



Getting Ahead – Pre-course Work

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Information Technology Level 2 Technical Diploma

Welcome to the **Information Technology Level 2 Technical Diploma**. In preparation for the start of the course, please complete these tasks and have them with you to hand in during your first week of college in September.

This task should take you approximately an hour to complete and is designed to give you an introduction to the subject, and the expectations we have for you to complete independent work.

Activity: Specifying Your Dream Computer

Objective:

By the end of this activity, you will be able to research and specify the components of your dream computer, considering both hardware and software requirements. This exercise will help you understand the different components of a computer system and their functions.

Duration:

1 Hour

Materials Needed:

- Access to a computer with internet
- Pen and paper or a word processing document to take notes

Instructions:

1. Introduction (10 minutes):

- Briefly discuss what makes a computer system.
- Mention the main components: CPU, RAM, storage, graphics card, motherboard, power supply, case, and peripherals.
- Explain the importance of selecting the right components based on the intended use (e.g., gaming, graphic design, general use).

2. Research (30 minutes):

- Use the internet to research the latest and most popular components for a high-performance computer. Look at reputable sources like manufacturer websites, tech review sites, and online stores.
- Take notes on the following components:
 - **CPU (Central Processing Unit):** Look for different models and brands. Consider the number of cores and clock speed.
 - **RAM (Random Access Memory):** Research the type and amount of memory.
 - **Storage:** Compare SSD (Solid State Drive) and HDD (Hard Disk Drive) options. Look at capacity and speed.
 - **Graphics Card (GPU):** Investigate the latest graphics cards, especially if your dream computer is for gaming or graphic design.
 - **Motherboard:** Ensure compatibility with your chosen CPU and other components.
 - **Power Supply Unit (PSU):** Determine the required wattage to power your system.



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- **Case:** Choose a case that fits all your components and has good airflow.
 - **Peripherals:** Consider monitors, keyboards, mice, and other accessories.
 - **Software:** Think about the operating system and any specific software applications you would need.
3. **Specification (15 minutes):**
- Based on your research, specify the components for your dream computer. List each component with its brand and model.
 - Justify your choices by explaining why you selected each component. For example, if you chose a particular CPU, explain its advantages in performance.
4. **Summary (5 minutes):**
- Summarise your dream computer specifications and present them to a partner or group.
 - Discuss the challenges you faced during the research and how you overcame them.

Example Specification:

- **CPU:** Intel Core i9-11900K – Chosen for its high performance and multiple cores, suitable for gaming and multitasking.
- **RAM:** 32GB DDR4 Corsair Vengeance – Ample memory for running multiple applications simultaneously.
- **Storage:** 1TB Samsung 970 EVO SSD – Fast read/write speeds for quick boot times and data access.
- **Graphics Card:** NVIDIA GeForce RTX 3080 – High-end GPU for gaming and graphic design.
- **Motherboard:** ASUS ROG Strix Z590-E – Compatible with the CPU and supports high-speed RAM.
- **Power Supply:** Corsair RM850x – 850W to ensure reliable power delivery.
- **Case:** NZXT H510 – Stylish case with good airflow and cable management.
- **Peripherals:** Dell UltraSharp 27 Monitor, Logitech G502 Mouse, and Corsair K95 Keyboard.
- **Software:** Windows 11 Pro, Adobe Creative Cloud for graphic design, and Steam for gaming.

Getting Equipped

You will need the following:

- A ring binder
- Dividers
- Stationery (pens, pencils, a ruler)