



STOKE  
DAMEREL

Aspire Achieve Thrive

**Spring Term**  
**(Half Term 3 and 4)**  
**Computer Science**  
**Year 10**

**Name:** \_\_\_\_\_

**Tutor:** \_\_\_\_\_

### Year 10 Homework Timetable

<b>Monday</b>	English Task 1	Ebacc Option A Task 1	Option C Task 1	
<b>Tuesday</b>	Tassomai	Option B Task 1	Modern Britain Task 1	
<b>Wednesday</b>	Sparx	Science Task 1	Option C Task 2	
<b>Thursday</b>	Ebacc Option A Task 2	Tassomai	Option B Task 2	Modern Britain Task 2
<b>Friday</b>	Sparx	Science Task 2	English Task 2	

**Tassomai - 2 Daily Goals per week**

**Sparx - 4 tasks of Sparx per week**

Option A (EBACC)
French
Geography
History

Open B
Art
Business Studies
Catering
Computer Science
History
Health & Social Care
Music
Sport
IT

Open C
Business Studies
Childcare
Catering
Drama
Geography
Health & Social Care
Triple Science
Sport

## Year 10 Homework Plan

<b>Week Beginning Date</b>	<b>Cornell Notes on ....</b>	<b>Exam question</b>
<b>Week 1</b> Monday 2nd January	1.2.5 Compression	Lossy and Lossless compression
<b>Week 2</b> Monday 9th January	1.3.1 Types of Network	WAN and LAN
<b>Week 3</b> Monday 16th January	1.3.1 Network Performance	Network Performance factors
<b>Week 4</b> Monday 23rd January	Revision for Assessment Point 1	
<b>Week 5</b> Monday 30th January	1.3.1 Client-Server and Peer-to-Peer Networks	Advantages of client-server and peer-to-peer network models.
<b>Week 6</b> Monday 6th February	1.3.1 LAN Hardware	Differences between switches and routers. LAN Hardware in general.
<b>Monday 13th February</b>	HALF-TERM	
<b>Week 7</b> Monday 20th February	1.3.1 The Internet	The process when a webpage is requested from a web server. Cloud-based services.
<b>Week 8</b> Monday 27th February	1.3.1 Star and Mesh Topologies	Star Network Topologies.
<b>Week 9</b> Monday 6th March	1.3.2 Wired and Wireless Communications	Wired and Wireless Communications.
<b>Week 10</b> Monday 13th March	1.3.2 Encryption	Explain how encryption helps protect confidential documents.
<b>Week 11</b> Monday 20th March	1.3.2 IP and MAC Addressing	Differences between IP and MAC addresses
<b>Week 12</b> Monday 27th March	1.3.2 Standards	What are standards? Protocols for specific tasks.

## 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.

**Date**      Week Beginning 2nd January 2023

**Topic:**      1.2.5 Compression

# WEEK 1

<p><a href="#">1.2.5 Compression</a></p>   <p><b>Questions</b></p>	<b>Notes</b>

**Summary:**

**WEEK 1**

**Q1. Compression is often used to reduce the size of files before sending them electronically. What is one advantage for compressing files in this way? (1 mark)**

Answer:

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**Q2. What is meant by lossy compression? (2 marks)**

Answer:

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**Q3. What is meant by lossless compression? (2 marks)**

Answer:

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**Date**      Week Beginning 9th January 2023

**Topic:**      1.3.1 Types of Network

## WEEK 2

<p><a href="#">Types of networks</a></p>  <p>Questions</p>	<b>Notes</b>

**Summary:**

**Date** Week Beginning 9th January 2023

**Topic:** 1.3.1 Types of Network

## **WEEK 2**

**Q1. What does WAN stand for? (1 mark)**

Answer:

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**Q2. What are the differences and similarities between a LAN and a WAN? (2 marks)**

Answer:

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**Date**      Week Beginning 16th January 2023

**Topic:**      1.3.1 Network Performance

## WEEK 3

<p><a href="#">Factors that affect the performance of networks</a></p> 	<b>Notes</b>
	<b>Questions</b>

**Summary:**

**Date** Week Beginning 16th January 2023

**Topic:** 1.3.1 Network Performance

## **WEEK 3**

**Q1. What is the definition of the term 'bandwidth'? (2 marks)**

Answer:

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**Q2. List three factors that affect the performance of a network. (3 marks)**

Answer:

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**WEEK 4**

Questions	Notes

**Summary:**

**Date** Week Beginning 23rd January 2023

**Topic:** Revision for Assessment Point 1

## WEEK 4


Questions	Notes

**Summary:**

**Date:** Week Beginning 30th January 2023

**Topic:** 1.3.1 Client-Server and Peer-to-Peer Networks

## WEEK 5

<p><a href="#">1.3.1 Client-Server and Peer-to-Peer networks</a></p>  <p>Questions</p>	<b>Notes</b>

**Summary:**

**WEEK 5**

**Q1. Explain three advantages of a client-server network model. (3 marks)**

Answer:

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**Q2. Explain three advantages of a peer-to-peer network model. (3 marks)**

Answer:

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**Date**      Week Beginning 6th February 2023

**Topic:**      1.3.1 LAN Hardware

# WEEK 6

1.3.1 LAN Hardware   Questions	<b>Notes</b>

**Summary:**

**Date** Week Beginning 6th February 2023

**Topic:** 1.3.1 LAN Hardware

## WEEK 6

**Q1. Explain one difference between a switch and a router. (2 marks)**

Answer:

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**Q2. What network component would be used in every computer to connect it to a network? (1 mark)**

Answer:

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**Q3. What network component would be used to provide a wireless connection to devices on a network? (1 mark)**

Answer:


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**Date**      Week Beginning 20th February 2023

**Topic:**      1.3.1 The Internet

## WEEK 7

<a href="#">1.3.1 The Internet</a>	<b>Notes</b>
	
<b>Questions</b>	

**Summary:**

# WEEK 7

**Q1. Fill in the blanks below, using these terms (5 marks):**

**domain name, IP address, GET, browser, webpage**

When a client on the Internet wants to request a webpage from a webserver, the \_\_\_\_\_ sends the \_\_\_\_\_ to the DNS server. The DNS server maps the domain name to an \_\_\_\_\_ and sends it back to the client. The client then sends a \_\_\_\_\_ request for the \_\_\_\_\_.

**Q2. Explain why you might use cloud-based services for storing data and programs? (3 marks)**

Answer:

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Date Week Beginning 27th February 2023

Topic: 1.3.1 Star and Mesh Topologies

# WEEK 8

<a href="#">1.3.1 Star and Mesh</a>	<b>Notes</b>
	
<b>Questions</b>	

Summary:

## WEEK 8

**Q1** The owners of a large bakery have a Local Area Network (LAN) with a star topology. They order their supplies over the Internet. When data is transmitted from the bakery to the supplier, network protocols are used.

Give two reasons why the bakery may use a star network topology for their LAN. (2 marks)

Answer:

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**Q2.** An office has a LAN (Local Area Network). The office has four employees who each have a laptop. The office also has one server and one networked printer.


The office is set up as a star network with a switch at the centre. All devices are connected to the network using cables.

Draw the devices and connections in the office star network. All devices must be clearly labelled. (3 marks)

Answer:

**Date**      Week Beginning 6th March 2023      **Topic:**      1.3.2 Wired and Wireless Connections

## WEEK 9

<a href="#">1.3.2 Wired and Wireless</a>	<b>Notes</b>
	
<b>Questions</b>	

**Summary:**

## WEEK 9

**Q1** A house has computers in each room and a central router. Every room allows both Ethernet and WiFi connections to the router.

The following table has descriptions of Ethernet and WiFi. Tick (✓) one box in each row to identify if the description is more appropriate for Ethernet or WiFi. (5 marks)

Description	Ethernet	Wifi
A wired connection		
More likely to be affected by interference		
Data can be transmitted at a faster speed		
Wireless transmission		
Shorter transmission range before data is lost		

**Q2** Hope has a network in her house. The main devices are shown in the diagram



The network has one wireless access point in the kitchen. Explain why the laptop's network performance is lower in the bedroom (2 marks)

Answer:

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Date Week Beginning 13th March 2023

Topic: 1.3.2 Encryption

# WEEK 10

<p><a href="#">1.3.2 Encryption</a></p>  <p>Questions</p>	<b>Notes</b>

Summary:

**Date** Week Beginning 13th March 2023

**Topic:** 1.3.2 Encryption

## **WEEK 10**

**Q1** Hamish stores confidential documents on his laptop.

**If unauthorised access does occur, Hamish would like to use encryption to add another layer of protection to his documents. Explain how encryption helps to protect Hamish's documents. (2 marks)**

Answer:

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**Q2** Explain why hiding a wireless network SSID (Service Set Identifier) can make a wireless network more secure. (1 mark)

Answer:

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**Date**      Week Beginning 20th March 2023

**Topic:**      1.3.2 IP and MAC Addressing

## WEEK 11

<a href="#">1.3.2 IP and MAC Addressing</a>   <b>Questions</b>	<b>Notes</b>

**Summary:**

**Date**      Week Beginning 20th March 2023

**Topic:**      1.3.2 IP and MAC Addressing

## **WEEK 11**

- Q1**      A bank uses a local area network to connect all the computers in its head office. Computers in the network can be identified using both IP addresses and MAC addresses.
- Describe two differences between IP addresses and MAC addresses. (4 marks)**

Answer:

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Date Week Beginning 27th March 2023

Topic: 1.3.2 Standards

# WEEK 12

<a href="#">1.3.2 Standards</a>	<b>Notes</b>
	
<b>Questions</b>	

**Summary:**

## WEEK 12

**Q1** Complete the paragraph below, filling in the blanks (3 marks):

Use the following terms:

**software compatible specifications**

Standards are a set of \_\_\_\_\_ for hardware and \_\_\_\_\_. It makes it possible for manufacturers to create products and services that are \_\_\_\_\_ with one another.

**Q2** State one set of standards that might be used to represent character sets (1 mark)

\_\_\_\_\_

State one set of standards that might be used to create websites (1 mark)

\_\_\_\_\_

State one set of standards that might be used to store image files (1 mark)

\_\_\_\_\_







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Develop your character

