Unit 1 Objective Sheet (Part 2)

**Tested Objectives**

* Analyze how various organisms accomplish life functions through adaptations within particular environments (example: water or land) to ensure survival and reproductive success.
  + *structural adaptations –* nutrition, respiration, transport and excretion mechanisms, camouflage, movement
  + *reproductive adaptations* – sexual vs. asexual, eggs, seeds, spores, placental, types of fertilization

**Essential Vocabulary**

Protists

unicellular, adaptation, contractile vacuole, cilia, flagella, pseudopodia, eyespots

Plants

*(Synthesis/Nutrition):* photosynthesis, leaves, roots *(Transport/Excretion):* non-vascular, osmosis, stem, vascular, xylem, phloem, stomata, guard cells, diffusion *(Regulation):* hormone *(Reproduction):* spores, seed, gymnosperm, angiosperm, cone, stamen, anther, filament, pollen, pistil/carpel, stigma, style, ovary, ovule, pollination, pollen tube, fertilization, fruit *(Growth/Development):* germination

Animals

*(Synthesis)* protein synthesis, *(Transport)* closed/open circulatory system, blood, 4-chambered heart *(Excretion)* waste, nephridia, Malpighian tubules, kidneys, nephrons, urine, homeostasis *(Respiration)* diffusion, spiracles, gills, lungs, alveoli *(Nutrition)* digestion, esophagus, stomach, intestine *(Reproduction)* external vs. internal fertilization, hermaphroditism *(Growth/Development)* egg, incomplete vs. complete metamorphosis, amniotic egg, pouch, placenta *(Regulation)* nervous system, brain, endocrine system, hormone

**Statements to Master (ALL must be answered for full credit)**

1. Describe mechanisms for movement in unicellular organisms.
2. Evaluate the need for a contractile vacuole in a unicellular, freshwater organism.
3. Explain how the eyespot relates to nutrition for euglena.
4. Identify the types of synthesis of molecules that occur in various organisms.
5. Explain how various organisms gain the nutrition that they need.
6. Describe the connection between respiration and nutrition (cellular respiration).
7. Compare/contrast transport and excretion mechanisms of simple organisms to multicellular plants and animals which have specific structures to get materials to and from cells
8. Compare /contrast reproductive mechanisms of simple organisms to multicellular plants and animals which have specific methods to ensure reproductive success
9. Compare/contrast the growth and development of multicellular organisms, including the process of metamorphosis and different types of development in mammals
10. Explain how various life processes/body systems interact to regulate the internal environment of an organism and maintain homeostasis