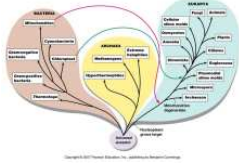
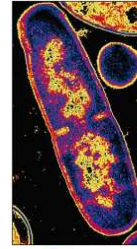


Classification of Microorganisms



- The science of classifying organisms
- Provides universal names for organisms
- Provides reference for identifying organisms
- The 3 domain system
- Create scientific names

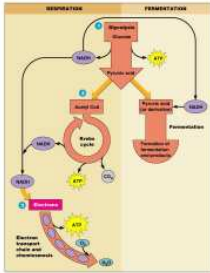
Microbial Growth



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- Requirements for growth
 - Physical & chemical
- Culture media
- Requirements for pure culture
- Reproduction of organisms
- Measure growth

Microbial Metabolism



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- Chemical reactions
- Metabolic pathways determined by enzymes
- Enzymes encoded by genes
- Enzyme classification
- ATP generation, ETS

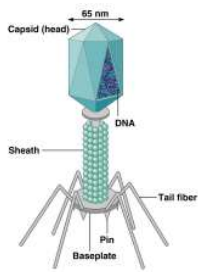
The Bacterial Cell



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- Compare prokaryotic & eukaryotic cells
- Shapes, flagella, arrangements, walls,
- Gram - & Gram +
- Damage to cells
- Movement across membranes
- Cytoplasm

Viruses



(a) A T-even bacteriophage. Copyright © 2007 Pearson Education, Inc., publishing as Benjamin Cummings.

- Many shapes
- Host range determined by specific host attachment sites
- Viral taxonomy
- Growing viruses
- Virus identification
- Growth curve
- Cancer
- Prions

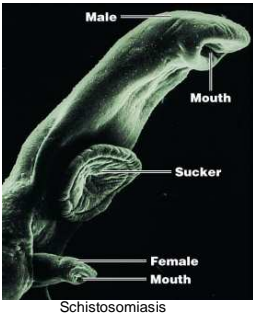
The Fungi



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- Eukaryotic
- Aerobic or facultative
- Chemoheterotrophic
- Decomposers
- Mycology- the study of fungi
- Fungal diseases (mycoses)
- Histoplasmosis
- Coccidioidomycosis

The Protozoa



- Eukaryotic
- Unicellular, multicellular animals
- Amoeba, worms, nematodes, ciliates, arthropods,
- Trypanosomiasis (Chagas' Disease)
- Toxoplasmosis

Host Pathogen Interactions



- Pathology
- Etiology
- Pathogenesis
- Infection
- Disease
- Normal microbiota
- Classifying infectious diseases