SBI4U HOMEOSTASIS Unit Checklist

Name: _____

loreescience

Mastery Checks may be attempted more than once and are not considered complete until **≥ 70%** is achieved.
Notes and activities will be checked for completion & corrections.

Topic	Objective(s)	Key Concepts	Approx. # classes	Notes	Mastery Check Inc. *# of attempts*
1	**Homeostasis & Thermoregulation:** *Describe the importance of mainlining homeostasis* *Explain the difference between positive and negative feedback loops*	- *What can be regulated & Why* - ***Feedback loops**: Advantages of +/-* - ***Thermoregulation**: Endo vs. Ectotherms*	4		
2	**Excretory System:** *Explain the anatomy and function of the excretory system* *Describe how the kidney maintains blood pressure, water & pH levels*	- ***Kidney** anatomy & function: Bowman's capsule, glomerulus, nephron, filtration, reabsorption, secretion* - ***Hormones**: ADH, blood pressure, pH balance*	4		
3	**Nervous System:** *Explain the anatomy and function of the nervous system including the central & peripheral systems, and nerve function* *Describe an action potential and how it works* *Explain the effects of various drugs on the nervous system*	- *Importance of nervous system: branches, functions* - ***Brain**: anatomy, compartmentalization, motor vs sensory areas* - ***Neurons**: structure, function, action potentials, neurotransmitters* - *Drug effects on system: painkillers, sedatives, hallucinogens, narcotics, over-the-counter medications*	7		
4	**Endocrine System:** *Explain how hormones help regulate various systems including blood sugar, metabolism, stress and reproductive* *Describe the different types of hormones and how they work*	- ***Main Endocrine Glands*** - ***Hormone Types**: steroid vs. protein, mechanisms* - ***Blood Sugar:** pancreas, insulin, glucagon, diabetes* - ***Metabolism:** Thyroid, parathyroid gland, growth hormone, iodine & T3/T4* - ***Stress:** adrenal glands, epinephrine & norepinephrine, mineralo- & gluco-corticoids, performance enhancers* - ***Reproductive:** male & female, FSH, LH, estrogen & progesterone, testosterone* - *Disorders & effects*	4		

Assessments & Labs

All **assessments & labs** must be completed in class and are due at the end of the in-class work period(s) unless otherwise indicated.

SUMMATIVE EVALUATIONS	DATE
Thermoregulation Case Study	Thursday Dec. 14
Quiz	Thursday Dec. 21
Dr. Is In Assignment	TBA
Unit Test	Monday Dec. 22

Homeostasis Terms to Know

- Absolute Refractory Period
- ACTH
- Action Potential
- Adrenal Cortex
- Adrenal Medulla
- Afferent
- Afferent
- Aldosterone
- Ammonia
- Anterior Pituitary
- Antidiuretic Hormone
- Autoreceptor
- Axon
- Axon Terminal
- Bicarbonate
- Bladder
- Bowman's Capsule
- Buffer System
- Calcitonin
- Calcium Channel
- cAMP
- Cerebellum
- Collecting Ducts
- Control Center
- Cortisol
- Dendrite
- Depolarizing Phase
- Distal Tubule
- Diurnal
- Dorsal Horn
- Dorsal Root
- Ectotherm
- Effector
- Efferent
- Endocrine
- Endocrine Gland
- Endotherm
- Epinephrine
- Equilibrium
- Excitatory NT
- Excretion
- Filtrate
- Filtration
- Frontal Lobe
- Glomerulus
- Glucagon
- Glucocorticoids
- Glycogen
- Grey Matter
- Growth Hormone
- Growth Hormone
- Homeostasis
- Hyperpolarization
- Hypothalamus
- Inhibitory NT
- Insulin
- Interstitial Cells
- Interstitial Fluid
- Involuntary
- Islets of Langerhans
- Juxtaglomerular apparatus
- Kidney
- Loop of Henle
- Medulla
- Meninges
- Meningitis
- Mineralcorticoids
- Motor Cortex
- Myelin
- Negative Feedback
- Nephron
- Nervous
- Neurilemma
- Neurotransmitter
- Node of Ranvier
- Non-Target Hormone
- Norepinephrine
- NT Re-Uptake Pump
- Occipital Lobe
- Osmoreceptors
- Osmotic
- Osmotic Gradient
- Oxytocin
- Parathyroid
- Parietal Lobe
- Positive Feedback
- Posterior Pituitary
- Postsynaptic Neuron
- Potassium Pump
- Presynaptic Neuron
- Prolactin
- Protein Hormone
- Proximal Tubule
- Reabsorption
- Receptor
- Regulator
- Relative Refractory Period
- Repolarizing Phase
- Resting Membrane Potential
- Saltatory Conduction
- Schwann Cell
- Secondary Messenger
- Secretion
- Sensory Cortex
- Sodium Pump
- Spatial Summation
- Spinal Ganglion
- Steroid Hormone
- Stimulus
- *Summation*
- Synapse
- Synaptic Cleft
- Synaptic Vesicle
- Target Hormone
- Temporal Lobe
- Temporal Summation
- Threshold
- Thyroid
- Thyroxine (T4)
- Triiodothyronine (T3)
- Type I Diabetes
- Type II Diabetes
- Urea
- Ureter
- Urethra
- Uric Acid
- Ventral Horn
- Ventral Root
- White Matter
- α-cells
- β-cells

Mastery Checks:

- Must be written during class or after school during **supervised** extra help times.
- Up to 3 attempts are permitted during class time. If more attempts are required they must be completed after school.
- Mastery or a minimum of 3 attempts must be completed to consider a topic complete
- Keep track of the number of attempts on the unit checklist
- Must be attempted as you progress through the topics – you **cannot** let them accumulate until the end of the unit