



Memory, Disk and Drive

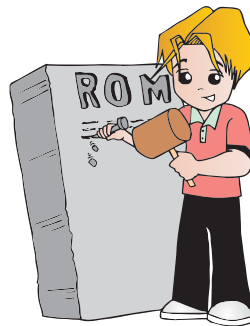
Lesson 3

Memory is a place in the computer where information is stored. Memory is made up of chips. Every computer has two kinds of memory: Read-Only Memory (ROM) and Random-Access Memory (RAM).

ROM

Read-Only Memory (ROM) holds and stores programs, which tell the computer how to work. When the computer is first turned on, and it is starting up (or “booting up” in computer jargon), instructions from ROM tell the CPU how to get going.

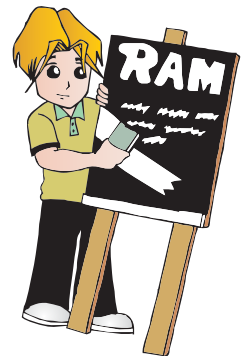
As the name suggests, programs in ROM can only be read. The instructions cannot be changed, and they won't be wiped out when the computer is turned off.



RAM

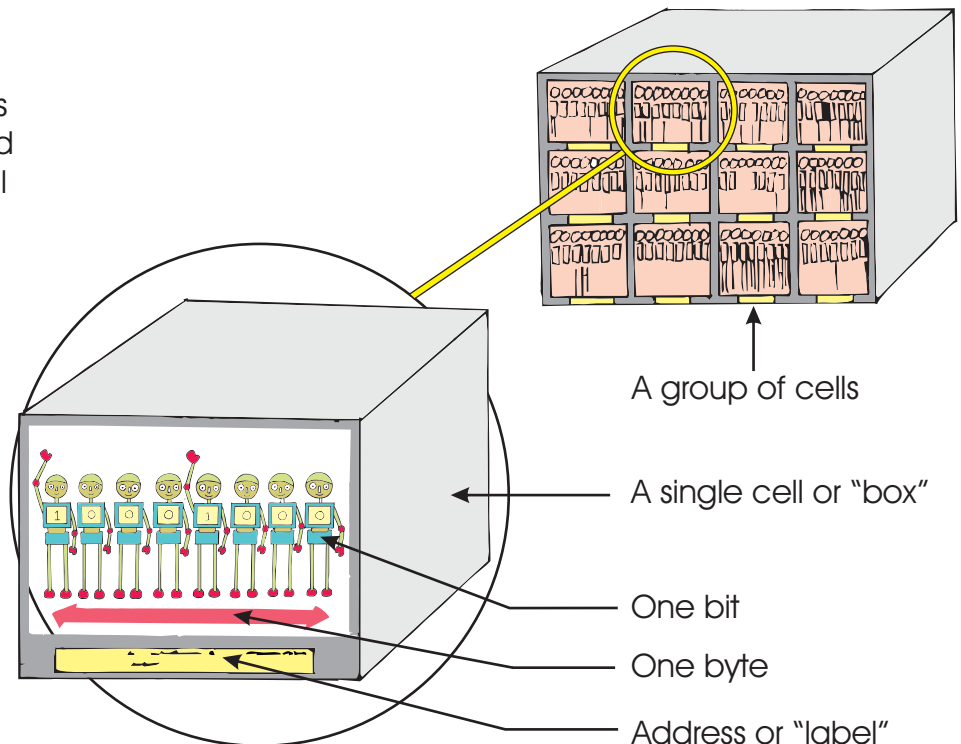
Random-Access Memory (RAM) stores data and instructions while the computer is turned on. It is called Random-Access Memory because the computer can pick out or access any piece of information from any point.

RAM is a temporary memory only. When the computer is switched off, all the data stored in it are lost. To keep the information in RAM when your computer is turned off, you need to save it on a disk.



Memory cells

Memory is divided into units called cells, which can hold one byte of data. Each cell has an address, so CPU knows where a piece of datum is stored. It helps memory to think as a series of boxes. Each box is a cell, and each has its address.



Kinds of Disk

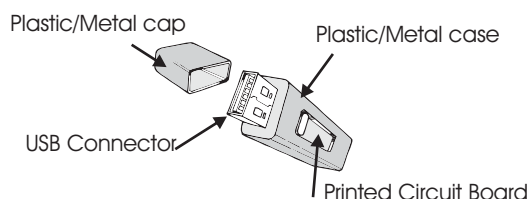
DVD (Optical Disc)

DVD (Digital Video Disc) is an optical disc storage media format, invented and developed by Philips, Sony, Toshiba, and Time Warner in 1995. DVD discs offer higher storage capacity than Compact Discs (CD) while having the same dimensions. The pre recorded DVD discs are mass-produced using molding machines that physically stamp data onto the DVD. Such discs are known as DVD-ROM, because data can only be read and not written nor erased. Blank recordable DVD discs (DVD-R and DVD+R) can be recorded once using a DVD recorder and then function as a DVD ROM. Rewritable DVD discs (DVD-RW, DVD+RW, and DVD-RAM) can be recorded and erased multiple times.

USB Flash Disk

USB Flash Disk. It consists of a flash memory data storage device integrated with a USB (Universal Serial Bus) interface. USB Flash Drives are typically removable and rewritable, and physically much smaller than a floppy disk. Storage capacities in 2018 can be as large as 2TB GB terabyte by Kingston company.

USB Flash Disk



iDrive Online Data Storage/Cloud Storage

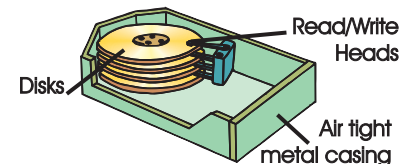
i-drive (name derived from Internet Drive) was an online data storage service that was founded in August 1998 by Jeff Bonforte and Tim Craycroft. The initial product offered a limited amount of free file storage space, and later enhanced the offering storing files such as MP3/MP4's-

media files, Word documents, spreadsheets, pdf files, photos collected on the Web without the need for the user to download them to their individual computer. The company began offering unlimited storage space. At its height, i-drive hosted over 1 billion registered users, employed many people, and held partnerships with big companies such as ZDnet.com, Amazon, and many big universities.



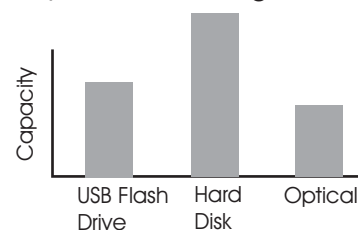
Hard Disk

Hard disk is made of glass or metal and lives permanently inside the computer. It does exactly the same as flash drive, except that it stores more data. Unlike flash drive, you can't lose your hard disks. As of 2018, the highest capacity of a hard disk is 4 TB (terabyte).



Capacity

The amount of data that can be stored in the memory or on a disk is called **capacity**. It is measured in megabytes (MB) (1,048,576 bytes) or gigabytes (GB) (1024MB) or Terabytes (TB). Disks with higher capacity are becoming more common nowadays.



Solid State Drive

A solid-state drive (SSD) is a nonvolatile storage device that stores persistent data on solid-state flash memory. It's performance is considered to be much faster than hard disk drives. In general, SSDs are more durable and much quieter than HDDs, with no moving parts to break or spin up or down.



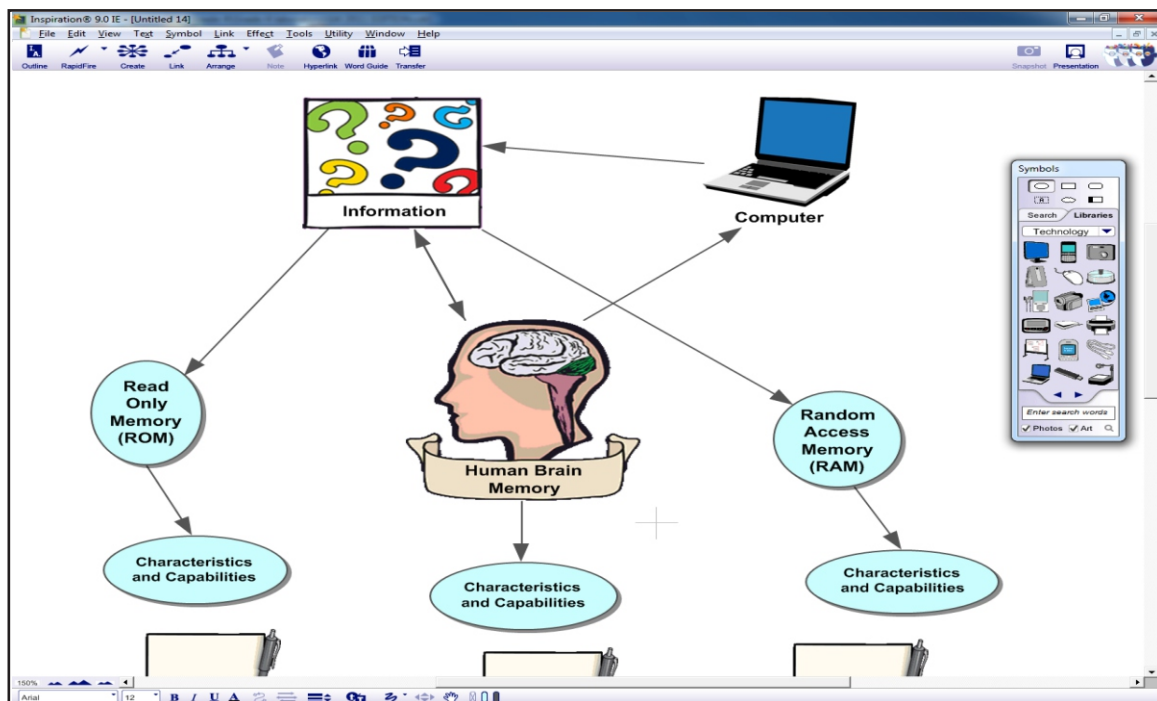
Activity 7

Directions:

1. Launch Inspiration.
2. Open and answer Lesson 3 Activity 7 **Memo Plus**.
3. Type the characteristics and capabilities of each type of memory.
4. Link the memories from characteristics and capabilities to the data using the Link tool.

Note: If you don't know the characteristics and capabilities of human brain, you can research it to Encarta Kids, Microsoft Student, or other medium to get information.

Preview:



5. Save the activity as **Memo Plus**.

Disks In Work

Memory, Disk and Drive

Lesson 3

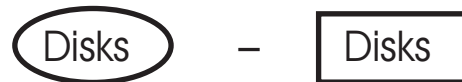
Score

Activity 8

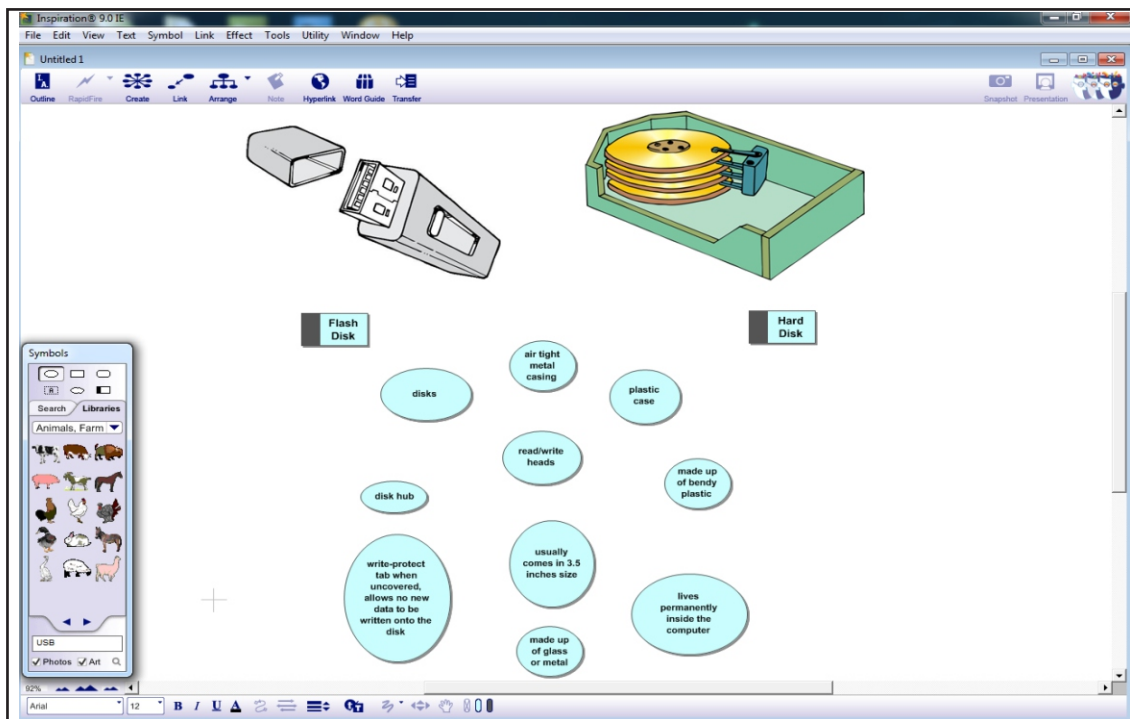
Directions:

1. Launch Inspiration.
2. Open and answer Lesson 3 Activity 8 **Disks in Work**.
3. Link the disks to their descriptions and parts. Replace the available symbols with Boxes-Frames symbols from the Symbols library.

Example of replacement:



Preview:



4. Save the activity as **Disks in Work**.

Memory Cells

Lesson 3

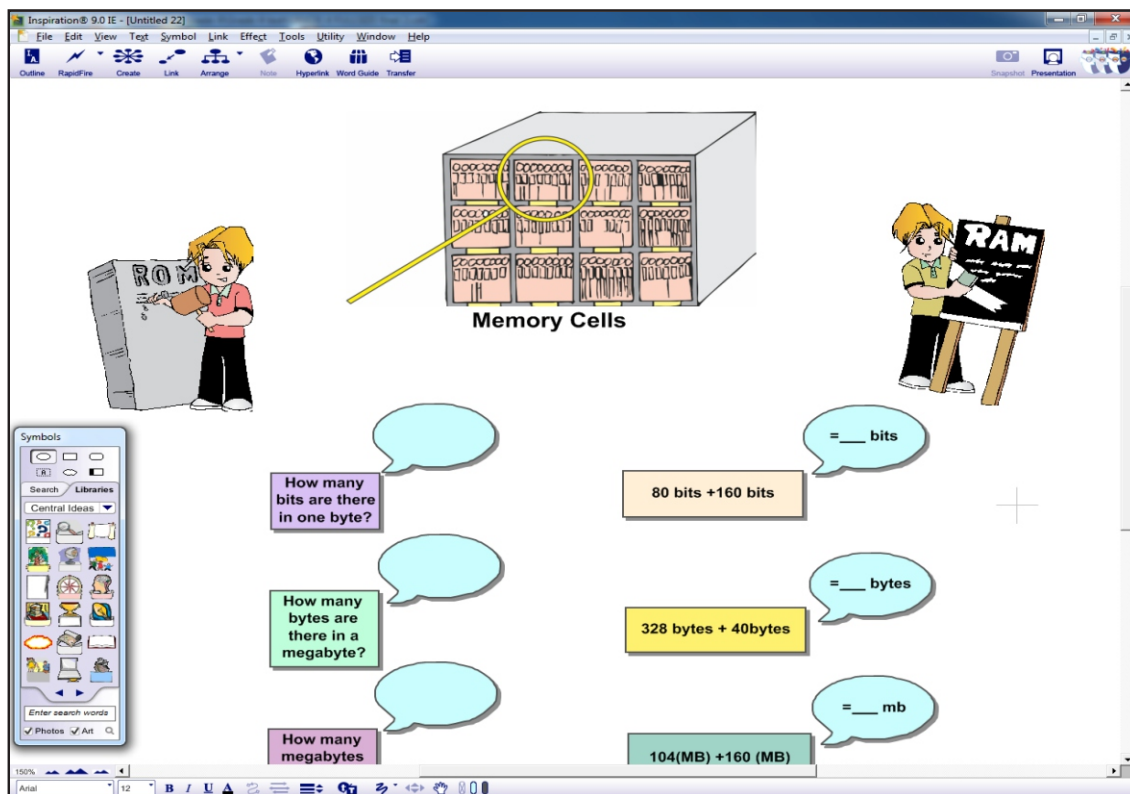
Score

Activity 9

Directions:

1. Launch Inspiration.
2. Open and answer Lesson 3 Activity 9 **Memory Cells**.
3. Provide what is asked and add the addition problems found.
4. Label the parts of the memory cells using the Text tool and the Link tool.

Preview:



5. Save the activity as **Memory Cells**.