Classifying Life - Study Guide

Vocabulary:
Prokaryotic- before a nucleus (Archaea and Bacteria); cells without a nucleus
Eukaryotic- cell contains a nucleus
Unicellular- an organism that is made of just 1 cell
Multicellular- an organism made of multiple cells
Ingest- mechanism of gaining energy, organism takes in food in whole or in small chunks
Photosynthesize- mechanism of gaining energy, organism uses sunlight to make its own food.
Absorbs- mechanism of gaining energy, organism secretes digestive chemicals onto the surface of the food, food broken down into nutrient molecules and absorbed through the cell membrane.

Know the 4 questions used to put a species into a domain and a kingdom:
1. Is there a nucleus in the cell(s)?
2. Is the organism unicellular or multicellular?
3. Do the cell(s) have a cell wall?
4. How is food obtained?

Know the characteristics of each of the domains and kingdoms:
Domain Archaea: Unicellular prokaryotic organisms, most having a cell wall, obtain energy via photosynthesis, absorption, or ingestion.

Domain Bacteria: Unicellular prokaryotic organisms, has a cell wall, obtain energy via photosynthesis, absorption, or ingestion.

Domain Eukarya: Eukaryotic organisms, may be unicellular or multicellular.
- Animal Kingdom- multicellular eukaryotes that ingest food for energy.
- Plant kingdom- multicellular eukaryotes that use photosynthesis for energy, have a cell wall made of cellulose (sugar).
- Fungus Kingdom- mostly multicellular eukaryotes that absorb energy from the substrate they grow on, some have a cell wall made of chitin (protein).
- Protist Kingdom- Mostly unicellular eukaryotes, may use photosynthesis, absorption, or ingestion to get energy. Some have a cell wall, some do not.