Grade 4.

Science and Technology.

3. Digital Technology.

A digital device refers to an electronic device that processes and stores digital information. They include phones, televisions, computers and smart watches.

3.1 Parts of a Digital Device.

These components work together to enable proper functioning of digital devices. Each component plays a specific role in processing, storing, inputting, outputting, and powering the device to perform various tasks.

- Central Processing Unit (CPU): Also known as the processor, the CPU is the brain of the device. It performs calculations, executes instructions, and manages data processing tasks.
- Operating System (OS): The operating system is the software that manages and controls the overall operation of the device. It provides a user interface, manages hardware resources, and runs applications.
- Memory: Digital devices have two main types of memory. The Random Access Memory (RAM) provides temporary storage for data and instructions that the CPU needs to access quickly. The Read-Only Memory (ROM) contains permanent instructions and data that are preloaded during manufacturing and remain even when the device is powered off.
- Storage: Digital devices have different types of storage for long-term data retention. Hard Disk Drives (HDD) and Solid-State Drives (SSD) are common storage options. HDDs use spinning disks to store data magnetically, while SSDs use flash memory chips for faster data access.
- Input Devices: These allow users to provide input to the device. Examples include keyboards, mice, touchscreens, cameras, microphones, and sensors.
- Output Devices: These display or present information to the user. Common output devices include monitors, screens, speakers, printers, and headphones
- Motherboard: The motherboard is the main circuit board that connects and provides communication between various components of the digital device. It houses the CPU, memory, storage, and other essential components.
- Power Supply: Digital devices require a power supply unit (PSU) to provide the necessary electrical power for their operation.
- Connectivity: Devices often include built-in connectivity options such as Wi-Fi, Bluetooth, Ethernet, and USB ports to enable communication with other devices and networks.

3.1.2 Coding.

Coding, also known as programming, is the process of creating instructions for a computer or digital device to follow. It involves writing and structuring lines of code using specific programming languages to develop software, applications, websites, and other digital solutions.