**Floppy Drives**
- Older systems use an expansion card
  - Contained controller and connection port
  - Newer systems have the controller built into the motherboard
- Order of the floppy devices on the cable makes a difference
  - Pin 1 on cable should be marked in RED
  - Pin 1 on circuit board should also be marked
  - "Molex" style power connector

**ATA/PATA**
- Parallel ATA, PATA, or just ATA
  - Older technology Advanced Technology Attachment
  - Uses a 40, or more often 80, pin ribbon cable which you can attach one or two drives to
- Drives have jumpers or pins
  - Master
  - Slave
  - Cable Connect
  - Has a length limitation of 18"

**IDE and EIDE**
- Integrated Drive Electronics
  - Controller is on the hard drive
  - Most common type of controller
  - Older IDE controllers connect up to two IDE hard drives on a single 40 wire ribbon cable
  - Newer Extended IDE controllers can connect hard drives, floppy drives, IDE CD-ROM drives and tape drives
  - Still 40 pins, but faster 80 wire ribbon cables now

**SCSI**
- Small Computer System Interface
  - Fast and versatile connection with a variety of devices, both internal and external
  - CD-ROM drives, storage devices (JAZ), printers, scanners and hard drives
  - Most common in servers
  - SCSI interface can be built into the motherboard or on an expansion card
  - Basic connector is 50-pin
  - ANSI standard but multiple variations
  - Supports up to 16 devices from a single SCSI port
  - Last device must have a terminator

**SATA**
- Serial ATA
  - Newer technology, faster than IDE
  - Slower than SCSI, but less expensive
  - Much longer length capabilities than IDE
  - Hot Swappable
  - Thinner cable that only allows one drive per cable
  - No pinning necessary
  - Different power cable
    - not 4-pin molex

**ATA/PATA** and **IDE and EIDE** are older technologies, whereas **SCSI** and **SATA** are newer technologies. **SCSI** is faster and more versatile than **IDE and EIDE**, but newer technology provides more length capabilities and offers a thinner cable that only allows one drive per cable. **SATA** is the newest and fastest technology among these, offering hot swappable and different power cable options.