BIOLOGY FINAL REVIEW

CH.9

* The ratio of surface are to volume of cells (smaller cells functions better)
* Cell cycle (cellular reproduction
* Which phase do cells spend most of their lives in?
* Mitosis
* Stages of mitosis- PMAT
* Cytokinesis
* Checkpoints occurring in cell division
* What is cancer, apoptosis and stem cells?
* VOCAB
	+ Cell cycle
	+ Interphase
	+ Cytokinesis
	+ Chromosomes
	+ Chromatin
	+ Prophase
	+ Sister chromatid
	+ Centromere
	+ Spindle fiber
	+ Metaphase
	+ Anaphase
	+ Telophase
	+ Cyclin
	+ Cancer
	+ Carcinogen
	+ Apoptosis
	+ Stem cells

CH. 10

* DNA replication during meiosis
* How many sets of division does meiosis consist of? What are they?
* What does meiosis produce?
* Gregor Mendel
* Law of segregation and law of independent assortment
* Punnet squares
* Genetic recombination
	+ Crossing over
	+ Independent assortment
* VOCAB
	+ Gene
	+ Homologous chromosome
	+ Gamete
	+ Haploid
	+ Fertilization
	+ Diploid
	+ Dominant
	+ Recessive
	+ Homozygous
	+ Heterozygous
	+ Genotype
	+ Phenotype
	+ Hybrid

CH. 12

* DNA structure
* Location of DNA
* DNA replication
	+ DNA helicase
	+ DNA polymerase
	+ Leading strand
	+ Lagging strand
* Transcription
	+ How does it happen?
	+ Where does it occur?
	+ Participants on the process? (Name the parts of the process)
* Translation
	+ How does it happen?
	+ Where does it occur?
	+ Participants on the process? (Name the parts of the process)
* Major types of RNA
	+ mRNA
	+ tRNA
	+ rRNA
* Codon, anticodon, mutation, protein synthesis

CH.14

* What is a fossil and how do they help scientists to determine past life?
* How do you determine age of fossils?
	+ Relative dating and radiometric dating
* Divisions of geologic time scale
	+ Eras, periods, and epochs
* Major events in the geologic time scale include both biological and geological changes.
* What is:
	+ Fossil
	+ Paleontologist
	+ Relative dating
	+ Law of superposition
	+ Geologic time scale
* Spontaneous generation
* Origin of life hypothesis
* How are amino acids might have been formed from simpler molecules on early Earth
* First cells
	+ Autotrophic and prokaryotic

CH. 15.1

* Natural selection is based on ideas of excess reproduction, variation, inheritance
* Beagle ship
* Charles Darwing
* Principles of natural selection
* Hypothesis about new species of animals
* Artificial selection, natural selection, evolution
* Galapagos island
	+ Organisms
	+ Importance

CH. 17

* Aristotle first classification system
* Linneaeus used:
	+ Morphology and behavior to classify plants and animals
* Binomial nomenclature
* Phylogeny, evolutionary history of species
* Molecular clock
	+ Uses DNA sequences
* Cladistics analysis models (Cladograms)
* Characteristics of Domain
	+ Bacteria
	+ Archea
* Domain
	+ Eukarya contains 4 kingdoms of eukaryotes
* Viruses no living things

CH. 18

* Prokaryotes as first organisms on earth
* Prokaryotes divided into 2 domains
	+ Bacteria
	+ Archea
		- Thermoacidophiles, halophiles, and methanogens
* What are the names of prokaryotic cells in different environments
* Anatomy and function of a prokaryotic cell
	+ Nucleid
	+ Capsule
	+ Pili
	+ Cell walls
	+ Flagella
* Reproduction of prokaryotes
	+ Binary fission
	+ Conjugation
* Food that are contain bacteria

CH. 19

* Protist – Unicellular and multicellular eukaryotes
* Prostis classification – how are they classify?
* Endosymbiosis
* Protist might have been the first eukaryotic cells with chloroplasts and mitochondria

CH.21

* Characteristics of plants
* Classification of plants
	+ Vascular
	+ avascular
* Characteristics of green algea and how they are ancestors of present day-play
* Plant adaptation
* Anatomy of the plant leaf
	+ Cuticle
	+ Vein
	+ Stoma
	+ Guard cells