Technology

Keywords	Knowledge	
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WEEK 1

Types of Network and Cloud Computing

Date.....

Clare is a designer for a games development company.

She works from home and in public places such as cafés, train stations and airports.

Clare uses her laptop to prepare designs.

Give **two** ways Clare could connect her laptop to the internet when she is working away from home.

(2)

1

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2

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(Total for question = 2 marks)

Maya has an online shop selling fair trade products.

She collects personal data about her customers.

There is legislation covering data protection. One of the data protection principles that Maya must follow is to protect the customers' personal data she has collected.

Maya uses cloud storage to save all her data.

The image shows the interface that she uses.

It has been annotated to explain one of the features.

Annotate the image to explain **two other** features of the cloud storage interface.

(4)

Help feature, so Maya can access help topics if she has problems using the interface.



A car insurance company sells policies to customers all over the UK.

The car insurance company uses cloud computing to provide employees with access to resources.

Discuss the benefits of using cloud computing to provide access to resources.

(6)

This image shows a full page of white paper with horizontal dashed lines, typical of primary-ruled notebook paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Modern Teams and Communicating with Stakeholders

Date.....

A car insurance company sells policies to customers all over the UK.
The company uses communication tools to manage its staff.
One communication tool it uses is email.
Explain **one** other communication tool the car insurance company might use.

(2)

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Marco owns a building company. Marco uses digital technology systems to design new homes for his customers and order building materials from local suppliers.
One communication platform Marco uses is email.
Give **two other** communication platforms Marco can use.

(2)

1
2

Marco owns a building company. Marco uses digital technology systems to design new homes for his customers and order building materials from local suppliers.
One communication platform Marco uses is email.
State **two** benefits of using email to communicate.

(2)

1
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2
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Marco owns a building company. Marco uses digital technology systems to design new homes for his customers and order building materials from local suppliers.

One communication platform Marco uses is email.

One drawback of using email to communicate is that it requires internet access.

State **two other** drawbacks of using email to communicate.

(2)

- 1
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- 2
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Why Systems are Attacked and External Threats

Date.....

A doctor's surgery provides medical care for people in the local area. The surgery uses Information Technology to collect, store and process patient data.

State **two** possible external threats to the patient data.

(2)

1

2

Marco owns a building company. Marco uses digital technology systems to design new homes for his customers and order building materials from local suppliers.

Marco is concerned about someone attacking his systems.

One reason why someone might attack his systems is to steal his data.

State **two other** reasons why someone might attack his systems.

(2)

1

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He designs and installs computer networks.

Mina works remotely.

When Mina is installing networks he uses open wi-fi networks to access data.

Explain **two** possible external security threats to Mina when using open wi-fi networks.

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Internal Threats and User Access Restrictions

Date.....

A company that sells books has shops all over the UK.

The company has a head office in Carlisle.

The company uses book sales data for its day-to-day activities.

Discuss possible internal threats to this data and their impact on the company.

(6)

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Hues Artwork is a graphic design company.

It specialises in designing brochures, magazines and advertising products, using specialised computer software.

User access restriction and data level protection methods could keep its designs safe.

One user access restriction method is a password.

State **two other** user access restriction methods Hues Artwork could use.

- 1
- 2

Data Level Protection and Finding Weaknesses

Date.....

Hues Artwork is a graphic design company.

It specialises in designing brochures, magazines and advertising products, using specialised computer software.

User access restriction and data level protection methods could keep its designs safe.

A firewall is one data level protection method Hues Artwork could use.

State **two other** data level protection methods it could use.

- 1
- 2

(Total for question = 2 marks)

A car insurance company sells policies to customers all over the UK.

The company uses encrypted emails to send insurance documents to customers.

Using encrypted emails keeps the data safe when it is being transmitted.

Describe how encryption protects transmitted data.

(3)

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A company sells vegan food and clothing.

It has decided to create a website to sell its products.

The company uses an ethical hacker to identify weaknesses in its system security.

Discuss the implications of using an ethical hacker in this way.

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(Total for question = 6 marks)

Disaster Recovery

Date.....

A company that sells books has shops all over the UK.

The company has a head office in Carlisle.

The company has a Disaster Recovery Policy.

The policy includes the process for backing up its book sales data.

One example of information that should be in the policy is a list of files and folders to be included in the backup.

Explain **one other** example of information to be included.

(2)

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Shared Data and Environmental Concerns

Date.....

A company that sells books has shops all over the UK.
The company has a head office in Carlisle.
Each shop stores book sales data on the shop's computer system.
They then share this data with the head office.
Describe **one** way the company head office can use this shared data.

(3)

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Maya has an online shop selling fair trade products.
She collects personal data about her customers.
There is legislation covering data protection. One of the data protection principles that Maya must follow is to protect the customers' personal data she has collected.
Maya tries to use her digital systems responsibly.
Explain **one** way she could reduce the amount of energy her digital systems use.

(2)

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Maya has an online shop selling fair trade products.

Maya is getting rid of her old computer but is aware of the potential environmental impact.

Explain **two** ways Maya can dispose of her computer responsibly.

(4)

1

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STEP 2: CREATE CUES

What: Reduce your notes to just the essentials.

What: Immediately after class, discussion, or reading session.

How:

- Jot down key ideas, important words and phrases
- Create questions that might appear on an exam
- Reducing your notes to the most important ideas and concepts improves recall. Creating questions that may appear on an exam gets you thinking about how the information might be applied and improves your performance on the exam.

Why: Spend at least ten minutes every week reviewing all of your previous notes. Reflect on the material and ask yourself questions based on what you've recorded in the Cue area. Cover the note-taking area with a piece of paper. Can you answer them?

STEP 1: RECORD YOUR NOTES

What: Record all keywords, ideas, important dates, people, places, diagrams and formulas from the lesson. Create a new page for each topic discussed.

When: During class lecture, discussion, or reading session.

How:

- Use bullet points, abbreviated phrases, and pictures
- Avoid full sentences and paragraphs
- Leave space between points to add more information later

Why: Important ideas must be recorded in a way that is meaningful to you.

STEP 3: SUMMARISE & REVIEW

What: Summarise the main ideas from the lesson.

What: At the end of the class lecture, discussion, or reading session.

How: In complete sentences, write down the conclusions that can be made from the information in your notes.

Why: Summarising the information after it's learned improves long-term retention.

Questions	Notes

Summary

Questions	Notes

Summary

Questions	Notes

Summary

Questions	Notes

Summary

Questions	Notes

Summary

Questions	Notes

Summary

Questions	Notes

Summary

Revision Page

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