

#31: Nervous System

- Controls all body activities

- Main Parts

 - Peripheral

 - nerves

 - CNS (central nervous sys)

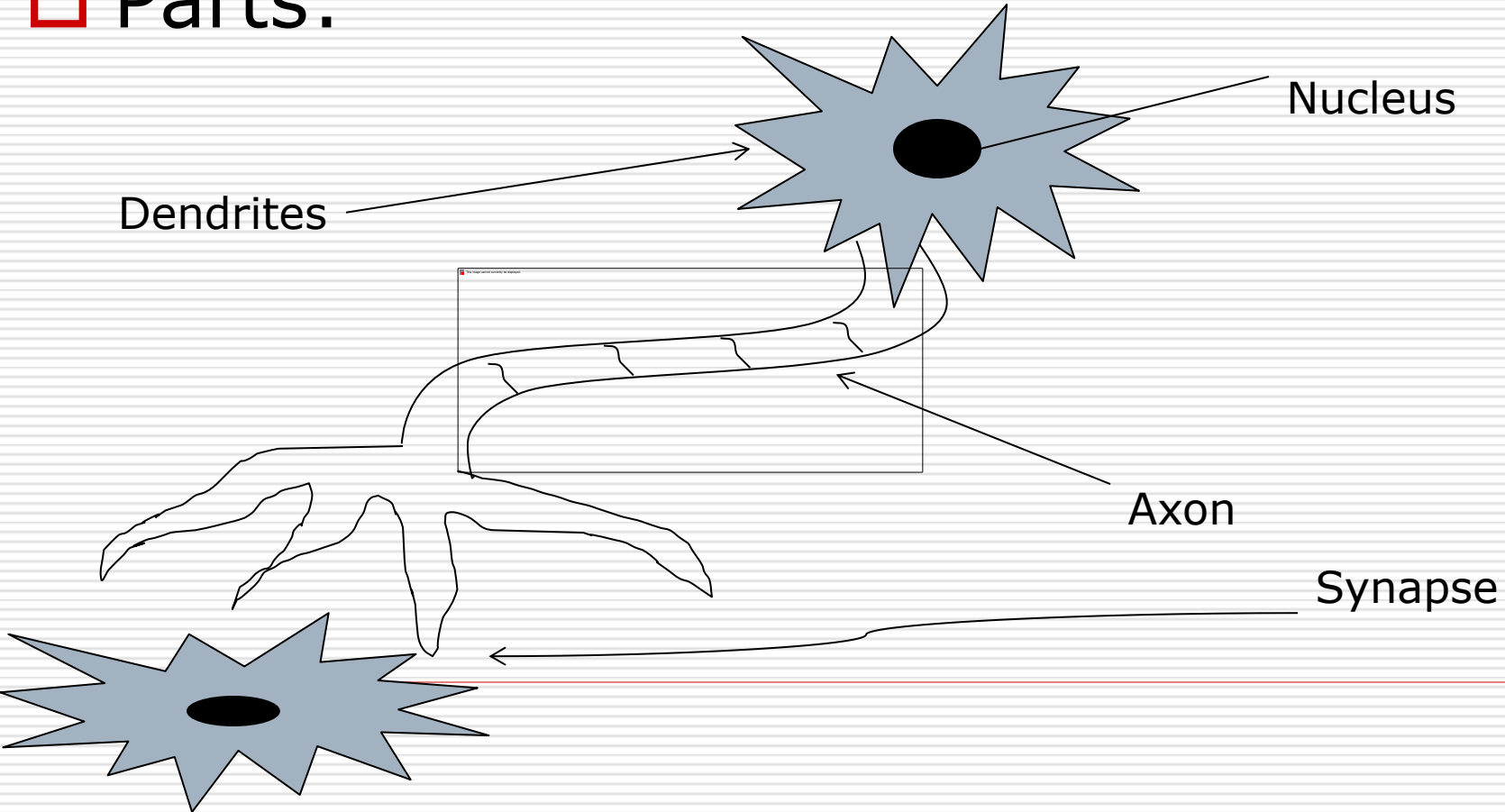
 - BRAIN

 - SPINAL CHORD

32: NEURON

❑ Nerve cell- carry message to and from brain

❑ Parts:



33: Stimuli / Response

- ❑ **Stimulus**- any environmental or external factor that causes a response from your Nervous System
 - EX: NOISES, CHANGE IN TEMP., LIGHT, TOUCH, SMELLS, ETC...
 - ❑ **Response**- when **RECEPTOR** cells or organs (skin, eyes, ears, nose, antennae) REACT to outside stimuli
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34: Types of NEURONS

- **SENSORY** (senses)

- Receptors to brain

- Eyes, ears, nose, tongue, skin

- **MOTOR**

- **BRAIN to EFFECTORS**= Central Nervous System (CNS) to muscles

35: Parts of Brain

☐ Cerebrum

- Voluntary action (picking up a pencil)
- Senses
- Memory

☐ Cerebellum

- Coordination / Motor skills (balance, walking, writing)

☐ Medulla (brain stem)

- Involuntary (breathing, heartbeat)
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36: Endocrine System

□ Helps body:

- coordinate life processes
- maintain **HOMEOSTASIS**
- Respond to environment

□ Made of:

- **Glands** – secretes hormones into plasma of blood
 - **Hormones** – chemical messengers that tell organs to exert their function
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37: Head and Neck Glands

- ❑ **Hypothalamus** Gland- brain region controlling pituitary gland
 - ❑ **Pituitary** Gland(master gland)- at the base of the brain, controls activities of many other glands, produces growth hormones
 - ❑ **Parathyroid** Gland- part of thyroid, controls calcium, produces parathyroid hormone
 - ❑ **Thyroid**- in the neck, produces thyroxin which controls metabolism
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38: Midsection Glands

- ❑ **Adrenal Glands:** located at the top of kidneys, produces **adrenalin**, speeds up heart rate and blood flow, sweaty palms
 - ❑ Helped ancestors hunt and run from danger, helps you score on the soccer field, etc...

 - ❑ **Pancreas:** Top stomach, produces **insulin**, lowers blood sugar
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39: Gonads

□ Reproductive (sex) Glands

■ **TESTES** / Males

- Location – scrotum
- Produces – **TESTOSTERONE** (male hormone) and Sperm (male reproductive cell)

■ **OVARIES** / Females

- Location – inside abdomen
 - Produces – **ESTROGEN** (female hormone) and Egg (female reproductive cell)
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