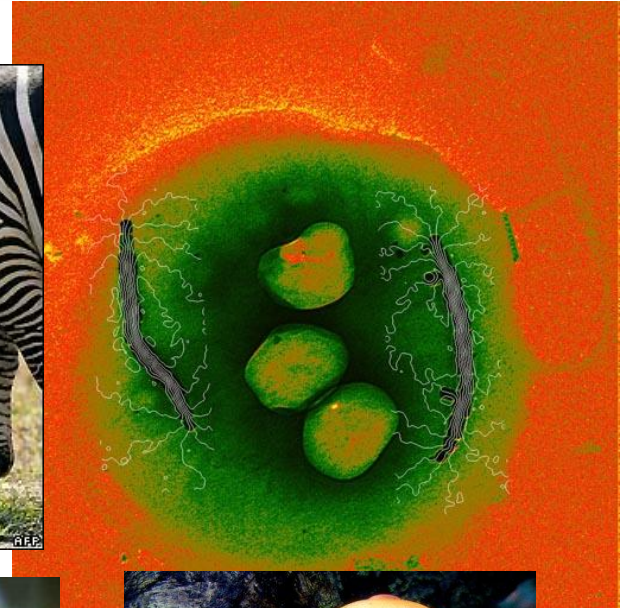
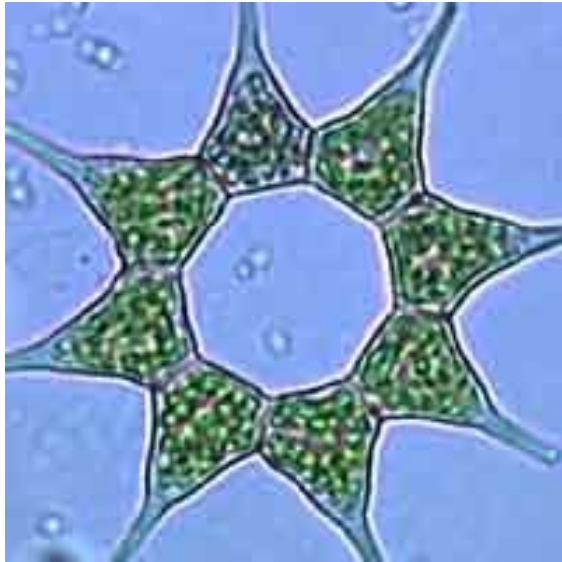


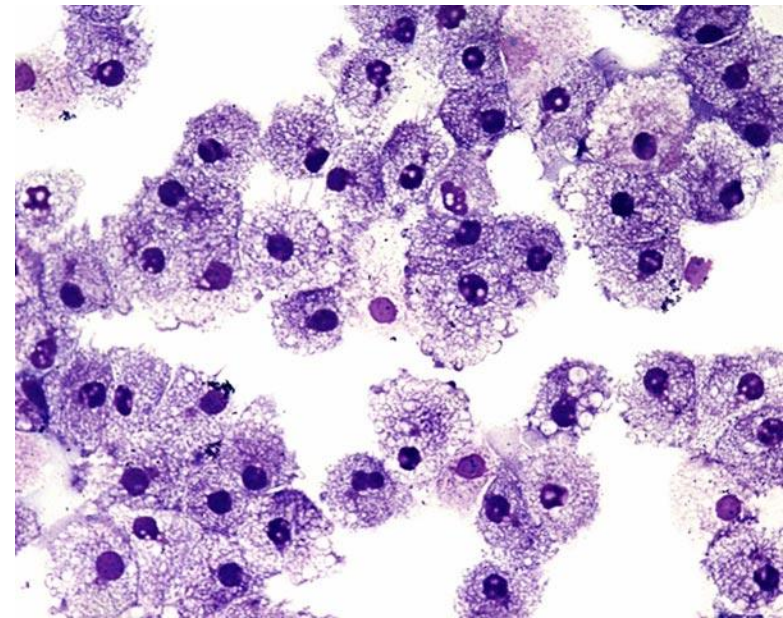
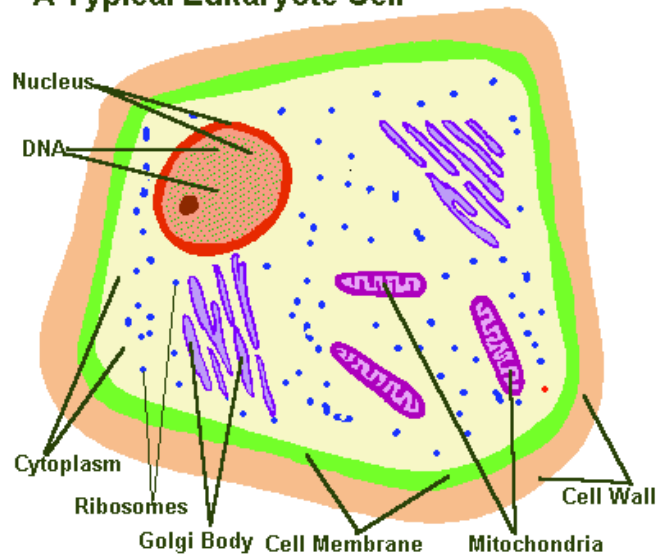
CHARACTERISTICS OF LIVING THINGS



1. Living thing Are Made of Cells

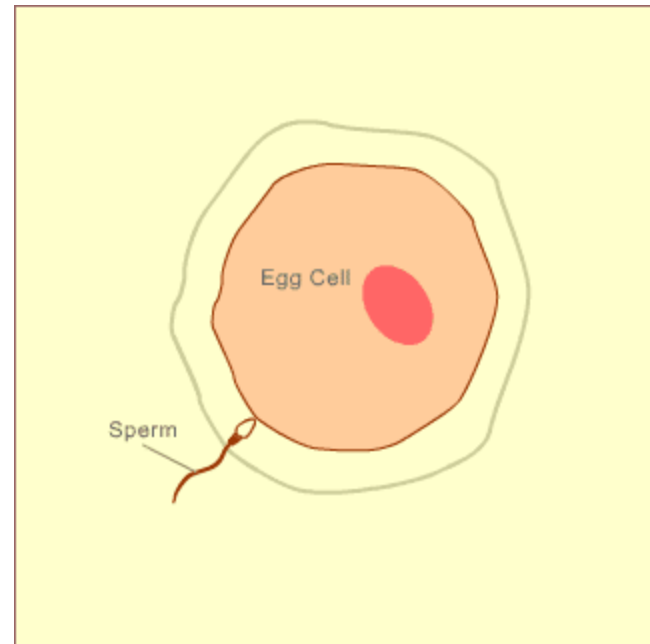
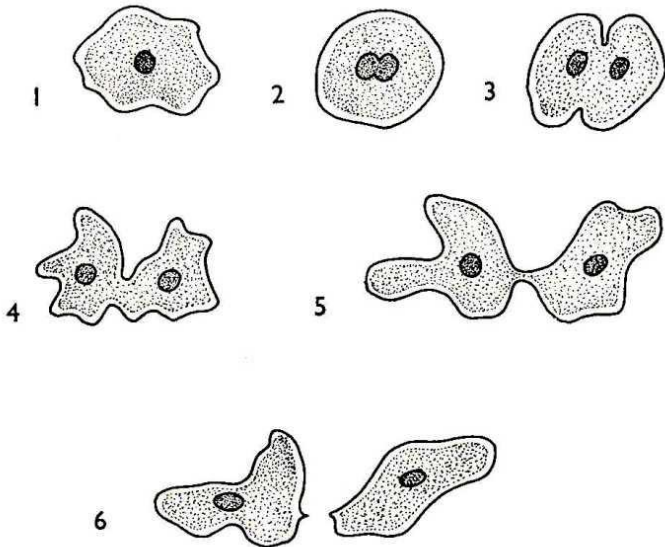
1. Are made up of cells and organisms can be
 - a. Unicellular – one cell; single cell
 - b. Multicellular – many-celled.

A Typical Eukaryote Cell



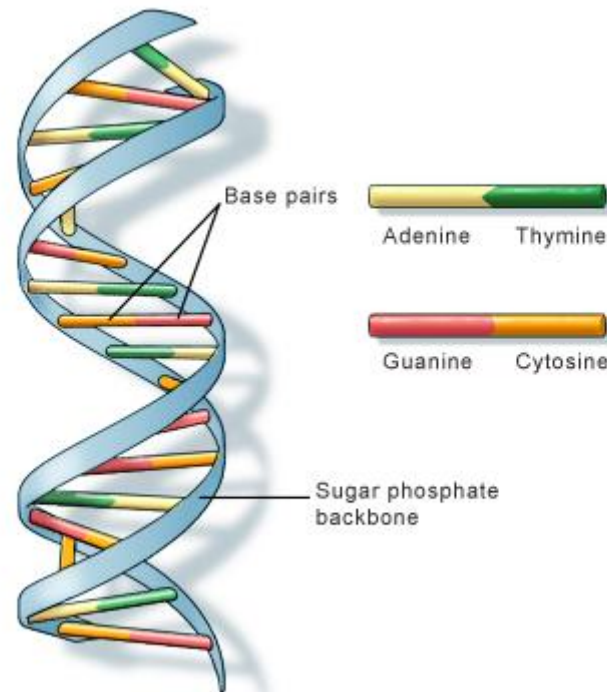
2. Living things reproduce

- A. Asexual – new organism has a single parent.
- B. Sexual – two cells from different organisms.
unite to produce 1st cell of new organism.
(most common form)



3. Living things are based on a universal genetic code

3. Is based on a universal genetic code (DNA) that determines inherited characteristics of every organism on Earth



4. Living things grow and develop

4. Grow and develop

- at some point increase in size
- organisms change (develop) over the course of their lifetime

Fetal Growth From 8 to 40 Weeks



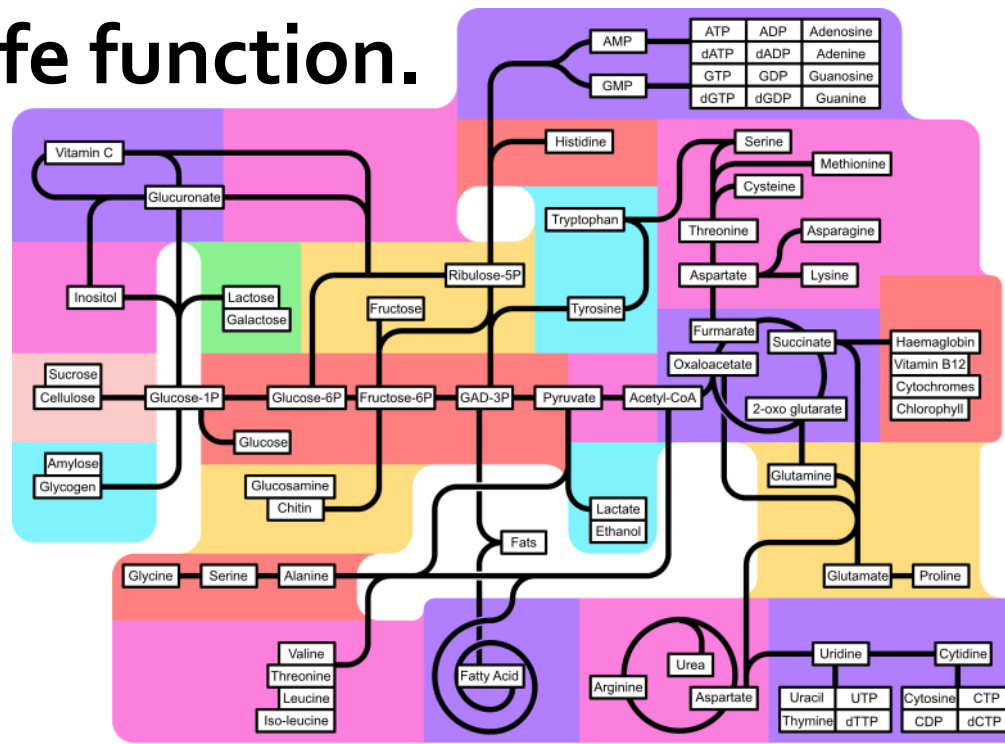
5. Living things obtain and use energy

5. Obtain and use materials and energy
- need these to just stay alive.
 - need constant supply of energy and metabolism.



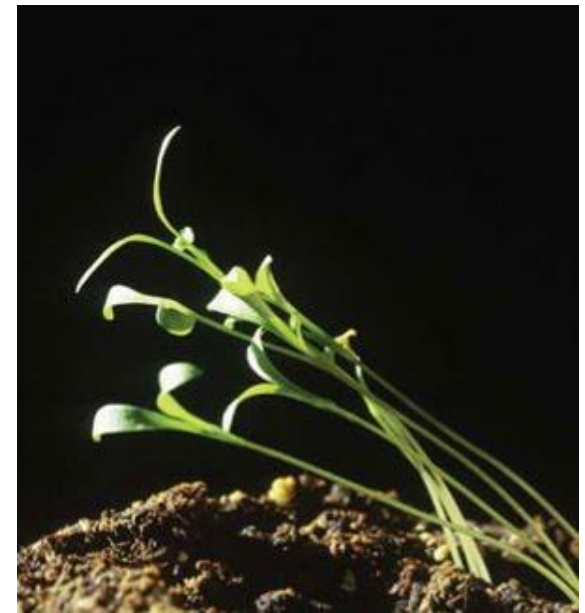
Metabolism

- Definition: Metabolism – combination of all chemical reactions in the body that builds or breaks down materials as it carries out its life function.



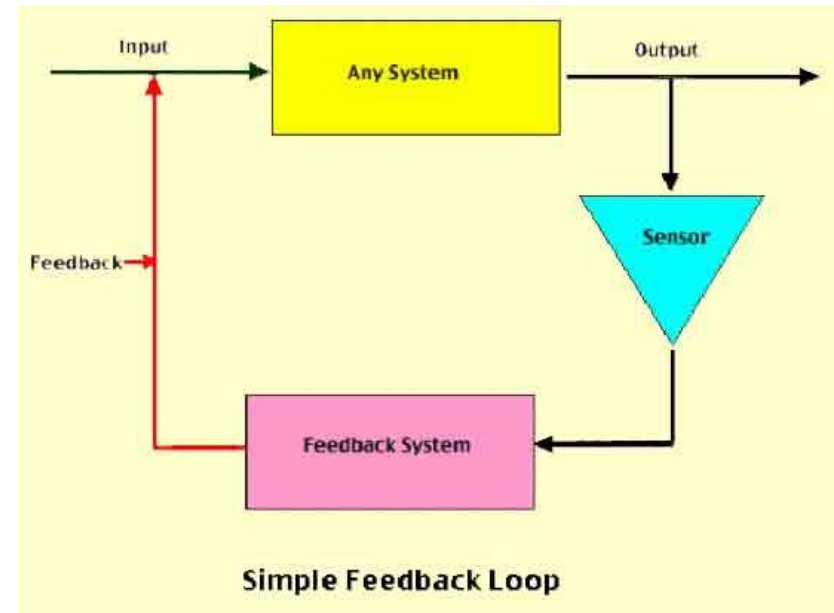
6. Living things respond to their environment

6. Respond to their environment.
- Organisms detect and respond to stimuli in their environment.
 - Definition: stimuli – a signal to which an organism responds
 - Can be external or internal.



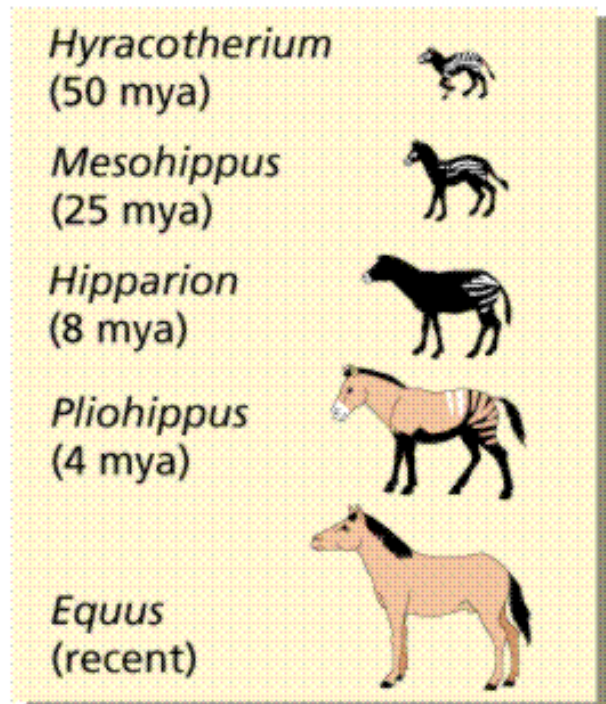
7. Living things maintain a stable internal environment

7. Maintain a stable internal environment.
- Process to do this is known as homeostasis.
 - Often involves internal feedback mechanisms.




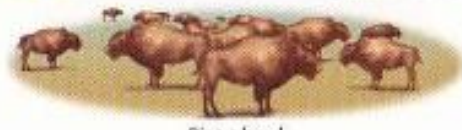


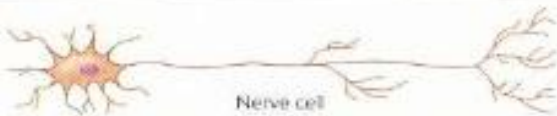


8. Living things change over time

8. Taken as a group organisms change over time; these changes are small at any one time but over long periods of time can be significant.



Levels of Organization

Biosphere	The part of Earth that contains all ecosystems	
Ecosystem	Community and its nonliving surroundings	
Community	Populations that live together in a defined area	
Population	Group of organisms of one type that live in the same area	
Organism	Individual living thing	
Groups of Cells	Tissues, organs, and organ systems	
Cells	Smallest functional unit of life	
Molecules	Groups of atoms; smallest unit of most chemical compounds	