

## ICT Computing Lesson 1: Introduction to Computers



# Objectives: Lesson 1

- 1.1.1: Define “computer,” and explain why it is important to have a basic understanding of how computers work.
- 1.1.2: Describe the four functions of the computing cycle (i.e., input, processing, output, storage).
- 1.1.3: Describe how people use computers at home, school and work.
- 1.1.4: Identify the main types of computers, including supercomputer, mainframe, microcomputer, notebook, tablet, handheld.
- 1.1.5: Describe the four parts of a computer system (i.e., hardware, software, data, user).

# Computer

- A programmable electronic device
- designed to accept **data**,
- perform prescribed mathematical and logical operations
- at high speed
- and display the results of these operations.

[Dictionary.com](https://www.dictionary.com) (2016)

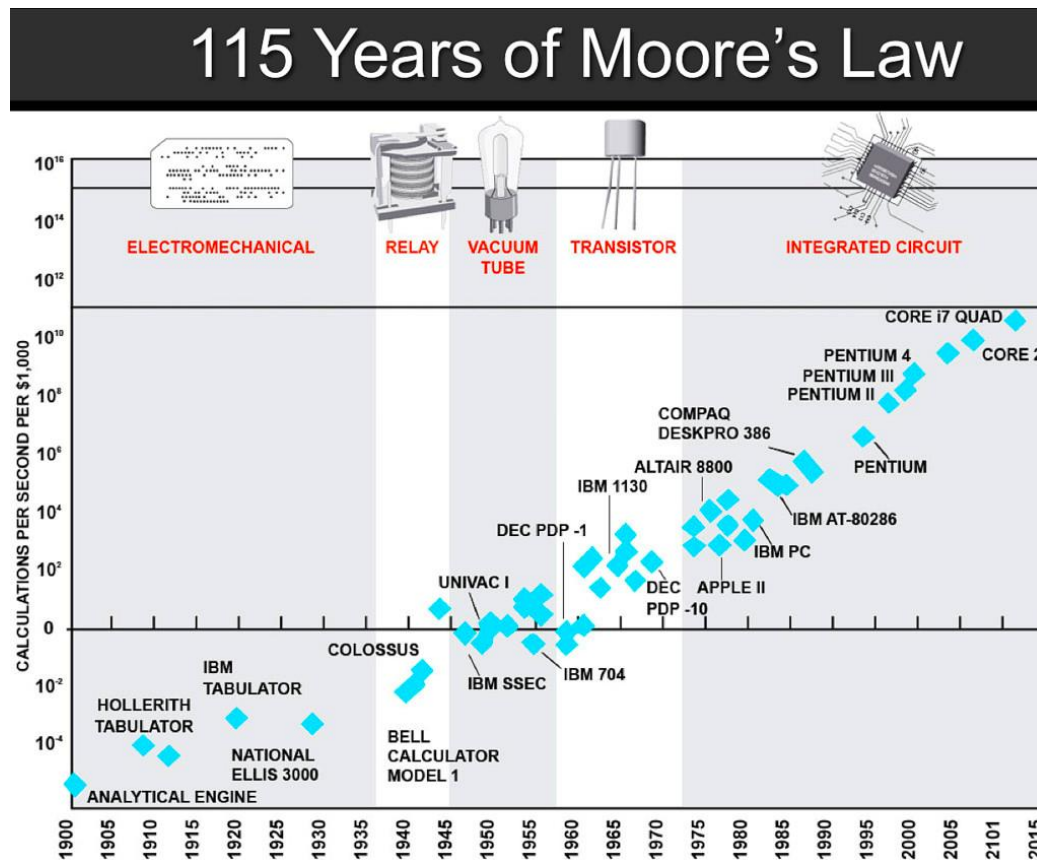
# History

- Designed for math
- ENIAC 1941
- 1960's – large computers for government agencies
- 1968 – Apollo Guidance Computer
- 1970's - Microcomputers



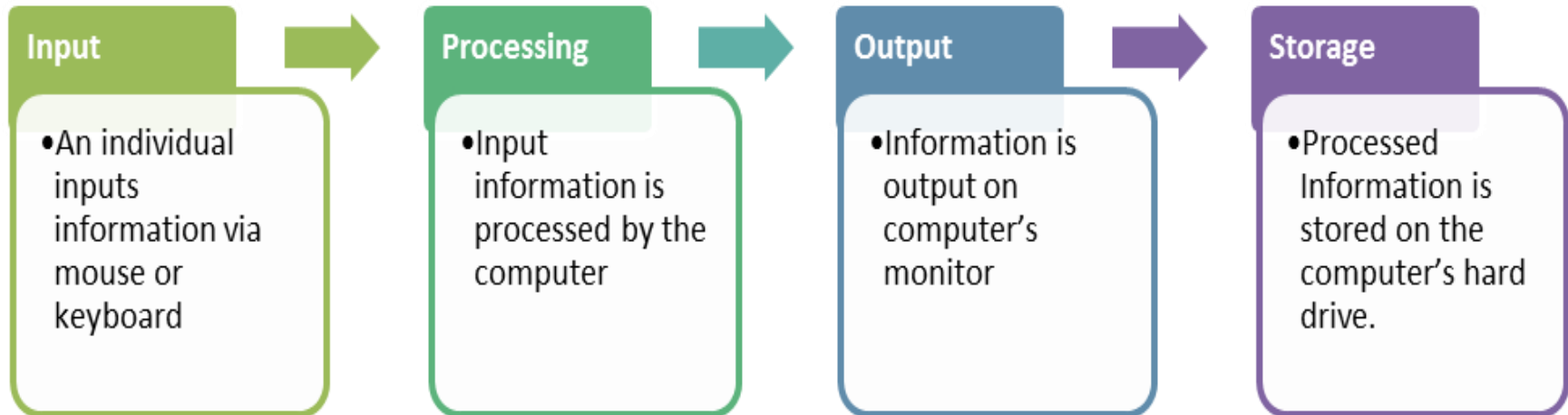
# Moore's Law

Computing power per square inch of circuit board will double every year





# Computing Cycle



# Computers at Home

- streaming TV shows, movies, and music
- shopping
- social networking
- remote jobs
- online schools
- e-mail
- surfing the internet



# Computers at School

- Research
- Classwork
- Testing
- Online education





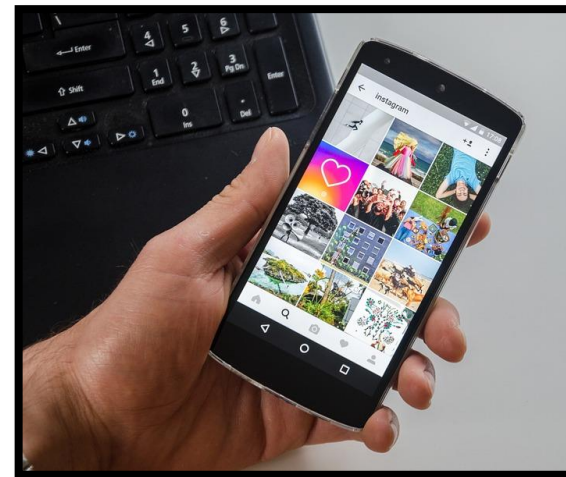
# Computers at Work

- Accounting
- Managing Inventory
- Contact Management
- Graphic Design
- Sales Presentations



# Types of Computers

- Mainframes
- Desktop
- laptop
- tablets
- and smartphones



# Types of Computers: Supercomputers

- *A computer or series of computers designed to process data at extremely fast speeds*
- Typically larger than desktop computers and require more power
- Generally, only the government and large corporations use supercomputers because they are very expensive to build and maintain
- Work on problems requiring more calculation speed (such as beating grand masters at chess).

TechTerms.com





# Types of Computers: Mainframes

- A very powerful computer made to execute many programs simultaneously at a high speed.
- Scientists, governments and large businesses generally use mainframe computers.
- Mainframes provide reliability for tasks requiring large amounts of input/output (such as processing credit card transactions).

TechTerms.com



# Types of Computers: Microcomputers

- Also called personal computers (PCs) or desktop computers.
- Generally consists of a keyboard, mouse, monitor and system unit.
- Commonly used for playing video games, streaming movies or television shows, banking, browsing the Internet, writing reports and letters, and creating spreadsheets and presentations.

TechTerms.com





# Types of Computers: Notebook Computers

- Similar to desktop computers but are often smaller, less expensive and more portable.
- Generally smaller than a briefcase.
- They can use battery or AC power.

TechTerms.com



# Types of Computers: Tablets

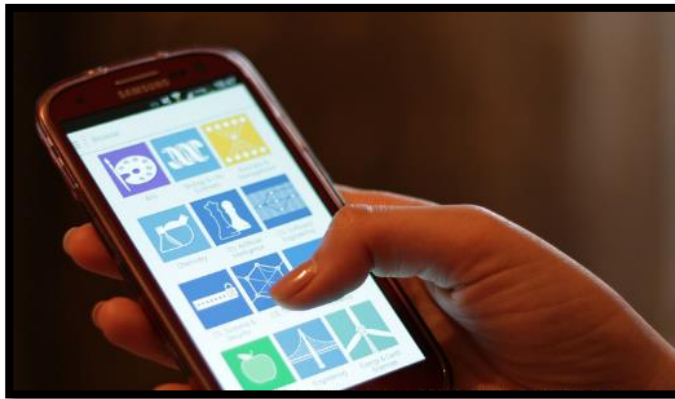
- Generally smaller, lighter, more affordable and easier to use than a notebook computer.
- Most tablets include a touchscreen, microphone, camera and speakers, all built into the same unit.

TechTerms.com



# Types of Computers: Handheld

- Small enough to fit in one's hand or a pocket.
- Most include mobile telephone capability (smartphones), although some do not (for example, iPods).
- Similar to tablet computers, with the exception of size.
- Typically used as personal information managers (PIMs) to maintain schedules, store address books, perform calculations and take notes.
- With an Internet connection, they can be used to exchange e-mail and get information from the Web.



TechTerms.com

# Computer Systems

