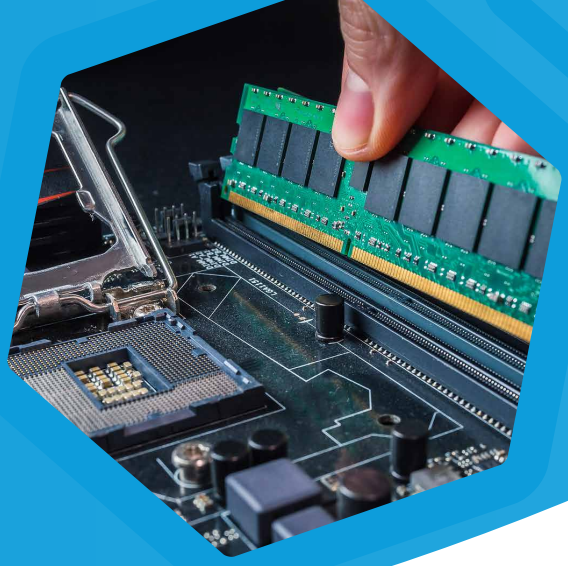

IT Fundamentals

Unit - Hardware

Lesson 3.2.1 - OS File Systems

IT Fundamentals Objectives (FC0-U61)
Objective 3.2 - Compare and contrast components of an operating system.

- File systems and features
  - File systems
  - NTFS
  - FAT32
  - HFS
  - Ext4

Grade Level(s)
8, 9

Cyber Connections

- **Hardware & Software**

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Teacher Notes:

OS File Systems

File Systems

An important component to every operating system is the file system (abbreviated fs) and how things are stored (and retrieved) on storage devices. Just like in the real world, if things are a mess, things don't run efficiently. Take a doctor's office for example, if the front desk staff did not sort the files by patient's names, they would have a hard time finding patient files. There are many different file systems and they usually are very specific to certain operating systems.

The most common file system for a Microsoft Windows operating system is the NTFS file system which stands for New Technology File System. The NTFS replaced the older FAT32, which stood for 32-bit File Allocation Table. FAT32 is not as efficient as NTFS and does not have as advanced attributes as the NTFS. Mac operating systems us the HFS, Hierarchical File System, but has now been passed up by the newer HFS+. Lastly, Linux operating systems use the EXT4 file system, which stands for Extended Filesystem Version 4.