Critical thinking in studying

* Nervous system : Control
  ↳ Needs information ⇒ Detected by sensory receptors
    ↳ From environment
      ↔
      External Internal

↳ Sensory function of nervous system
  ↳ Through PNS not CNS

⇒ Next, I want to process these information ⇒ Make decision
  ↳ Compare & contrast these information to previous information we have.

↳ Integrative function of nervous system
  ↳ Through CNS not PNS

* Nervous system
  ↙ ↘
  CNS PNS

* As we go up, more complicated processing occur.

* Decision will come out ← Depends on Previous information / Experiences #.
  ↓ ↘
  Discard information ⇒ 90% of information come to CNS will be discarded.
  ↓
  Store information

Motor
↙ ↘
Muscles Gland

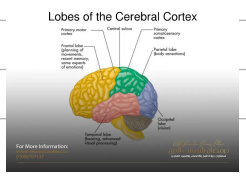
Divisions of nervous system

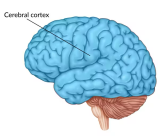
Central nervous system (CNS)	• Brain • Spinal cord	Integrative function
Peripheral nervous system (PNS)	• Somatic system (SNS) • Autonomic system (ANS) • Enteric system (ENS)	Sensory function

* Note : Spinal cord can make decisions
  ↳ why ?
    ↳ It's part of CNS

* Sensation :
  ↳ Awareness in the changes of Environment
    ↙ ↘ ↙ ↘
    Conscious Unconscious External Internal

* Perception
  ↳ Conscious awareness
  → Happens when Integrative function [Processing] occur in Cerebral cortex





Senses

- General
  - Visceral
  - Somatic
    - Mechanical
      - Tactile
        - Pressure
        - Touch
        - Vibration
        - Tickle
        - Itch
      - Position
        - static
        - Dynamic
    - Thermal
      - Warm
      - Cold
    - Pain
- Special

Position vs Equilibrium

- Sensory receptor
  - specialized structures in the body that can detect changes in the Environment
    - what are these structures
      - Sensory Neuron
      - cells that communicate with neurons
        - Epithelial cells
        - photoreceptors in Retina

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① Change in the Environment [stimulus] → Detected by sensory receptor [Energy]

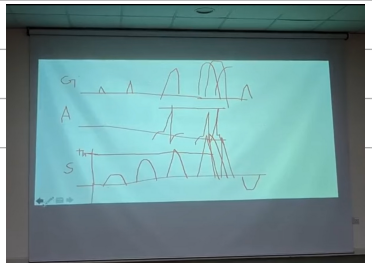
→ stimulating Sensory receptor

→ Transduction [Energy → graded/receptor potential]

→ Transmit this signal to CNS

- Action potential = nerve impulse

CNS



	Graded	vs	Action / Potential
Threshold	∿		∿
Distance	short		Long (propagation)
Duration	=		=
stimulus - Amplitude	↑ - ↑		↑ - same
" - Frequency	↑ - same		↑ - ↑
" - Summation	↑ - ↑		↑ - Absolute refractory period
			All or none

Characteristics of sensory receptors

① Sensory receptor is specific to certain stimulus

② Receptive field: Region that detect these changes

Discrimination Ability increases with decrease in Receptive field