Introduction to Digital Technologies

Meaning, Scope and Relevance in Modern Society | Senior Secondary School 1 | DIGITA TECHNOLOGIES

Meaning of digital technology

Digital technology refers to electronic devices, systems and applications that create, process, store or transmit information as digital data.

Digital data is represented using discrete values, commonly binary digits called bits: 0 and 1. A smartphone turns a voice message, photograph or typed text into digital data that can be saved and sent.

Examples include smartphones, computers, digital cameras, ATMs, websites, mobile apps, cloud storage and computer networks. Electricity alone does not make a device digital: a simple electric fan uses electricity, but it does not normally process digital information.

Scope of digital technology

The scope means the main areas and activities covered by digital technology. These areas often work together: a phone uses hardware, software, a network and data to display an online lesson.

- **Devices and hardware:** Physical equipment such as phones, laptops, sensors, printers and servers.
- **Software and applications:** Programs such as word processors, learning apps, browsers and payment apps.
- **Data and storage:** Collecting, organising and saving information on devices, databases or cloud services.
- **Networks and communication:** Wi Fi, mobile networks and the internet connect people and devices.
- **Digital services:** Online learning, banking, shopping, telemedicine and electronic government services.
- **Emerging technologies:** Artificial intelligence, robotics and the Internet of Things, where connected devices exchange data.

Relevance in modern society

Education

Teachers can prepare notes and presentations, while students can research topics, attend online lessons and submit assignments. A school portal can share results and information with parents. Students must still check whether an online source is reliable.

Communication and social life

Messages, email and video calls allow people to communicate quickly across distances. Social media helps communities share information, but false stories and cyberbullying can spread quickly too.

Business and employment

Businesses advertise products online, keep electronic records, accept transfers and manage customer orders. Digital skills also support jobs in design, programming, data work, media and customer service. A Lagos caterer, for example, can receive an order through a website and confirm payment electronically.

Health and public services

Hospitals can keep digital patient records and offer remote consultations where suitable. Government services may use online forms and databases to process applications. Secure handling of personal information is essential in both settings.

Banking and transport

ATMs and mobile banking make some payments faster. Map and transport apps help people plan routes and estimate travel time. Service can be interrupted by weak connectivity, power failure or system faults, so users should keep important records and follow safe procedures.

Benefits and challenges

Benefits	Challenges
Fast access to information and services	Misinformation and unreliable sources
Easier communication and collaboration	Cybercrime, scams and privacy risks
Improved record keeping and productivity	Distraction, excessive screen time and unequal access
New learning and work opportunities	Power, device cost and internet limitations

Responsible use includes strong passwords, careful sharing of personal details, checking information before forwarding it, respecting others online and balancing screen time with offline activities.

Class activity

In groups, choose one local example such as a school portal, mobile banking app or hospital registration system. Identify the device, software, data and network it uses. Explain two benefits and one challenge. Present your findings to the class.

Evaluation questions

- Define digital technology in your own words.
- What is digital data? Name two forms of information that can be digitised.
- List four areas within the scope of digital technology.
- Give one example each of digital technology in education, business and health.
- State three benefits and three challenges of digital technology.
- Why should you verify information before sharing it online?