

Ch 18

- Taxonomy
 - Know how to write scientific name with genus and species
- Taxonomic ranks
 - Order of kingdom, phylum, etc
- Know what phylogeny is
- Who are systematics? Study phylogeny
- 3 domains of life
 - eukarya, bacteria, archaea
 - prokaryote (2 groups)
 - eukarya (protists, plants, animals, fungi)
 - protists is largest group

Ch 19

- diff/ similar b/w bacteria and archaeae
 - both single-celled
 - archaea doesn't have something in cell wall
- shapes of eukarya
 - rod, cork-screw, sphere
- biofilm
 - made of polysaccharide protein
 - found on teeth, creates plaque
- anaerobic- without oxygen
- binary fission- asexual reproduction, fast, copies of genetic info, no exchange of genetic info
- conjugation- crossing of genetic material
 - sex pilis- creates a bridge (know what it looks like)
- know what pathogenic means
 - pathogenic bacteria and diseases they cause
- virus isn't living
 - it does reproduce, and contains dna, can evolve
- know what viroid and prion is

Ch 20

- algae and protozoa (difference)
- different ways protists require nutrition
 - engulf prey,
- protists reproduce by mitosis (asexual)
 - also reproduce sexually (exchange of genetic info) know what it looks like
- mitosis is cell division (make copies)
- examples of diplomonads (types of protists)
 - table 20.1 look at groups, subgroups, representative genus
- what causes red tide?

- o harmful to fish and humans
- life cycle of malaria (plasmodium-parasite causes malaria)

ch 21

- alteration of generations (know the cycle and whats involved)
- some ways plants are useful to humans
- 2 major groups of land plants: vascular and non-vascular
 - o vascular scientific term: tracheophytes
 - o non-vascular scientific term: bryophytes
- what tracheophytes are flowering? angiosperms
- what vascular plant is seedless? Ferns, moss
- Which ones have seeds? Angiosperms because they produce flowers and fruits
- Non vascular plant: liverworts, some mosses
- Diff b/w gymnosperm and angiosperms?
 - o Both seed plants, but gymnosperms is non flowering
 - o Grass is angiosperm
 - o Angiosperms characterized by flowers, fruit, broad leaves
- Broad leaves capture more sunlight which is important for photosynthesis

Ch 22

- Structure of fungi
- Characteristics of how they obtain nutrients
- Fungi are parasitic
- Reproduce by spores (asexual)
- Can reproduce sexually
- Different phyla of fungi and examples of each group (table 22.1) → look at names and representative genre
- Know life cycle for each group
- Penicillin is example of what group of fungi (ascomycetes)
 - o Alexander Fleming
- Examples of Type of fungi that causes human disease → ringworm, etc
- Cyclosporin derived from fungi
- Fungi beneficial
 - o Antibiotics, cheese, wine/beer
 - o But can affect certain crops

Ch 23

- Know characteristics of animals
- Diff b/w vertebrates and invertebrates
- Invertebrates are more abundant
 - o One lacks backbone, other doesn't
- Table of different groups of invertebrates
 - o Know groups
- Life cycle of tapeworm (parasitic) (in flatworm category)

- Know what it means to have closed/open circulatory system
- Know examples of each group (gastropods, bivalves, cephalopods, etc)
 - Look at table
- Exoskeleton- protects and sheds → molting
- What organism has double-life? Amphibians
- What group is only flying invertebrate? Insects
- Metamorphosis- complete/incomplete
- Under body plan in book
 - Digestive, circulatory, nervous, and reproductive system of organisms

Ch 24

- Diff structures for chordates
- Which structures are lost/ maintained in humans
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