**AP BIOLOGY 2019-20 March 4, 2020**

**Today’s Agenda (Day 119)**

1. HOUSEKEEPING:

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1. Homework Check:

🡪 Chapter 27 Notes

🡪 **Coral Reef Campaign:** Phase III

1. Class Activity:

**🡪** **QUIZ: Chapter 26 & 27 Vocabulary**

HOMEWORK:

* Read Unit 7: Animal Form & Function – Chapters 40, 43, 45, 49-50
* Read Unit 8: Ecology – Chapters 52 – 56
* Complete Chapter 40, 43, 45 Vocabulary
* Continue working on **Coral Reef Campaign:** Phase IV

Chapter 40 – Basic Principles of Animal Form and Function

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Acclimatization | Adipose tissue | Anatomy | Basal metabolic rate | Bioenergetics | Blood | Bone |
| Cardiac muscle | Cardiac muscle | Cartilage  | Circadian rhythm | Conduction | Conformer | Convection |
| Countercurrent exchange | Ectothermic | Endocrine system | Endothermic | Fibroblasts | Fusiform | Glial cells |
| Hibernation | Homeostasis | Homeotherm | Hormones | hypothalamus | Integumentary system | Interstitial fluid |
| Ligaments | Macrophages | Metabolic rate | Muscle tissue | Negative feedback | Nervous system | Nervous tissue |
| Neurons | Organ system | Organs | Physiology | Poikilotherm | Positive feedback | Regulator |
| Response | Sensor  | Set point | Skeletal muscle | Smooth muscle | Standard metabolic rate | Stimulus |
| Tendons | Thermogenesis | Thermoregulation | Tissues | Torpor | Vasoconstriction | vasodilation |

Chapter 43 – The Immune System

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| --- | --- | --- | --- | --- | --- | --- |
| Acquired immunodeficiency syndrome | Active immunity | Adaptive immunity | Allergens | Anaphylactic shock | Antibody | Antigen |
| Antigen presentation | Antigen receptor | Antigenic variation | Antigen-presenting cell | Autoimmune disease | B cells | Cell-mediated immune response |
| Clonal selection | Complement system  | Cytokines | Cytotoxic T cells | Dendritic cells | Effector cells | Eosinophils |
| Epitope | Heavy chains | Helper T cell | Histamine | Humoral immune response | Immune system | Immunization |
| Immunoglobulin | Inflammatory response | Innate immunity | Interferons | Latency | Light chains | Lupus |
| lymphocytes | Lysozymes | Macrophage | Major histocompatibility complex molecule | Mast cells | Memory cells | Monoclonal antibodies |
| Natural killer cells | Neutralization | Neutrophils | Opsonization | Passive immunity | Phagocytosis | Plasma cells |
| Primary immune response | Pus | Rheumatoid arthritis | Secondary immune response | T cells | Thymus | Toll-like receptor |

Chapter 45 – The Endocrine System

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Adrenal gland | Adrenocorticotropic hormone | Androgen | Anterior pituitary | Autocrine signaling | Calcitonin | Catecholamine | Corticosteroid |
| Endocrine glands | Epinephrine/adrenaline | Estradiol | Estrogen | Follicle-stimulating hormone | Glucagon | Glucocorticoids | Growth hormone |
| Hormone cascade pathway | Hormone | Insulin | Local regulators |  Luteinizing hormone | Melanocyte-stimulating hormone | Melatonin | Mineralocorticoid |
| Neurohormone | Neurotransmitters | Nitric oxide | Norepinephrine/noradrenaline | Oxytocin | Paracrine signaling | Parathyroid glands | Parathyroid hormone |
| Pheromones | Pineal gland | Pituitary gland | Posterior pituitary | Progesterone | Progestin | Prolactin | Signal transduction |
| Simple endocrine pathway | Testosterone | Thyroid gland | Thyroid hormone | Thyroid-stimulating hormone | Tropic hormone/Tropin | Vasopressin/Antidiuretic hormone |  |

REMINDERS:

* **Coral Reef Campaign:** Phase IV **– March 16**
* **Chapter 40, 43 & 45 Test 🡪 March 19**
* **Chapter 49 & 50 Test 🡪 March 26**
* **Chapter 52 & 53 Test 🡪 April 2**
* **Chapter 54 - 56 Test 🡪 April 9**

**CORAL REEF PROTECTION CAMPAIGN LAUNCH**

**PROJECT IDEA: TENTATIVE GUIDELINES**

Directions: With your team, research and find answers to the prompts listed below. Slowly develop ideas that we, the people of St. Maarten and the Caribbean, could undertake to help protect our coral reefs. Please be sure to cite ALL references (in proper APA format)

**Phase I** [Due: Feb. 27]

* What is a coral/reef?
* How many different types of corals exist in the world?
* Where do corals/reefs exist within the world? Which region has the greatest concentration of it?
* How does it form? What inhibits its formation? What factors harm their continued existence?
* What is its function within the aquatic ecosystem? What is the value of corals/reefs [ie. economically, environmentally, culturally, politically, etc.,]. Who/which groups of people stand to benefit most from the sustained health of coral reefs?

**Phase II** [Due: Feb. 27]

* What is the current state of the world’s corals/reefs? Why? How has the health of corals/reefs changed over the last century?
* What is the current state of the Caribbean coral reefs? How did this come about? What are the top 3 factors threatening them?
* What has the Netherlands historically done to protect coral reefs? Have they been successful? Explain.

**Phase III** [Due: March 2]

* Of the 5 greatest threats to corals/reefs, further investigate any three factors in which you believe you are instrumental in an approach to protect them.
* What are some strategies that nations have undertaken to protect corals/reefs?
* Of the myriad of ways one can protect coral reefs, investigate no less than 3 nations where they have achieved success in maintaining/protecting their coral reefs.

**Phase IV** [Due: March 16]

* With your team members, devise a strategy/approach to protect the Caribbean coral reefs from more than one perspective. Be sure to note which significant people/groups of people you will need to recruit to successfully implement ideas.

-education/awareness (locally, regionally, globally)

-making best use of social media format, targeting towards various demographic groups (youth, teens, early adulthood, middle adulthood, late adulthood)

-from the water/underwater

-changes to our current way of life (ie. how we live)

-economically

-politically

**Phase V** [Due: March 23]

Project products: a) slide presentation (between 5 – 10 minutes in length; must incorporate audio)

b) PSA (no less than 2 minutes in length—audio or video)

c) a working timeline strategy/proposal [3-month, 6-month, 1 year, 18 months, 2 years, 3 years, 5 years implementation]