

Biology 2: Final Exam Review Topics

Evolution

- a. Darwin's theory
- b. Context for Darwin – other theories
- c. Survival of the Fittest and Natural Selection
- d. Variation within a species and its role in Darwin's theory
- e. Cladograms
 1. what they show
 2. why they work
 3. how they are created

Meiosis

- a. Process and sequence of steps
- b. Role in creating variation
 1. random assortment at metaphase
 2. crossing over during prophase I

DNA structure

- a. Nucleotides and components
- b. Base interactions
- c. Basic chemistry and geometry of DNA
 1. double helix

Genetics

- a. Classical Genetics
 1. Gregor Mendel
 2. Punnet Squares
 3. dominant
 4. recessive
 5. incomplete dominance
 6. sex-linkage
 7. monohybrid crosses
 8. dihybrid crosses
 9. test crosses
 10. gamete formation
 11. pedigrees
 - a. reading
 - b. writing
 - c. interpreting

Pig and Human Anatomy

- a. External
- b. Digestive System
- c. Respiratory System

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- d. Urogenital System
- e. Reproductive System
 - 1. male
 - 2. female
- f. Circulatory System
- g. Major structures organs in each system
 - 1. correct names
 - 2. location in body
 - 3. function within system and within body
- h. Nervous System
 - 1. structure of neurons
 - 2. types of neurons
 - 3. functions of nervous system
 - 4. parts of nervous system
 - a. central nervous system
 - b. peripheral nervous system
 - 1. somatic nerves
 - 2. autonomic nerves
 - 5. reflex arcs
 - 6. Parts of the brain
 - a. structure
 - b. function
- i. Circulatory System
 - 1. heart
 - a. structure
 - b. blood flow
 - c. major arteries and veins going in and out
 - 2. arteries
 - a. blood pressure
 - 1. systolic
 - 2. diastolic
 - 3. pulse pressure
 - b. pulse
 - c. structure of walls
 - d. function
 - 3. veins
 - a. structure of walls and valves
 - b. function