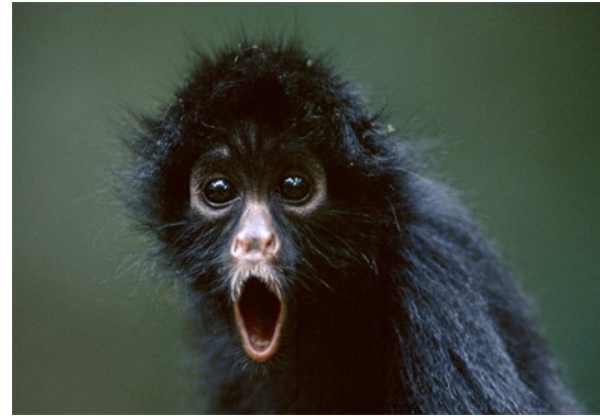




CHARACTERISTICS OF LIFE



- In your binder, all write down characteristics you think that living things have in common.



□ Characteristics of Living Things

- No single characteristic is enough to describe a living thing.
- Some nonliving things share one or more traits with living things.

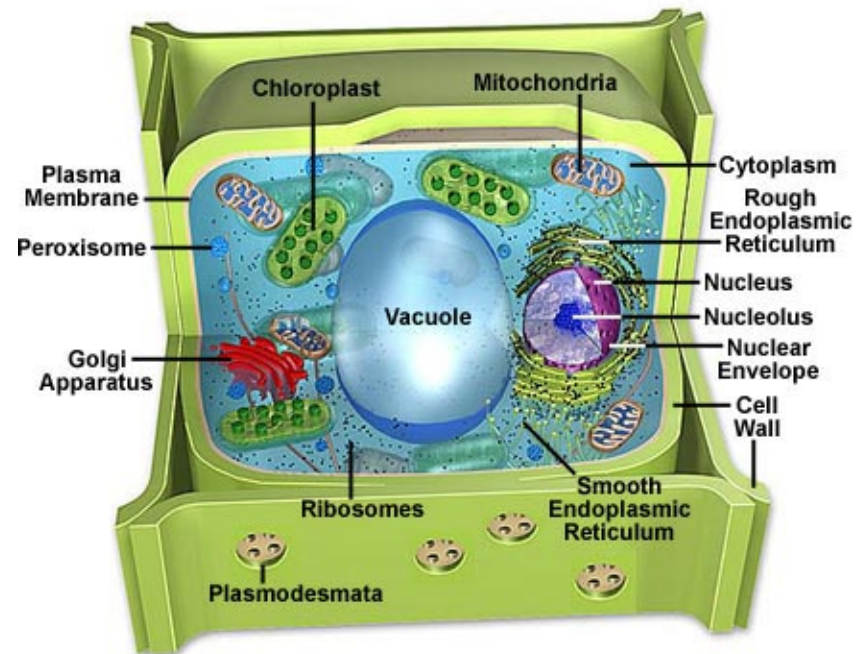
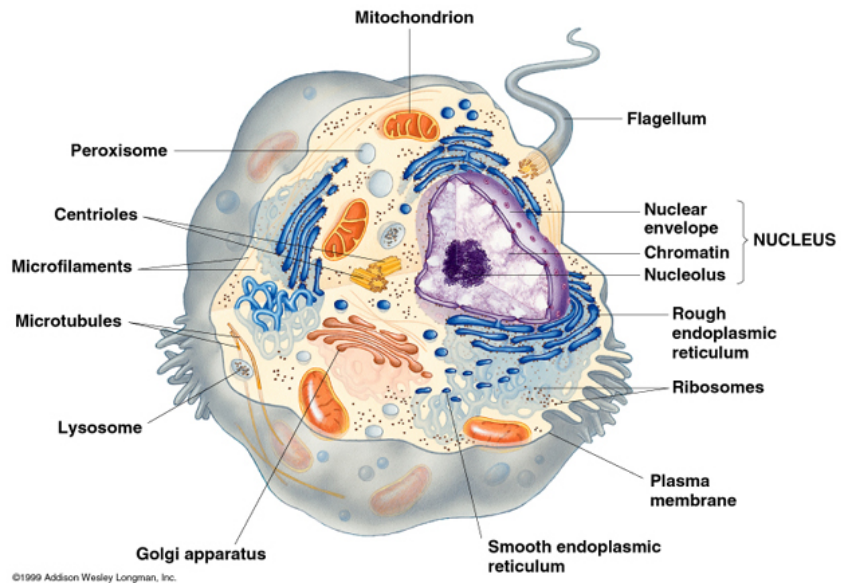


▣ All living things have ALL of the following EIGHT characteristics:

1. made up of units called cells
2. reproduce
3. based on a universal genetic code
4. grow and develop
5. obtain and use materials and energy
6. respond to their environment
7. maintain a stable internal environment
8. change over time

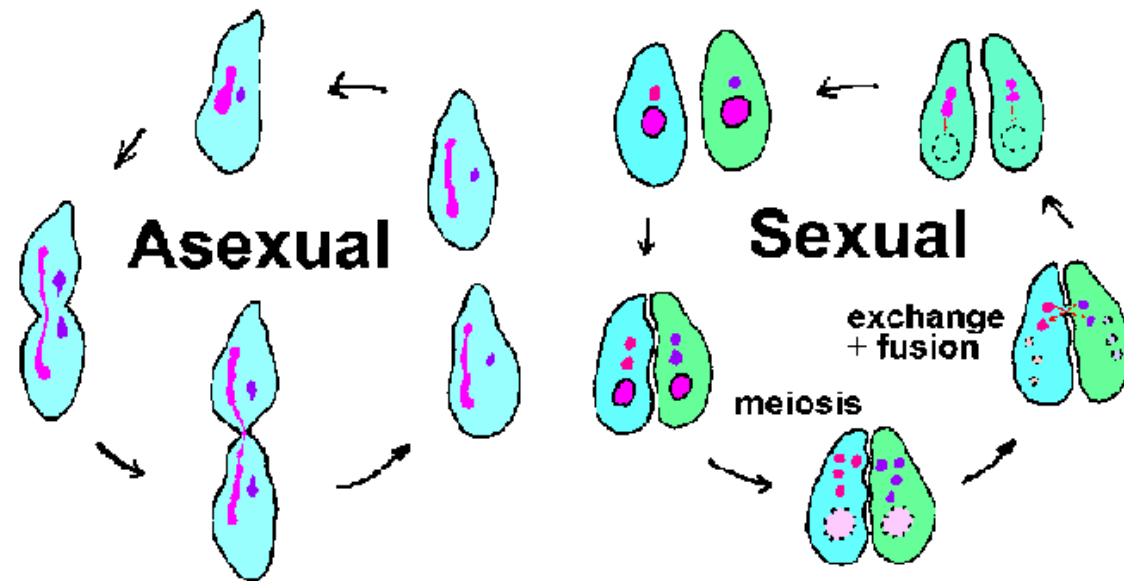
Living things are made up of cells.

- ▣ A cell is the **smallest unit** of any organism that is considered alive.



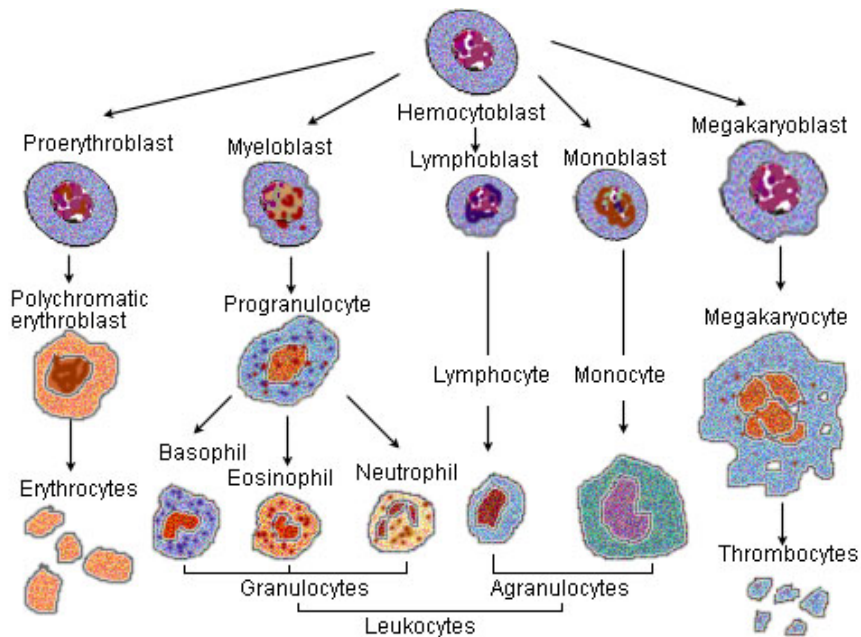
Living things reproduce.

- In sexual reproduction, cells from two different parents unite to form the first cell of the new organism.
- In asexual reproduction, a single parent produces offspring that are identical to itself.



Living things grow and develop.

- During an organism's development, cells differentiate, which means that the cells look different from one another and perform different functions.

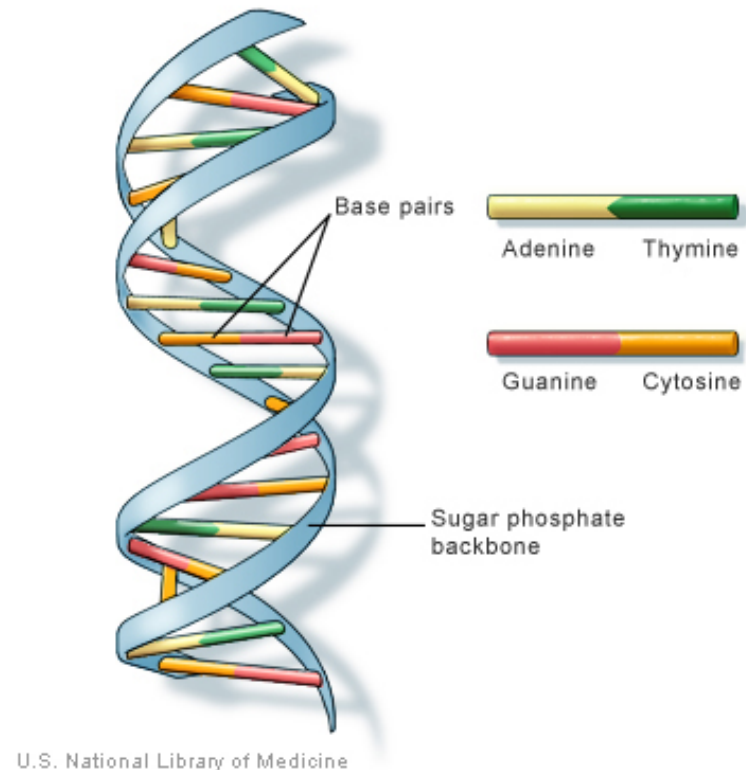


Cell Differentiation Copyright Pearson Prentice Hall

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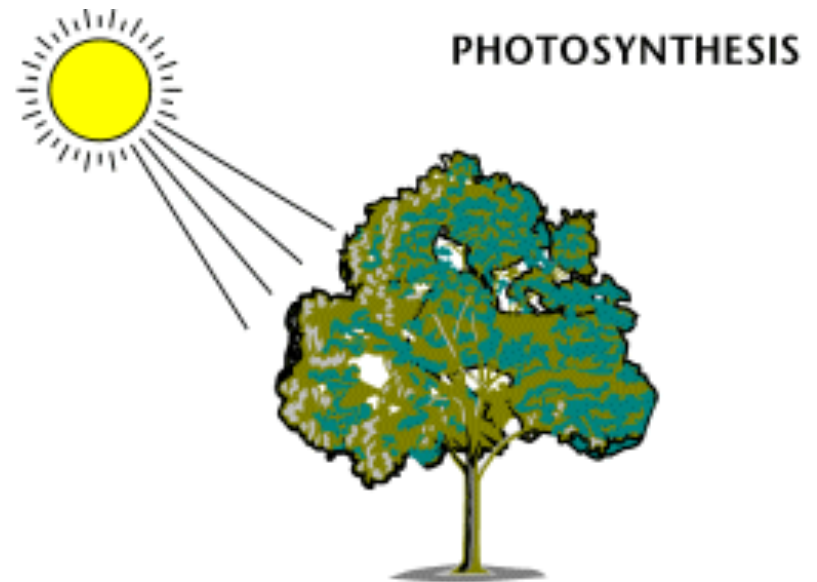
Living things are based on a universal genetic code (have DNA).

- Organisms store the information they need to live, grow, and reproduce in a genetic code in a molecule called DNA.

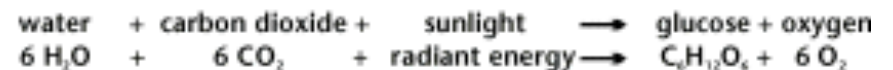


Living things obtain materials and use energy (they have to eat somehow!).

- ▣ The combination of chemical reactions through which an organism builds up or breaks down materials is called metabolism.



In the process of photosynthesis, plants convert radiant energy from the sun into chemical energy in the form of glucose - or sugar.



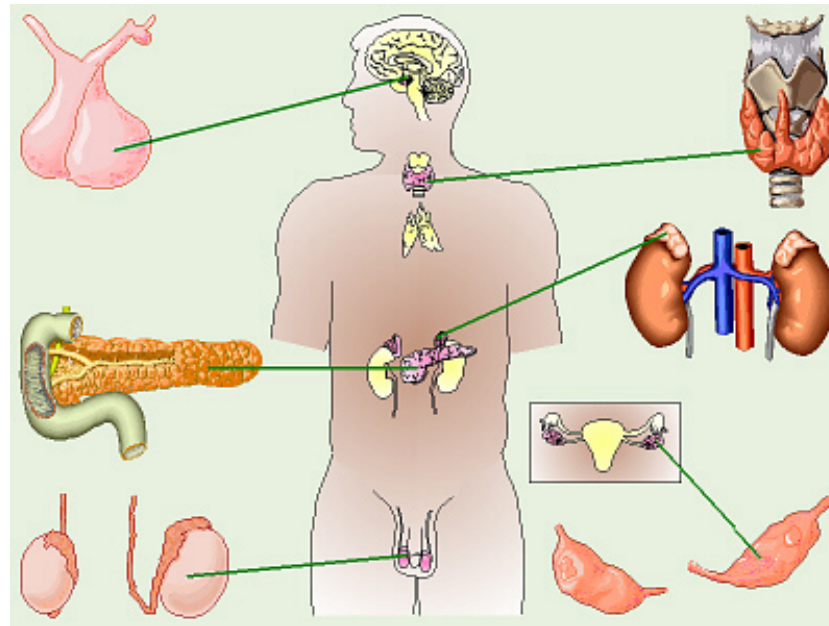
Living things respond to their environment.

- ▣ A stimulus is a signal to which an organism responds.



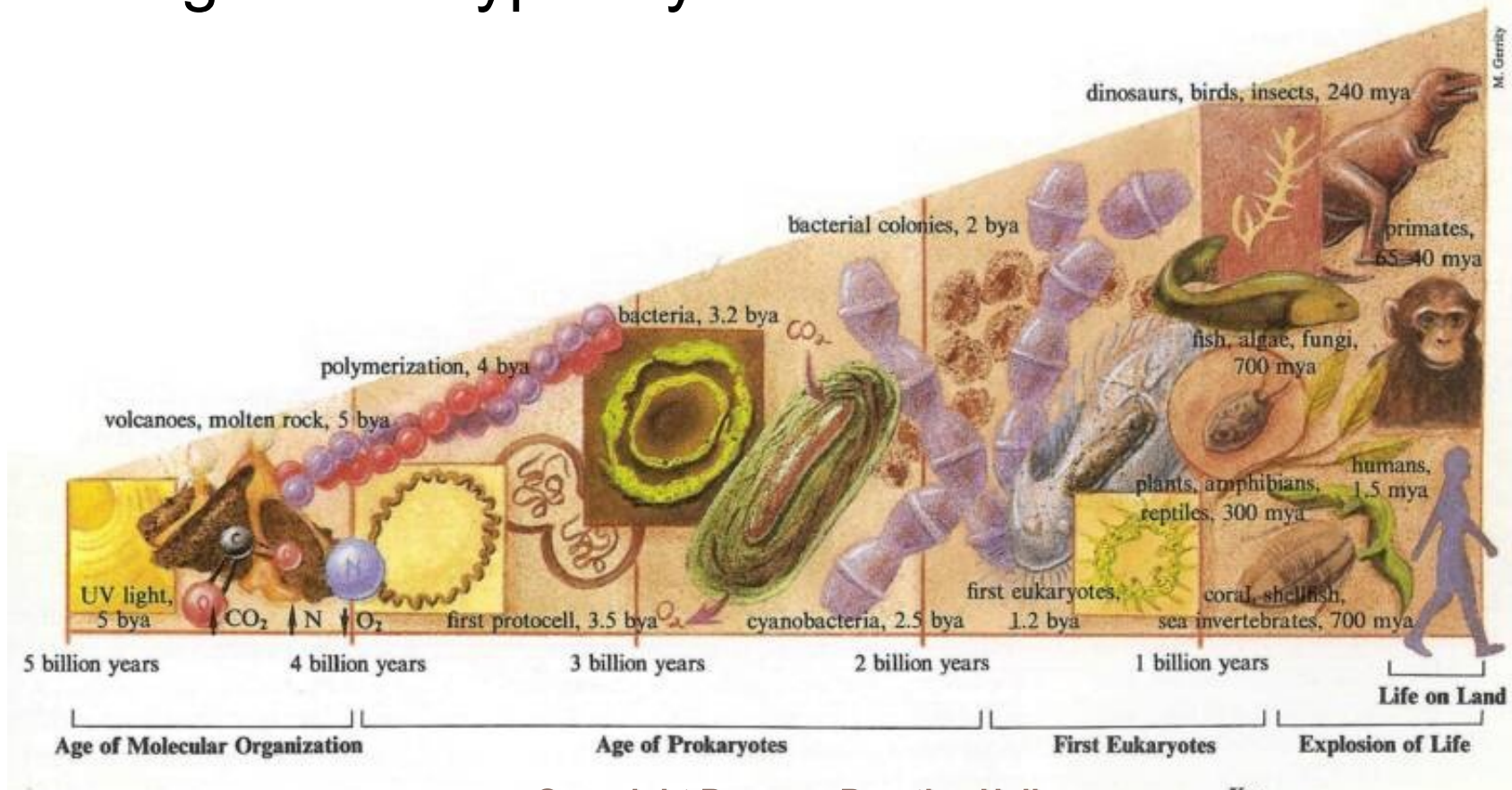
Living things maintain a stable internal environment.

- ▣ Although conditions outside an organism may change, conditions inside an organism tend to remain constant.
- ▣ This process is called homeostasis.



All living things evolve

- Taken as a group, living things change over time. Over many generations, groups of organisms typically evolve.



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1-3

1

▣ An increase in size is known as

A

- growth.
- metabolism.
- development.
- differentiation.

1-3

2

- ▣ Which of the following is NOT a characteristic of all living things?
 - use of energy
 - made of cells
 - stable internal environment
 - need for oxygen

A

1-3

4

▣ The genetic code is carried in

a. water.

A

b. DNA.

c. proteins.

d. soil.

1-3

- 5** ■ Which of the following shows the levels of organization in correct order from the simplest to the most complex?
- organisms, cells, populations, molecules, ecosystems
 - ecosystems, populations, organisms, cells, molecules
 - A** ■ molecules, cells, organisms, populations, ecosystems
 - molecules, organisms, cells, populations, ecosystems