

Honors Biology Study Guide Spring 2015-16

Homeostasis

Set point, positive feedback loop, negative feedback loop, reflex arc, stressors (in relation to disturbing homeostasis)

Examples: heart rate, temperature

Vital Signs: pulse, blood pressure (systolic pressure, diastolic pressure), body temperature, breathing rate, breathing sounds, oxygen saturation, triage

Hyperthermia, hypothermia

Blood type, antibodies, antigens

Urinary system – kidney transplant

Energy

Proteins (amino acids), lipids (fatty acids, glycerol), carbohydrates (monosaccharides), nucleic acids (nucleotides); biosynthesis; metabolism

Digestive system

Food pyramid; exercise pyramid

Muscles – structure and function of a muscle (myosin, actin)

Mitochondria – aerobic: cellular respiration; anaerobic: lactic acid fermentation, alcoholic fermentation

Exothermic reactions, endothermic reactions, conservation of energy, energy transfer

Cellular respiration: What is the big idea equation? What is glycolysis, Krebs cycle, the electron transport system (ETS) – what is the general idea of each stage? What goes in, what comes out, where does it take place?

Photosynthesis: What is the big equation? What is the light reactions (photosystems II & I), Calvin cycle (carbon fixation) - what is the general idea of each stage? What goes in, what comes out, where does it take place?

Food Webs: food chains, autotrophs, producers, consumers, trophic level, energy flow through food chains

Chicks

Chick reproduction structures; Incubation process; Hatching process

DNA

Structure of DNA, RNA

Mitosis

Meiosis

Protein Synthesis (transcription, translation)