

Computer Parts - Internal

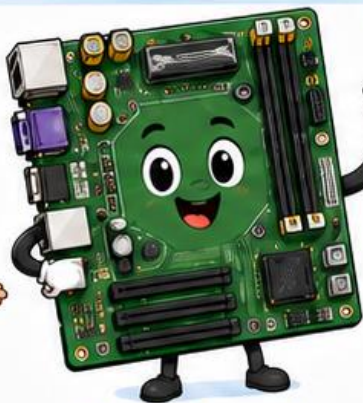
What's inside a computer?



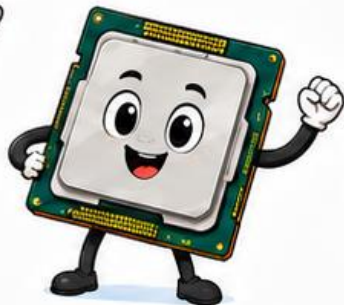
If we open a computer, what would we find inside?



Meet the Computer Team



Motherboard



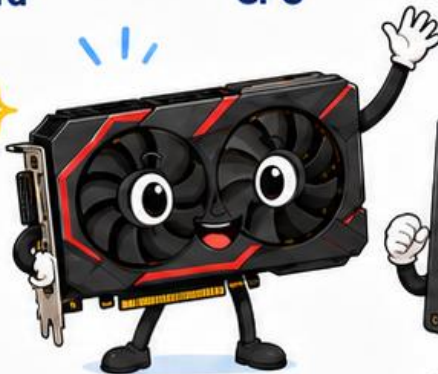
CPU



RAM



Storage



GPU



Power Supply



This is like looking inside the body of a computer.

All the parts work together to help your computer do amazing things!



CPU

The brain of the computer. Processes instructions and does calculations.



RAM

Temporary memory that stores data the computer is using right now.



MOTHERBOARD

The main circuit board that connects all parts and lets them communicate.



GPU (GRAPHICS CARD)

Creates images and video. Great for gaming, editing, and watching videos.



POWER SUPPLY

Provides power to all the parts so the computer can work.



BRAIN

Thinks, processes information and controls everything.



SHORT-TERM MEMORY

Holds information temporarily while you are using it.



NERVES (COMMUNICATION)

A network that connects everything and sends signals.



ENERGY (POWER)

Provides power to all parts so the body can work.



LONG-TERM MEMORY

Stores information for a long time, like memories.



Different parts,
same mission:



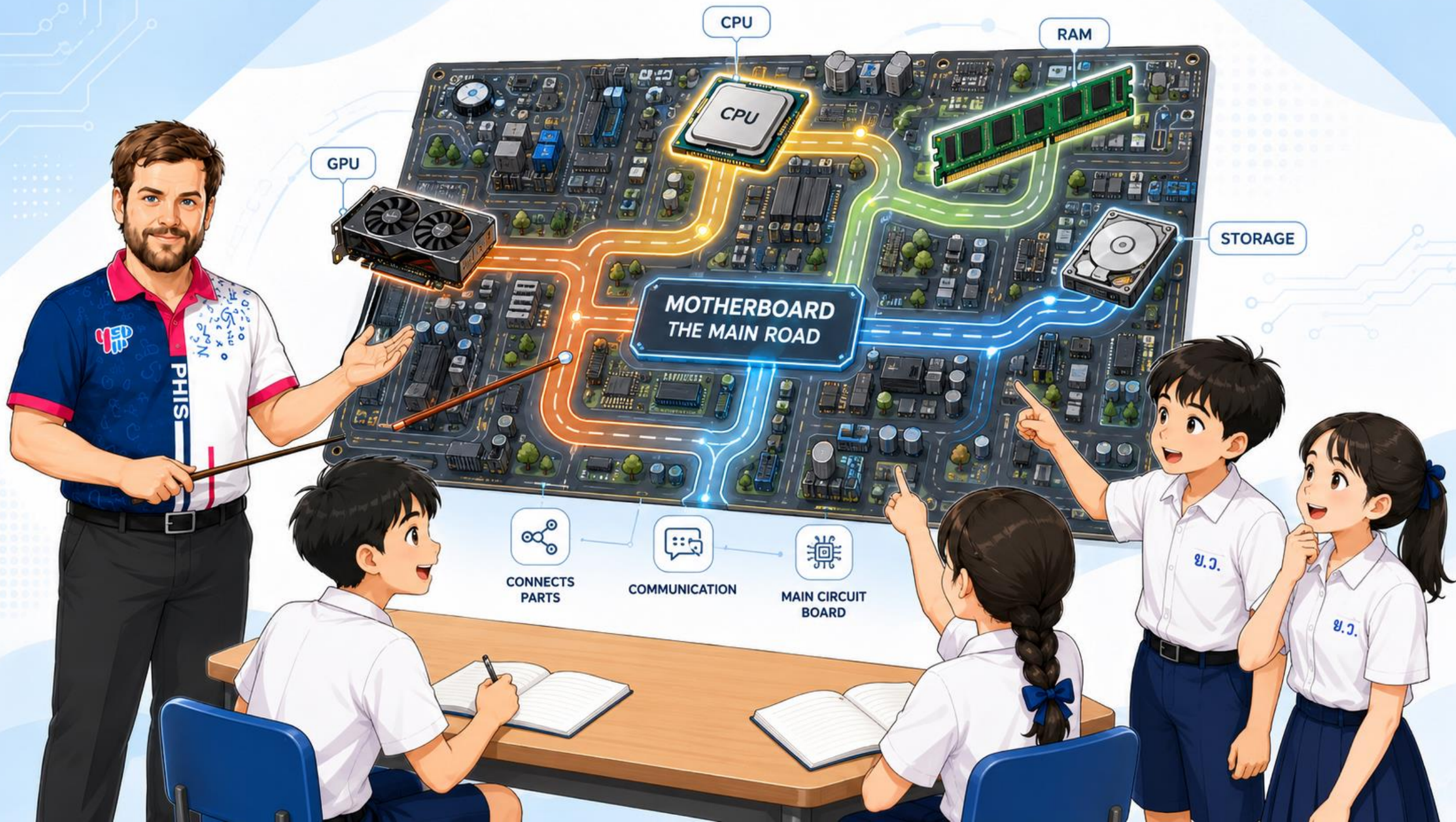
Work together



Communicate

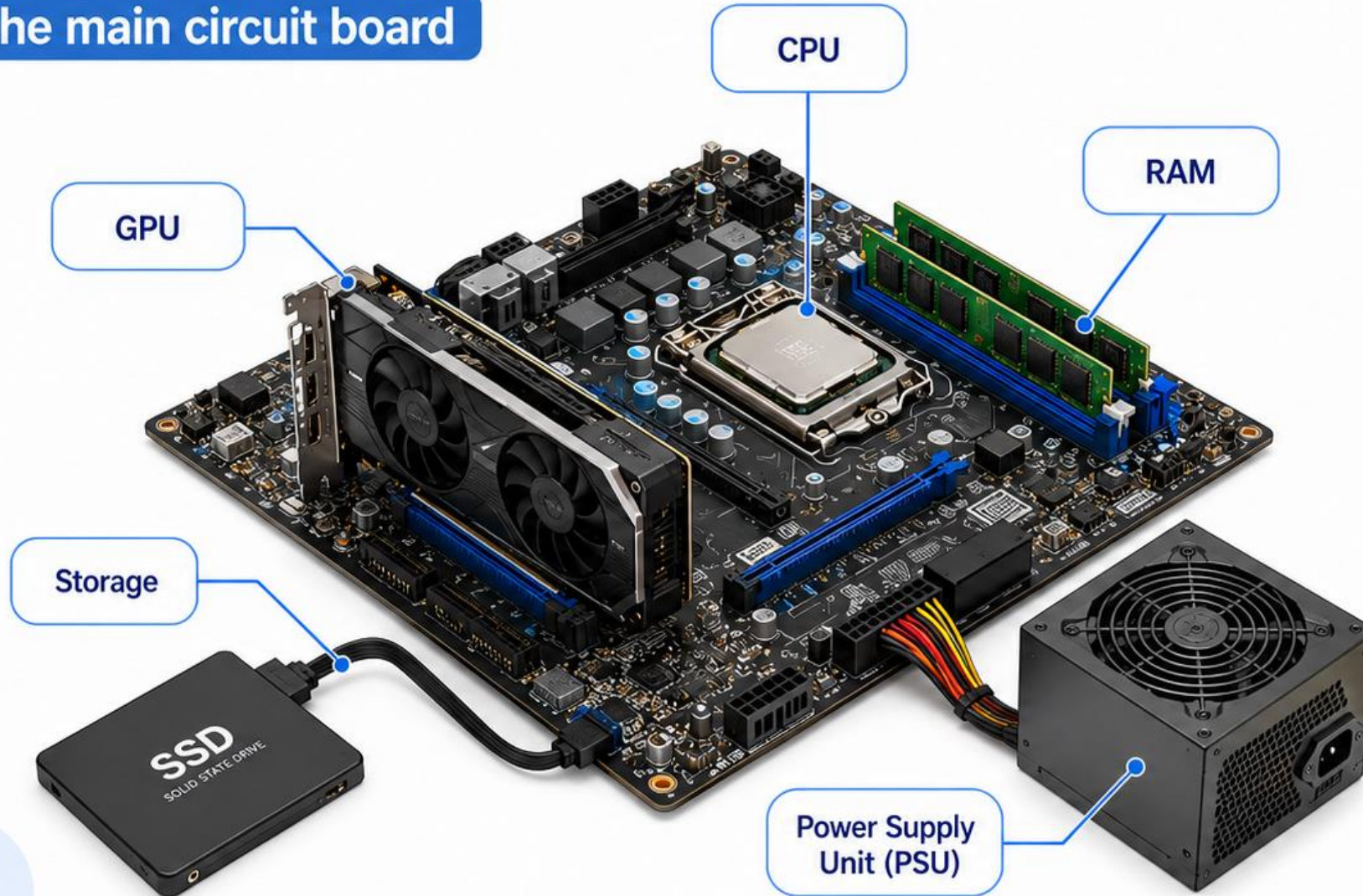


Make everything
happen



Motherboard

The main circuit board



Main circuit board



Connects
computer parts



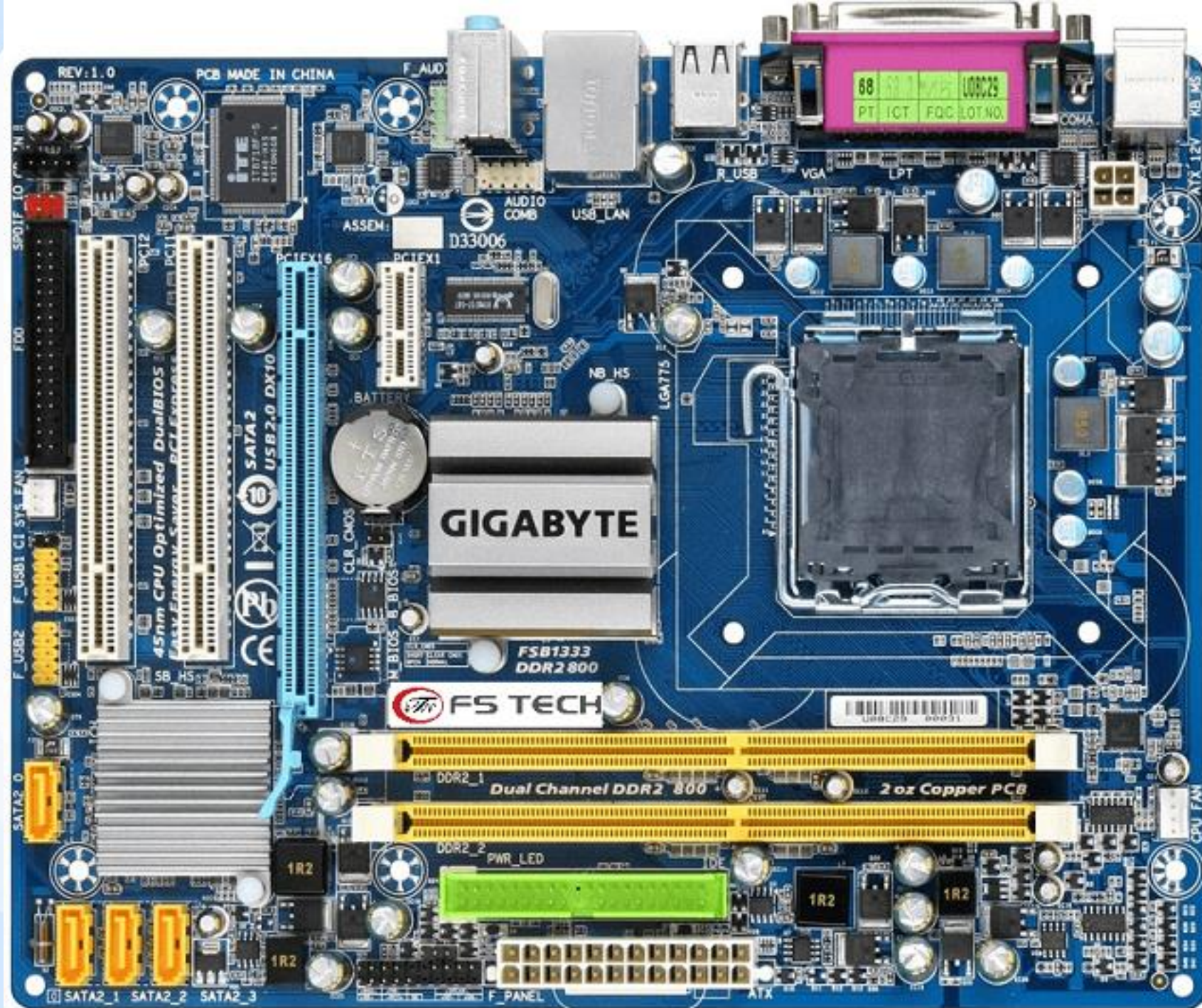
Lets parts
communicate

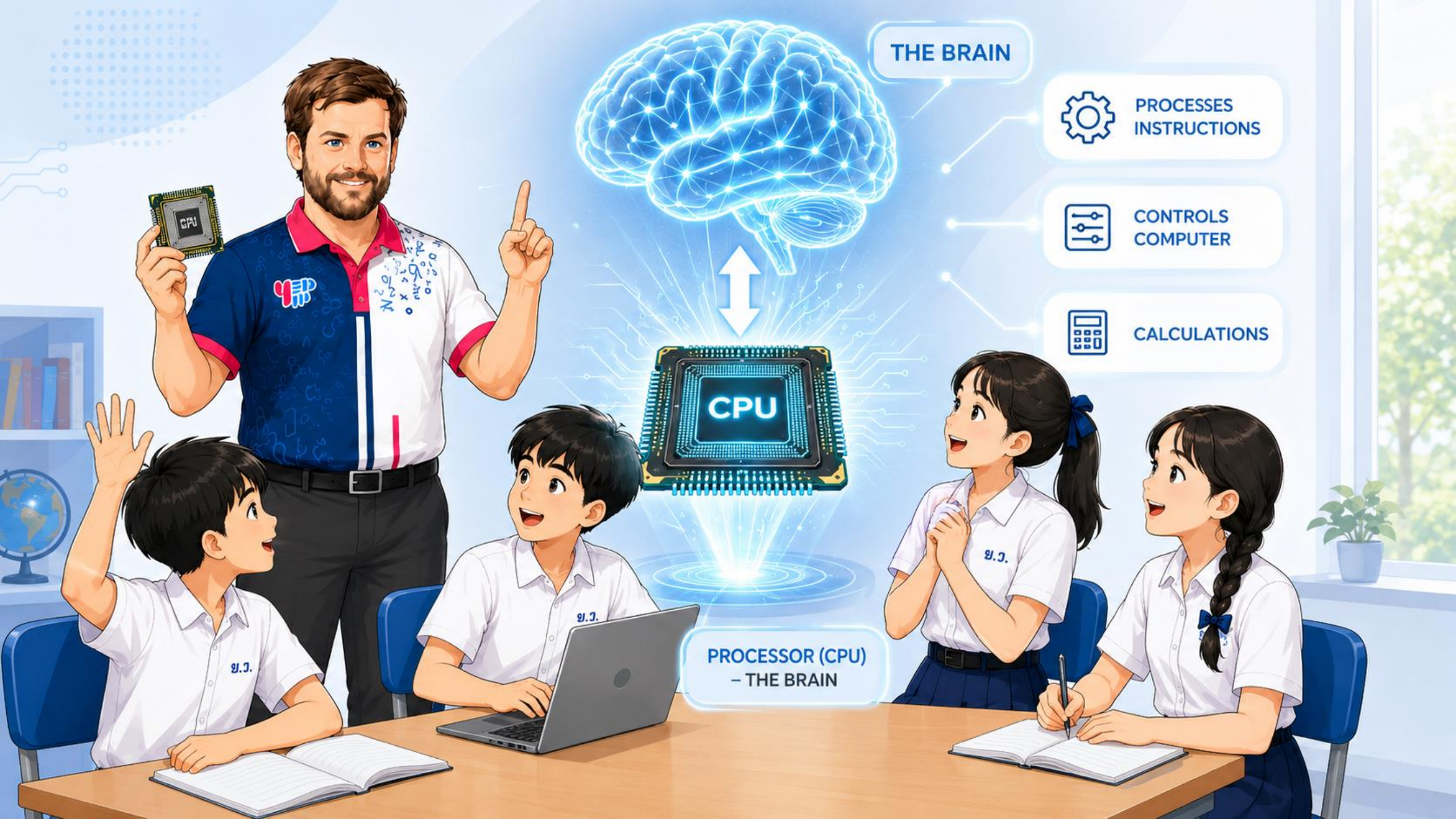


Moves data
and power



Think of the
motherboard as
the **main road
system** of the
computer.





THE BRAIN



PROCESSES
INSTRUCTIONS



CONTROLS
COMPUTER



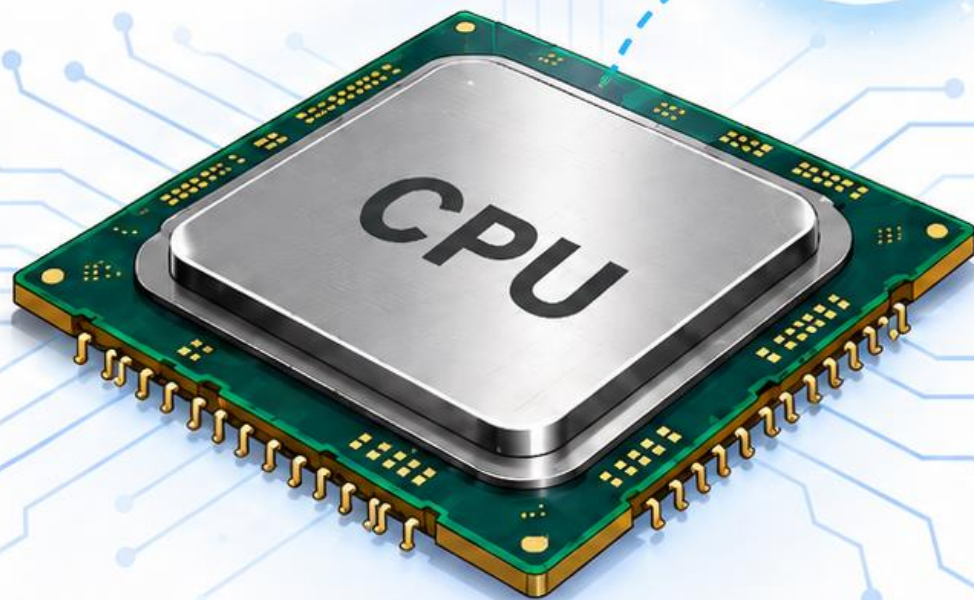
CALCULATIONS

CPU

PROCESSOR (CPU)
- THE BRAIN

CPU

The brain of the computer



CPU =
Central Processing Unit



Processes
instructions



Performs
calculations



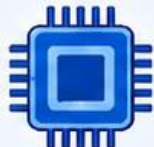
Controls what
the computer does



Think of the CPU as
the brain or manager
of the computer.



Click app



CPU
processes



Computer
responds

What is this?



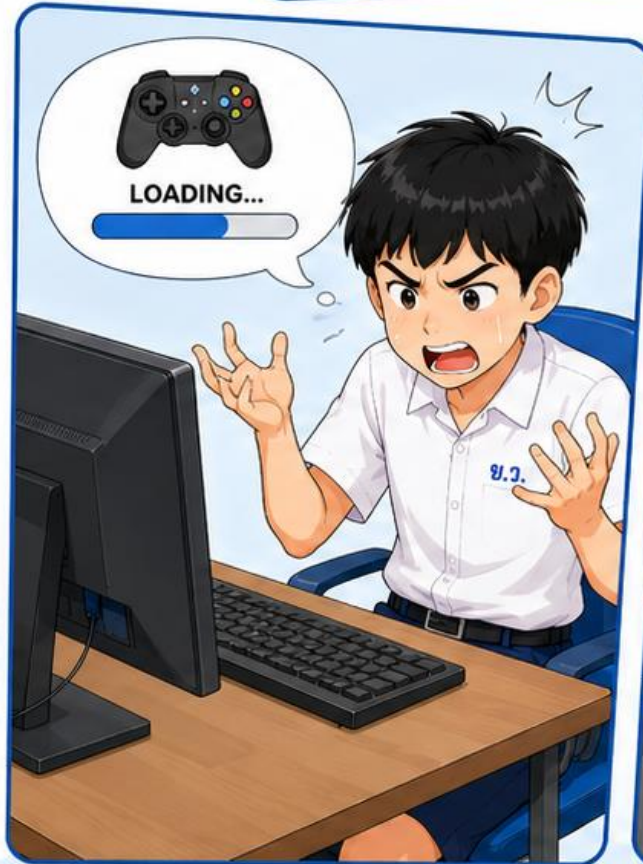
AMD



Intel



What happens if
the CPU is slow?



RAM

Short-Term Memory



RAM

Short-Term Memory

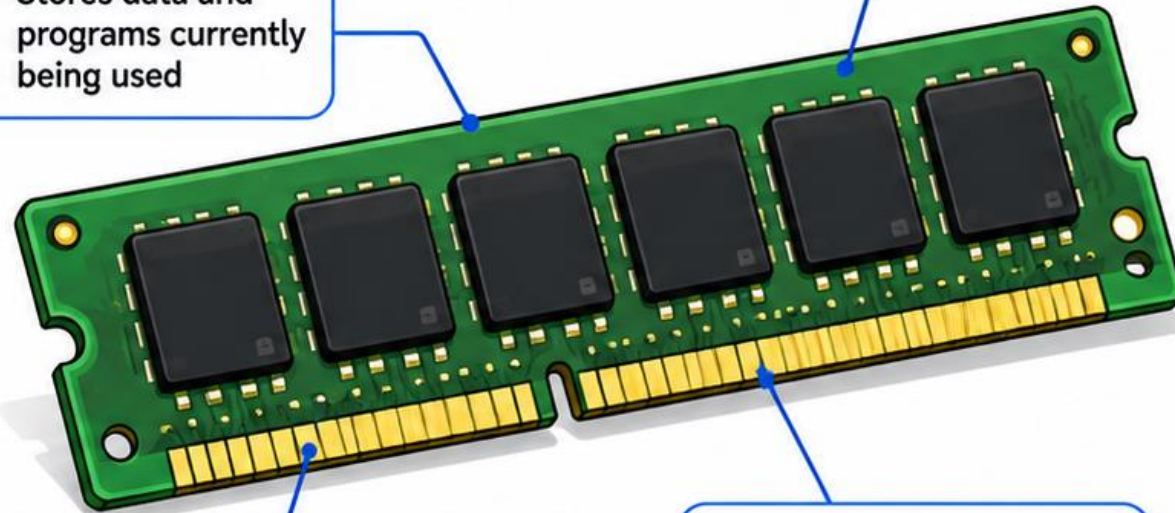
RAM = Random Access Memory



Stores data and programs currently being used



Fast read and write access



Temporary storage

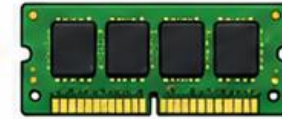


Volatile memory – data is lost when power is off

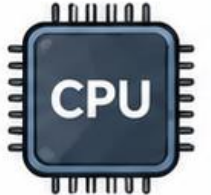
How RAM works



Apps / files in use



RAM



CPU

quick access

Volatile memory



Power ON
= data stays in RAM



Power OFF
= RAM is cleared



Storage

Saving user data



HDD

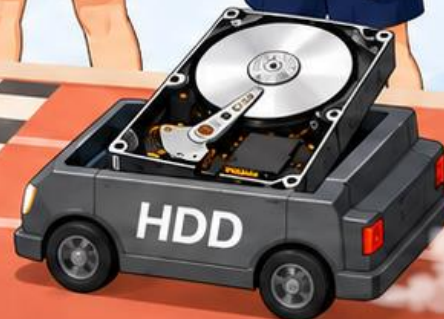


- Mechanical
- Slower
- Larger Capacity
- Lower Cost

SSD



- Flash Memory
- Faster
- Smaller
- Higher Cost



Your data stays safe even without power!



0 1 1 1 1
1 0 0 0 1
1 1 1 1 0



2.5 inch SATA SSD



mSATA SSD



Half mSATA SSD



SATA M.2 SSD



RAM



Temporary Working Area



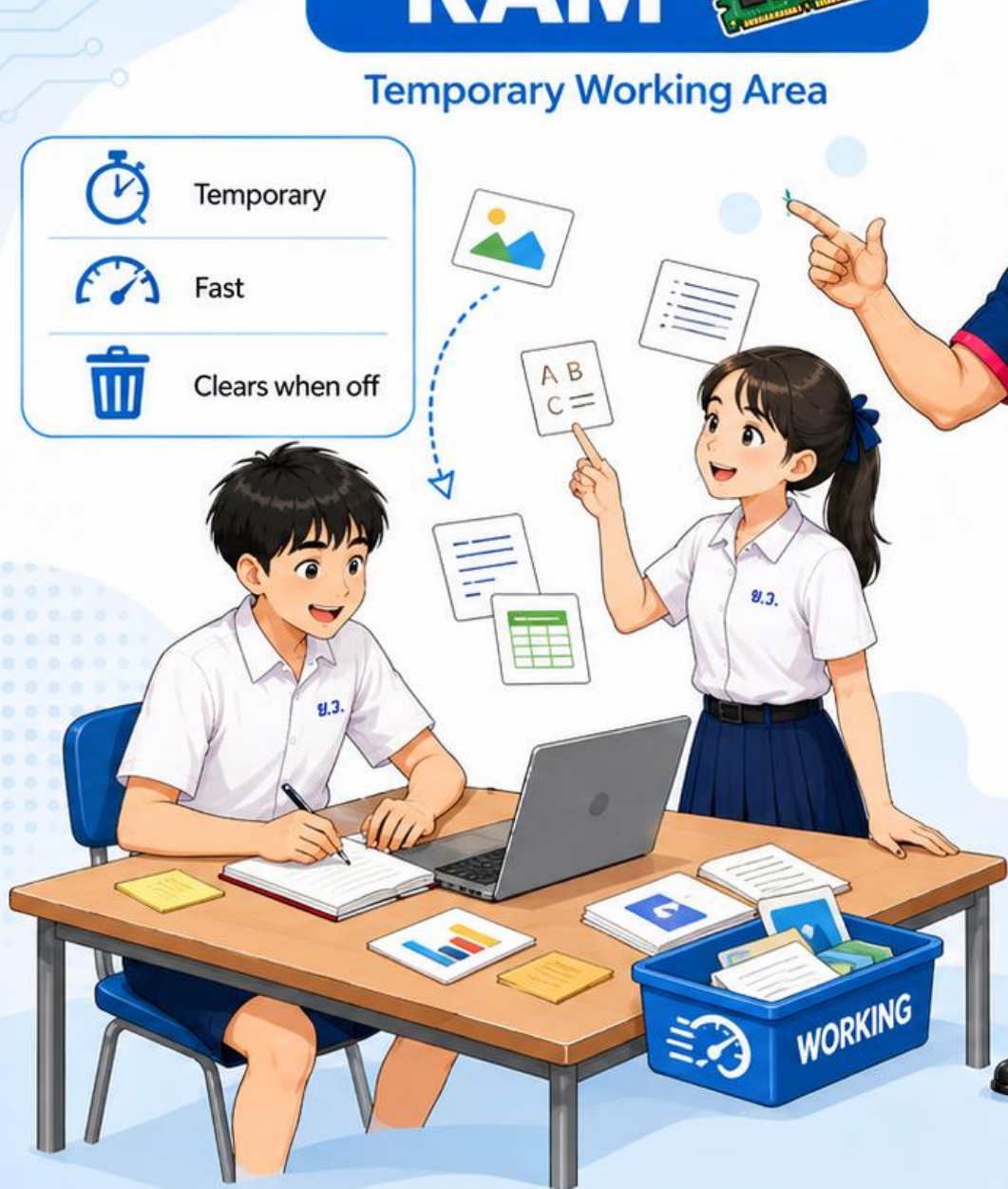
Temporary



Fast



Clears when off



STORAGE



Permanent File Library



Permanent



Slower



Keeps files



GPU

GRAPHICS POWER



GRAPHICS



GAMING



IMAGES AND VIDEO



LOW GRAPHICS



GPU

Graphics Processing Unit



GPU = Graphics Processing Unit



Processes images, videos, and graphics



Helps display visuals on the monitor



Used for gaming, videos, and graphic-intensive tasks



Works with the CPU for better visual performance



CPU / computer



GPU



Monitor

visual data



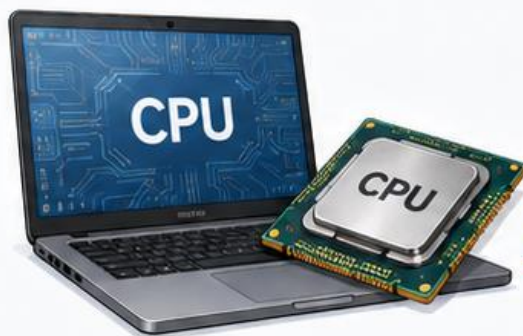
Think of the GPU as the **artist** of the computer.



Types of GPU

Integrated vs Dedicated

Integrated GPU



Built in



Uses less power



Good for basic graphics

Vs

Dedicated GPU



Separate card



More powerful



Better for games/design

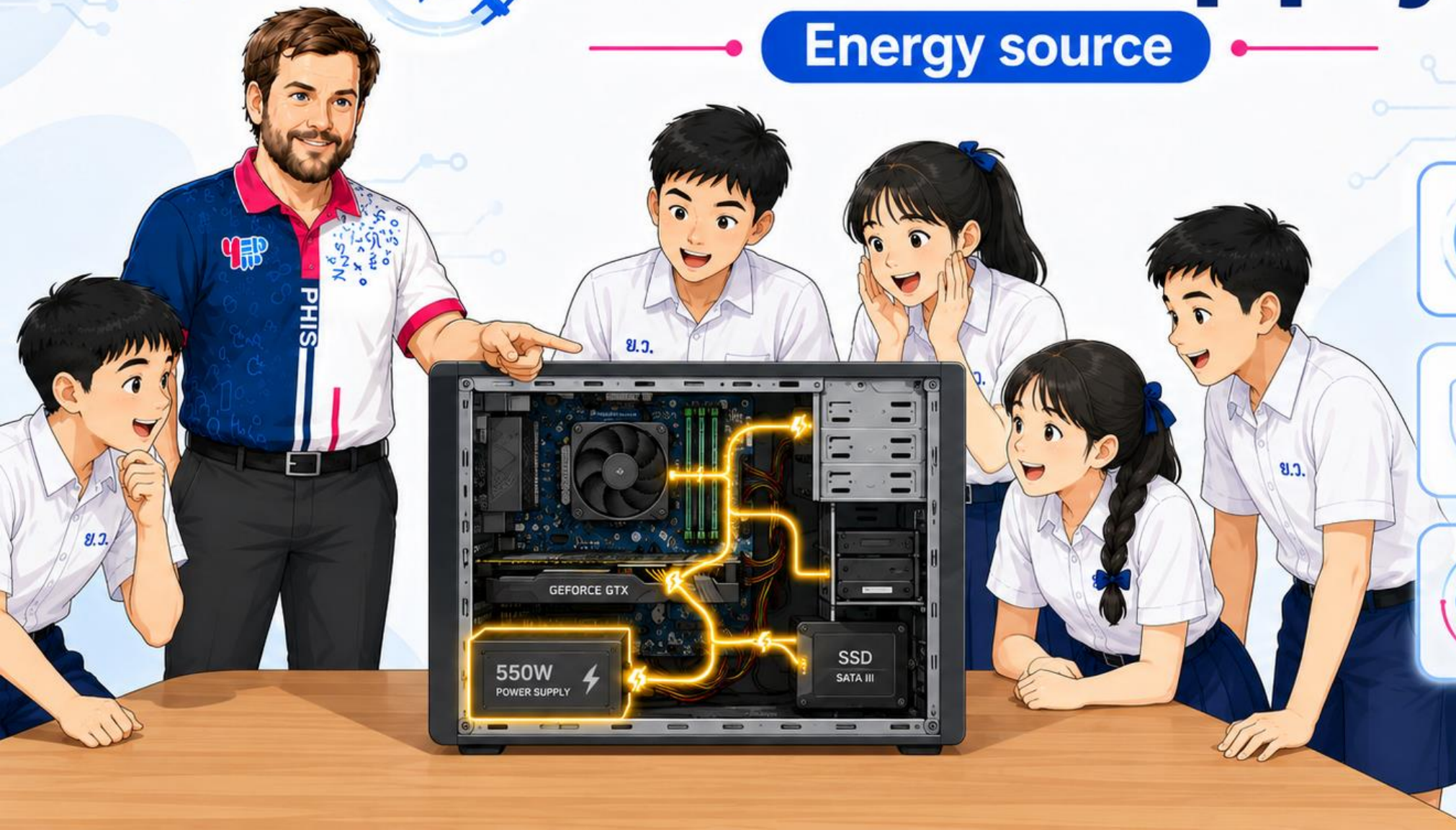






Power Supply

Energy source



Gives power
to parts



Converts
electricity safely



Computer cannot
turn on without it



Optical Drive

Reading discs with laser light



Reads
CDs/DVDs



Uses
laser light



Older storage
technology



Floppy Disk

Old storage device



Could a floppy disk store a huge modern game?



1.44 MB



Many GB



Floppy disks could hold documents and small files, but **NOT** huge modern games!



Which Parts Are Most Important?

Choose the best upgrade

Gamer

Play games smoothly



Recommended Upgrade

Student

Study, do assignments, and store files



Recommended Upgrade

Video Editor

Edit videos faster and smoother

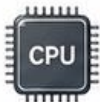


Recommended Upgrade



Different tasks need different upgrades.

Choose the right parts to get the best performance for what you do most!



CPU
Processes instructions



RAM
Temporary memory



GPU
Handles graphics



Storage (SSD)
Stores files and programs



What Part Am I?



Match the description to the correct computer part



Descriptions

1



I am called the brain of the computer.

2



I forget everything when the power turns off.

3



Without me, games may lag or look bad.

4



I become full after downloading too many games.

5



I am the giant road system inside the computer.

6



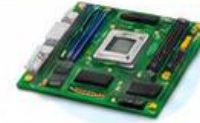
Without me, every other computer part becomes useless.



Parts



Power Supply



Motherboard



CPU



GPU



Storage



RAM

Guess the Computer Part

Use the emojis as clues



1



2



3



4



CPU

RAM

GPU

STORAGE

POWER
SUPPLY

CPU



The brain of the computer. Processes instructions.

RAM



Temporary memory that the computer uses while working.

GPU



Handles graphics and images. Great for gaming and visuals.

STORAGE



Stores your files, photos, videos, and programs.

POWER SUPPLY



Provides power to all parts of the computer.



Any questions?

Quick review



- 1 Which part is temporary memory?**
- 2 Which part creates graphics?**
- 3 Which part stores files permanently?**



The End

