

Digital Technology E-Note for JSS1 (Second Term)

Week 1: Revision of First Term Work

Objectives:

- Recall key concepts from first term.
- Identify knowledge gaps and reinforce basics.

Key Concepts:

- Meaning of Digital Technology/ICT.
- Basic computer parts (hardware and simple software).
- Importance of digital tools in society.

Detailed Explanation:

Digital technology refers to the use of electronic devices, especially computers and mobile phones, to create, process, store, retrieve, and share information. ICT (Information and Communication Technology) encompasses gadgets like computers, internet, and phones that help us communicate and access knowledge quickly. In the first term, we learned that a computer system has hardware (physical parts you can touch) like CPU, monitor, keyboard, and mouse, and software (instructions that tell the computer what to do). Computers are vital in education (e-learning), banking (ATMs), healthcare (patient records), and entertainment (games and videos).

Examples/Activities:

- Class discussion: Share how you used a phone or computer during holidays (e.g., WhatsApp for chatting, Google for homework).
- Group activity: List 10 ways computers help in Nigeria (e.g., online registration for exams like JAMB).
- Draw and label a full computer system.

Summary/Assignment:

Revision strengthens foundation for new topics. Digital tools make tasks faster and more efficient.

Assignment: Write a short paragraph on "How digital technology has changed schooling in Nigeria." (10 marks)

Week 2: Input Devices

Objectives:

- Define and classify input devices.
- Explain functions with examples.

Key Concepts:

- Input devices: Tools that send data/instructions into the computer.
- Common examples: Keyboard, mouse, scanner, microphone, webcam, joystick, light pen.

Detailed Explanation:

Input devices act as the "entry point" for data into the computer. Without them, we cannot interact with or command the computer. The keyboard has alphabetic keys (for typing letters), numeric keys (numbers), function keys (F1-F12 for shortcuts), and special keys (Enter, Shift). Mouse allows pointing, clicking, and dragging. Scanner converts physical documents/photos into digital files. Microphone captures sound (e.g., voice recording), while webcam captures video (e.g., Zoom calls). Advantages: Make data entry accurate and fast. Disadvantages: Can be damaged easily (e.g., dusty keyboard).

Examples/Activities:

- Practical: Use keyboard to type names; point and click with mouse.
- Identify input devices in the school lab.

Summary/Assignment:

Input devices bridge humans and computers.

Assignment: Draw/label 5 input devices and state one use each.

Week 3: Output Devices

Objectives:

- Identify output devices and their roles.
- Differentiate soft (visual/sound) and hard (printed) output.

Key Concepts:

- Output devices: Display or produce processed information.
- Examples: Monitor, printer, speakers, plotter, projector.

Detailed Explanation:

After processing data, the computer shows results via output devices. Monitor (screen) displays text, images, videos (types: LCD, LED – energy efficient). Printer produces hard copies (inkjet for color photos, laser for fast text). Speakers/headphones output sound (e.g., music, alerts). Advantages: Allow us to see/hear results immediately. Disadvantages: Monitors can strain eyes; printers use ink/paper costly.

Examples/Activities:

- Observe different monitors; listen to computer sounds.
- Discuss: Why is a printer useful in offices?

Summary/Assignment:

Output devices make information usable.

Assignment: List 5 output devices with real-life examples (e.g., printer in banks for receipts).

Week 4: Computer Software (System and Application)

Objectives:

- Distinguish system and application software.
- Give examples and functions.

Key Concepts:

- System software: Manages hardware (e.g., Operating Systems).
- Application software: Performs user tasks (e.g., Word processors).

Detailed Explanation:

Software is programs/instructions. System software acts as intermediary between hardware and user (e.g., Windows manages files, memory). Application software solves specific needs (e.g., MS Word for typing letters, calculators for math). Without system software, applications won't run. Advantages of applications: User-friendly. Open-source (free) vs proprietary (paid).

Examples/Activities:

- Identify desktop icons (e.g., Windows OS, MS Paint application).

Summary/Assignment:

Software powers the computer.

Assignment: Table of 5 system and 5 application software examples.

Week 5: Operating Systems

Objectives:

- Describe OS functions and types.
- Explain booting.

Key Concepts:

- OS: Controls hardware/software.
- Types: Windows, Linux (free), macOS, Android (mobile).
- Booting: Starting the computer (cold vs warm).

Detailed Explanation:

OS is the most important system software – it loads when powered on, manages files, runs programs, handles security. Booting process: Power on → BIOS checks hardware → OS loads. Cold boot (from off), warm (restart). Mobile OS like Android powers smartphones.

Examples/Activities:

- Watch booting on a computer.
- Compare Windows and Android interfaces.

Summary/Assignment:

OS is the computer's manager.

Assignment: Explain cold and warm boot with differences.

Week 6: Word Processing Basics

Objectives:

- Use word processing tools.
- Create, edit, save documents.

Key Concepts:

- Word processing: Software for text documents (MS Word, Google Docs).
- Features: Typing, formatting (bold, italic, underline), saving, printing.

Detailed Explanation:

Word processors replace typewriters – easy editing, spell check, fonts/sizes. Steps: Open program → type → format → save (as .docx) → print. Useful for letters, reports, resumes.

Examples/Activities:

- Practical: Type a letter to your principal; apply bold/italic; save file.

Summary/Assignment:

Word processing enhances document creation.

Assignment: Create and save a document about "My Favorite Subject."

Week 7: Data Processing

Objectives:

- Understand data vs information.
- Explain the data processing cycle.

Key Concepts:

- Data: Raw facts; Information: Processed meaningful data.
- Cycle: Collection → Input → Processing → Storage → Output → Distribution.

Detailed Explanation:

Data processing converts raw data into useful information (e.g., student scores → average grade). Stages form a cycle. Electronic Data Processing (EDP) uses computers for speed/accuracy. Importance: Business decisions, research.

Examples/Activities:

- Example: Supermarket sales data → daily report.
- Draw the cycle.

Summary/Assignment:

Processing makes data valuable.

Assignment: Draw and label the data processing cycle; give one example per stage.

Week 8: Introduction to the Internet

Objectives:

- Define internet and its uses.
- Introduce browsers and search engines.

Key Concepts:

- Internet: Worldwide network of connected computers.
- Uses: Research, email, social media, e-commerce.
- Browser (Chrome, Firefox); Search engine (Google).

Detailed Explanation:

Internet connects billions via cables/satellites/wireless. WWW (World Wide Web) is part of it for websites. Browser displays pages; search engine finds info. Advantages: Global access. Risks: Fake news.

Examples/Activities:

- Discuss: How students use Google for assignments.
- Safe rules: No stranger chats.

Summary/Assignment:

Internet is a global library.

Assignment: List 8 uses; 6 safety tips.

Week 9: Computer Ethics and Safety

Objectives:

- Promote ethical and safe use.
- Lab rules and health tips.

Key Concepts:

- Ethics: No plagiarism, respect privacy, no viruses.
- Safety: Ergonomics (proper posture), limit screen time, lab cleanliness.

Detailed Explanation:

Ethics ensure responsible use (e.g., cite sources online). Safety prevents harm (eye strain, back pain). Lab: No food/drinks, proper shutdown.

Examples/Activities:

- Role-play ethical dilemmas (e.g., copying homework online).

Summary/Assignment:

Responsible use protects everyone.

Assignment: 10 computer room rules.

Weeks 10-11: Revision

Full review with quizzes, practicals, past questions.

Week 12: Examination

Final Note: Practice regularly! Digital skills open doors to future jobs like programming and AI. Ask questions in class.