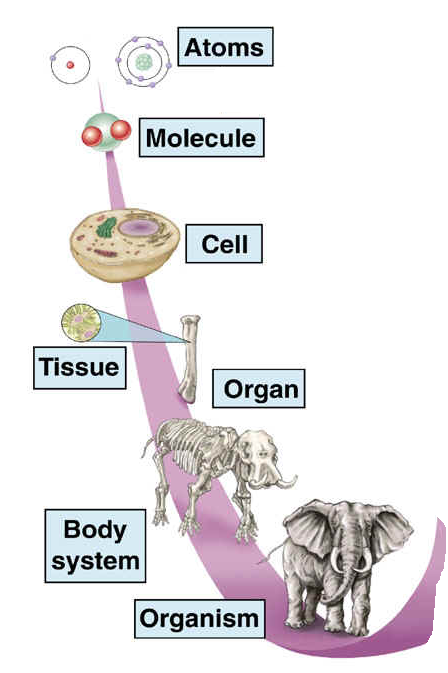


**Classification (Binomial nomenclature: genus, species)**

**Levels of Organization**



**Symbiotic Relationships**

**Theory of Evolution (Charles Darwin)**

**Evolution**: CHANGE over time

**Natural Selection**: “Survival of the fittest” Organisms with traits best suited to their environment are more likely to survive and reproduce



**Commensalism**

Clown fish and Anemone



**Parasitism**

Dog and Tick



**Mutualism**

Bee and Flower

**Law of Conservation of Matter and Energy**

Matter and energy CANNOT be created or destroyed. The total amount of matter and energy available in the universe is a fixed amount and can never be any more or less.

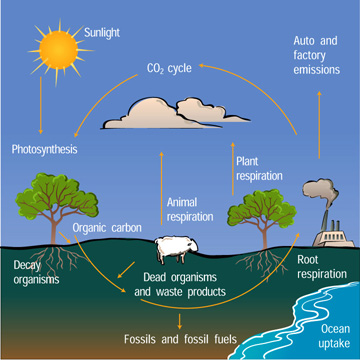
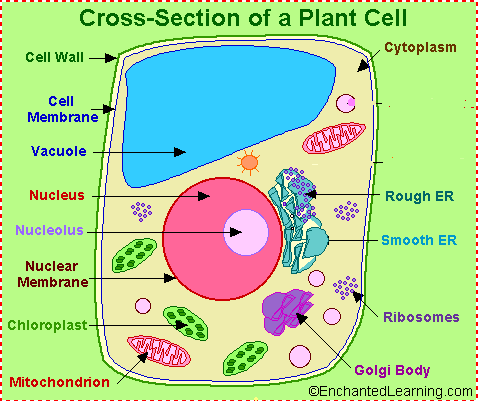
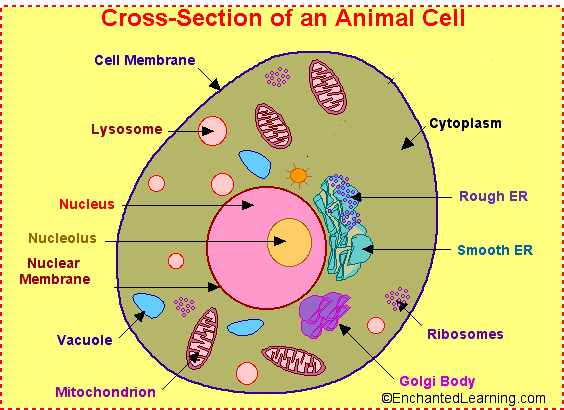
**Experimental Replication vs Repetition**

**Replication:** the reproduction of an experiment by others to confirm findings or ensure accuracy

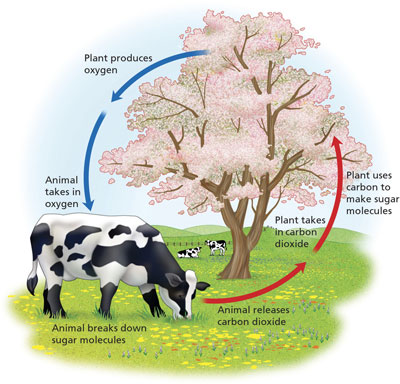
**Repetition:** conducting multiple trials during an experiment to ensure accuracy

**Cells**

**Cell Theory:** all organisms are composed of cells, all cells come from pre-existing cells, cells are the basic unit of life



Photosynthesis and Respiration



**Carbon dioxide + water + light↔ sugar + oxygen**

**Genetics**



**Genotype** = Gg

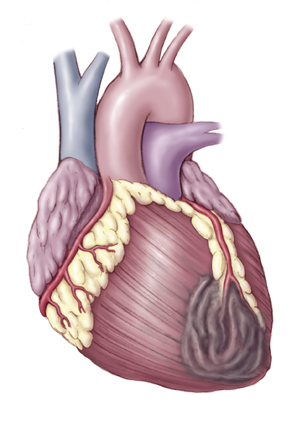
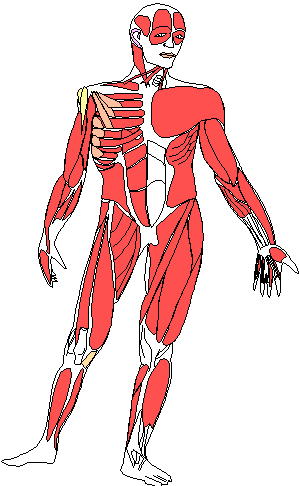
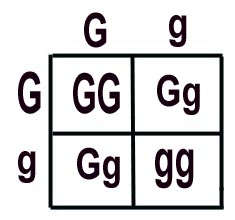
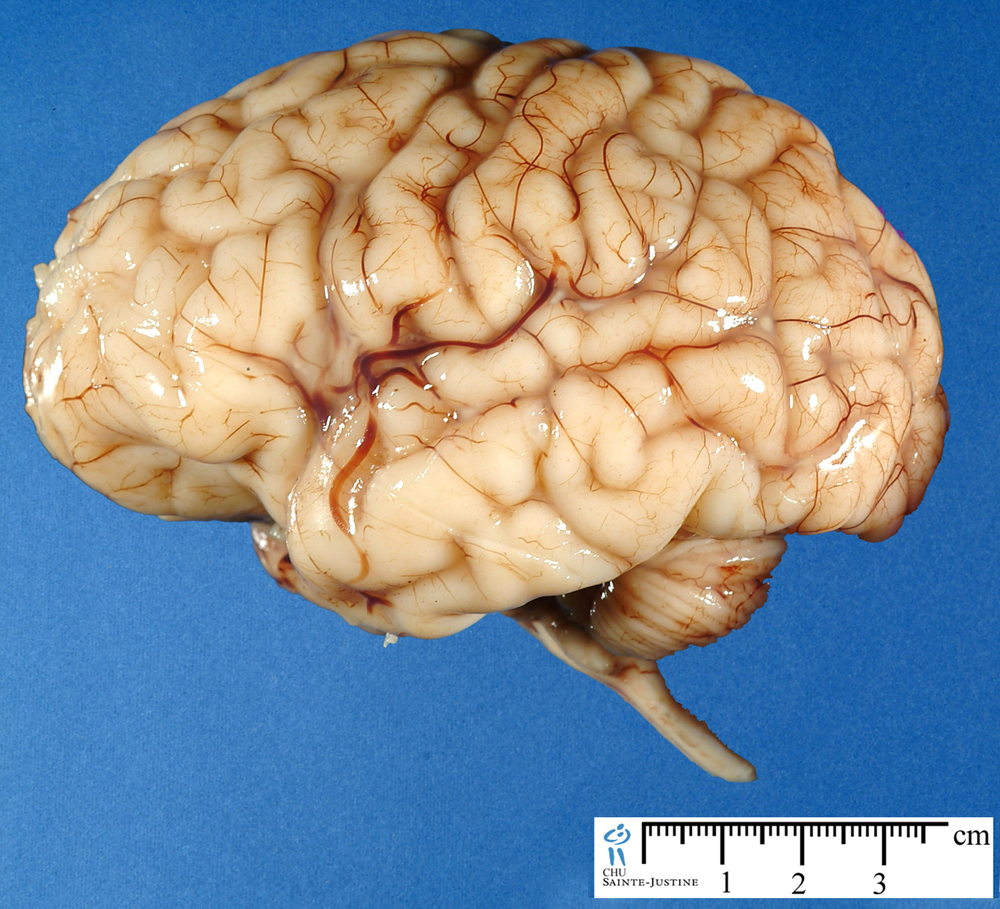
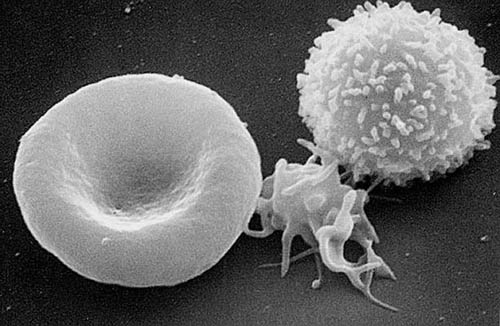
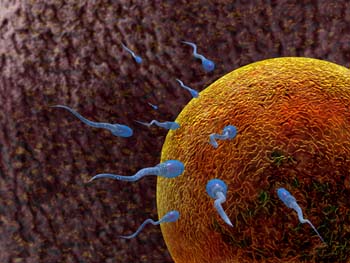
**Phenotype** = Green skin

**Offspring** = 75% green

25% yellow

**Homozygous:** GG and gg

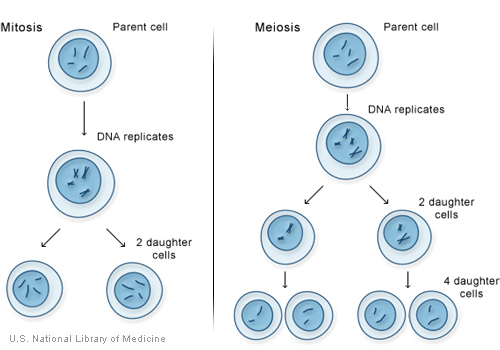
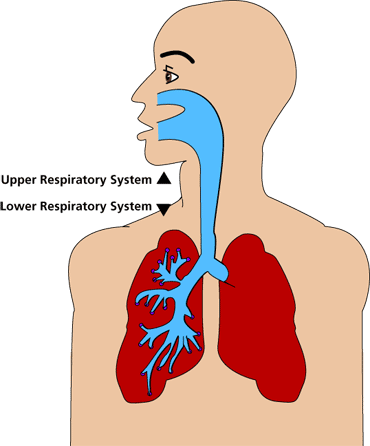
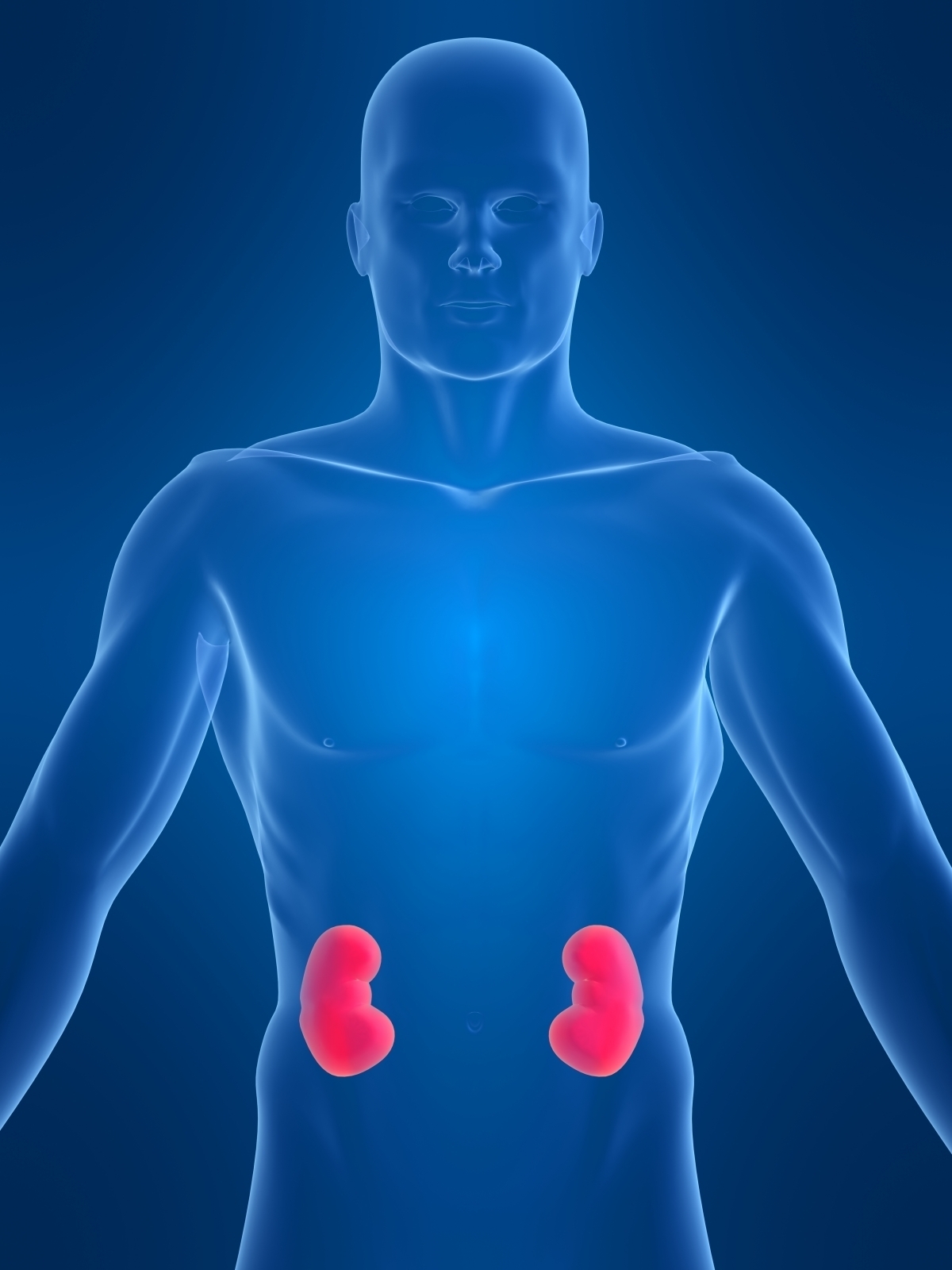
**Heterozygous:** Gg



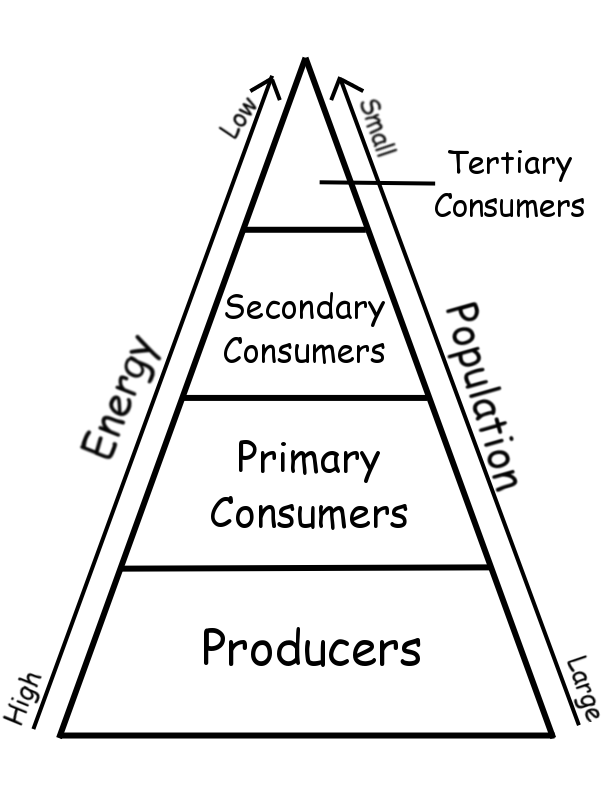
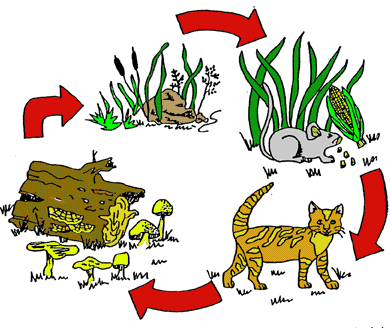
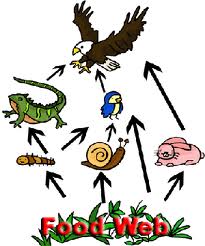
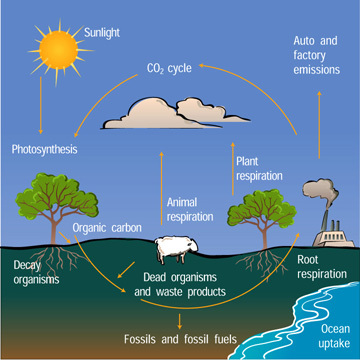
**Experiment vs Investigation**

**Experiment:** A procedure carried out and repeated under controlled conditions to discover, demonstrate, or test a hypothesis.

**Investigation:** a systematic process that uses data, logic, and reasoning to answer a question or gain understanding



**Ecology**



**Food Web**

**Food Chain**

