

# Atoms to Universe (Organization of Matter)

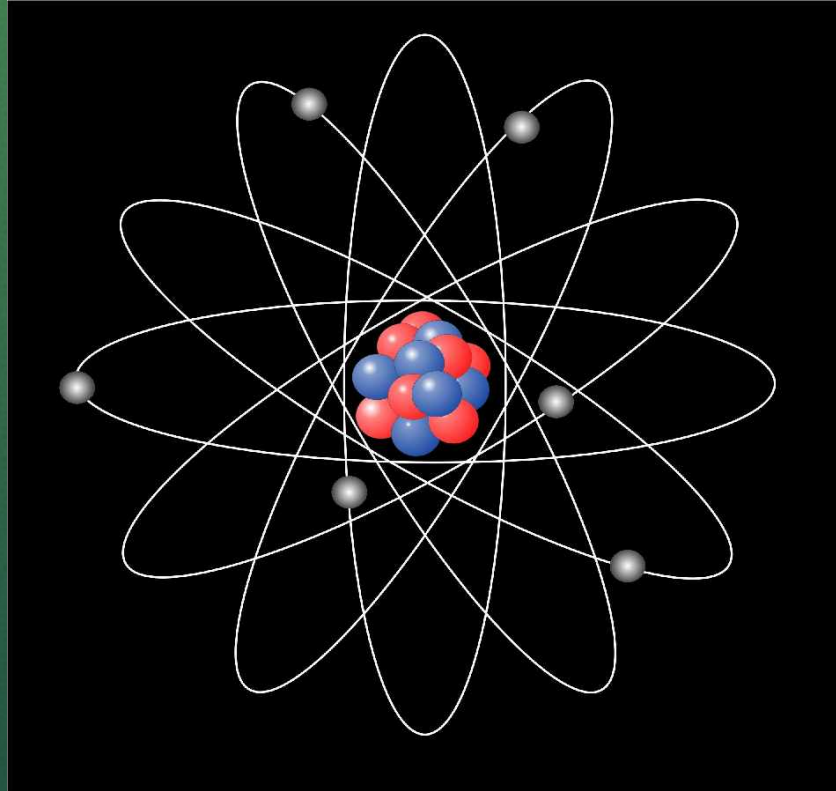
Matter is any substance that occupies space, has mass, and is made of atoms consisting of protons, neutrons, and electrons.

# Subatomic Particles



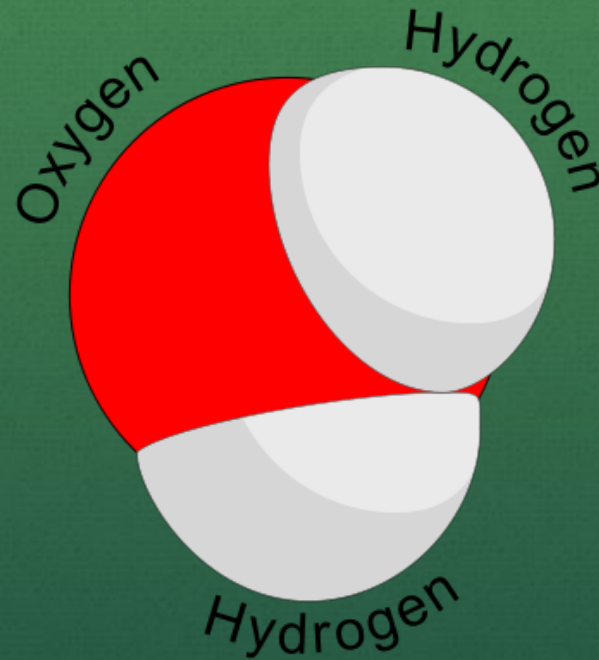
- The nucleus of an atom is made up of protons and neutrons.
- Electrons circle the nucleus.

# Atom



- The atom is the basic unit of matter.

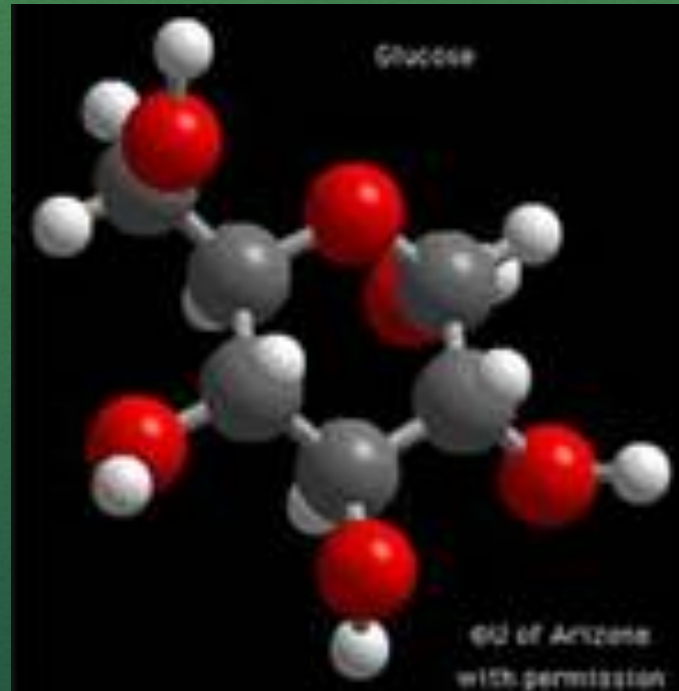
# Molecules



- Made up of two or more atoms.
  - Ex. H<sub>2</sub>O – water molecule.

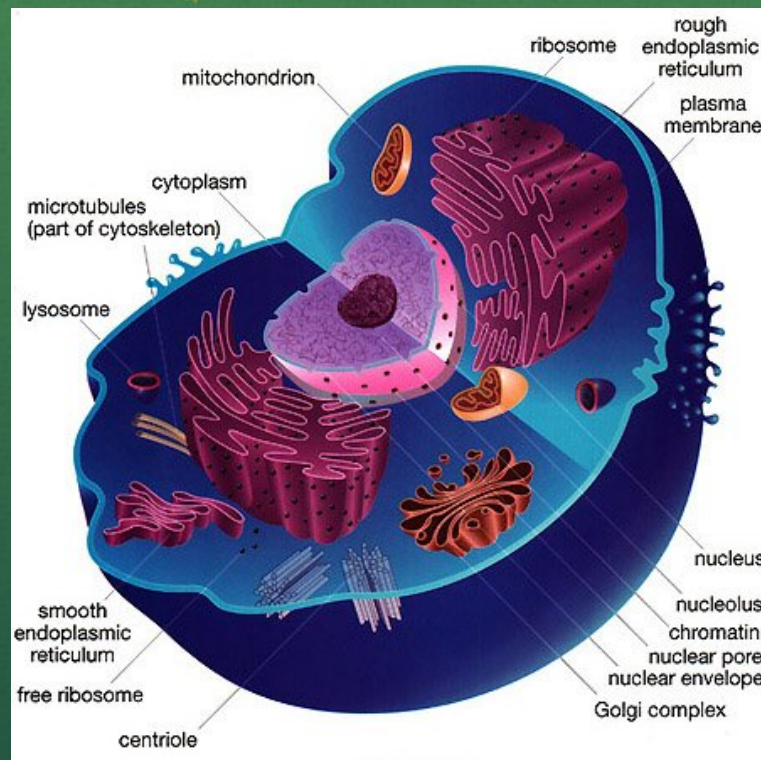


# Macromolecules



- Large molecules made up of smaller molecules.
  - Macro = big
  - Ex. Glucose  $C_6H_{12}O_6$

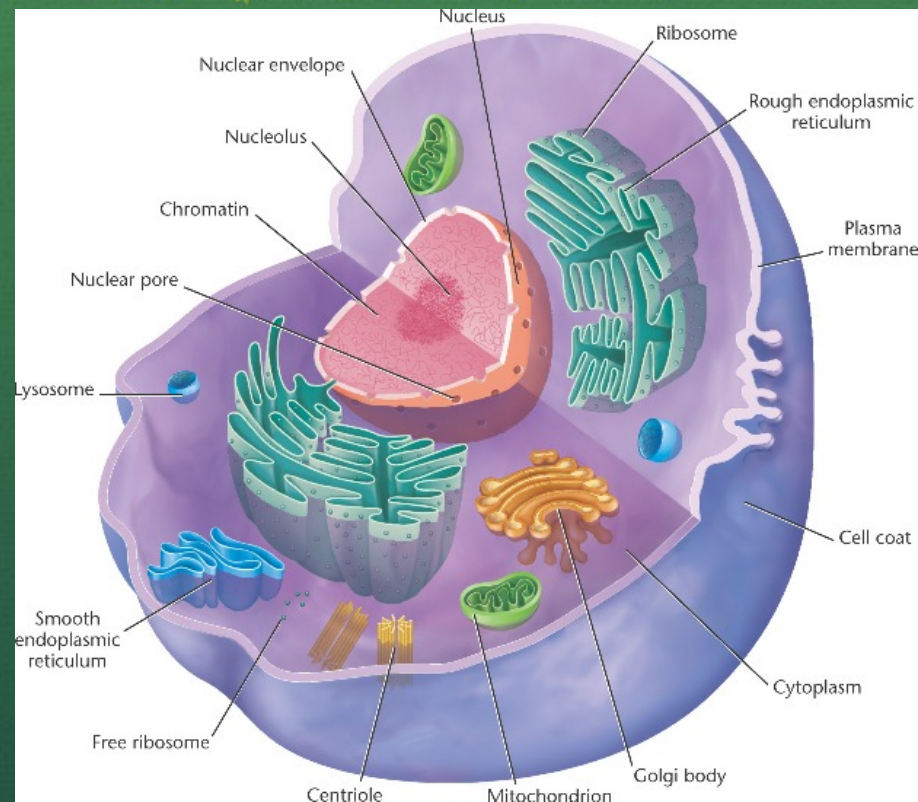
# Organelles



- Specialized unit inside the cell.
  - “small organ” (-elle)
  - Ex. nucleus

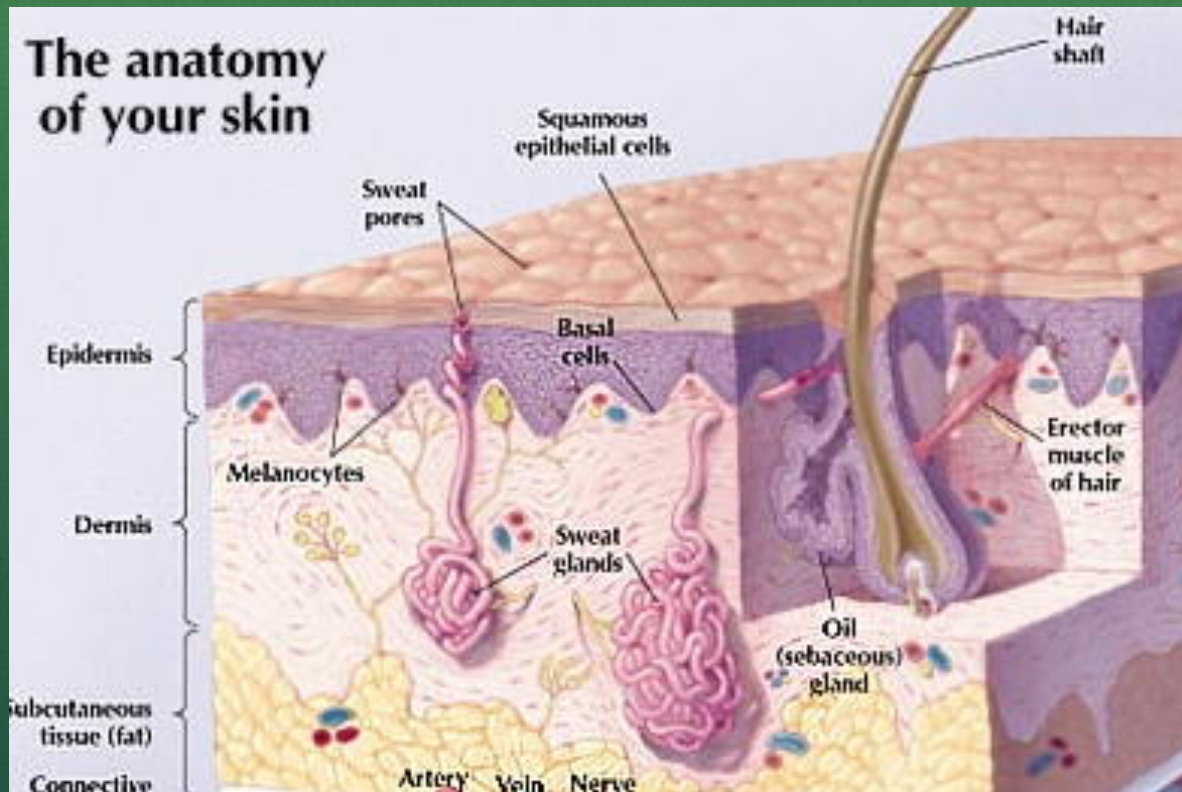


# Cells



- Basic unit of life.
- Smallest unit to be considered alive.

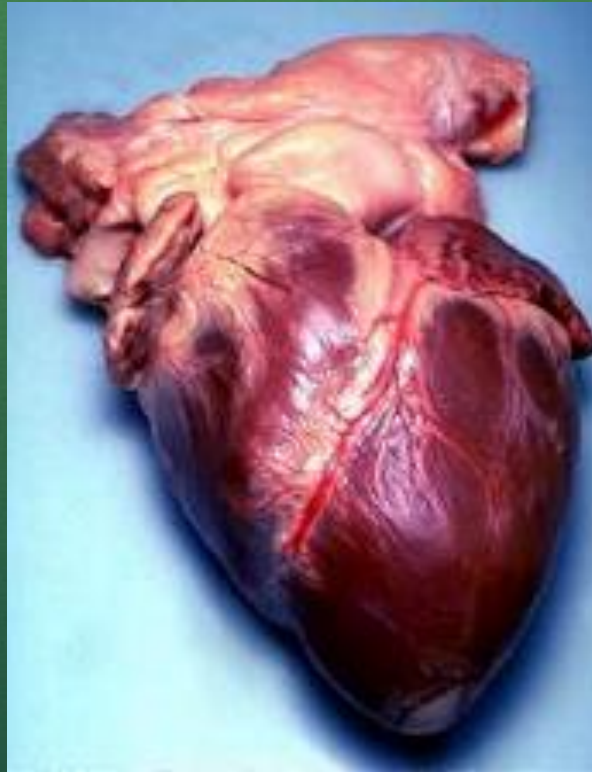
# Tissue



- Groups of cells working together to perform a function.
  - Ex. Skin tissues.

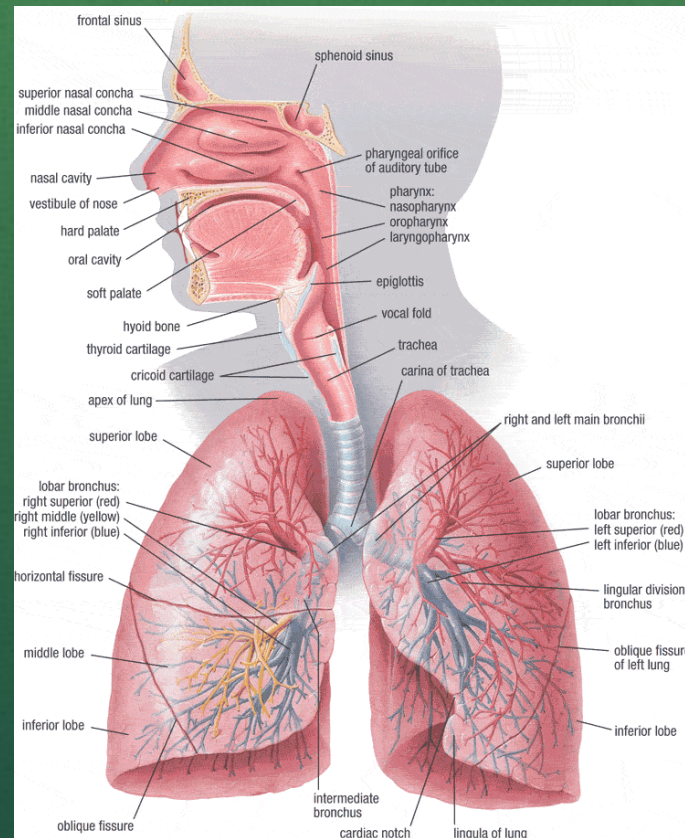


# Organ



- Groups of tissue working together to perform a function.
  - Ex. Heart.

# Organ System



- Groups of organs working together to perform a function.
  - Ex. Respiratory System.



# Organisms

- An individual living thing = an organism.





# Population

- Individual organisms of the same species that share the same geographic location at the same time make up a population



Deer

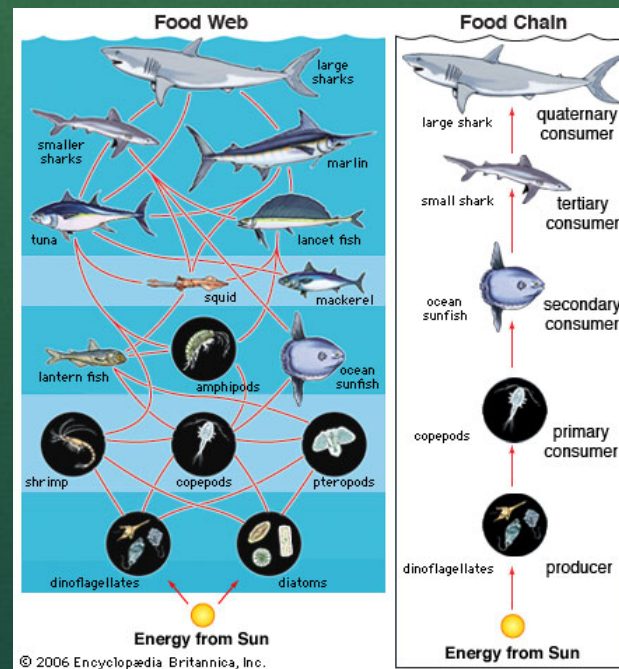
Honeybees



Tree frogs

# Biological Community

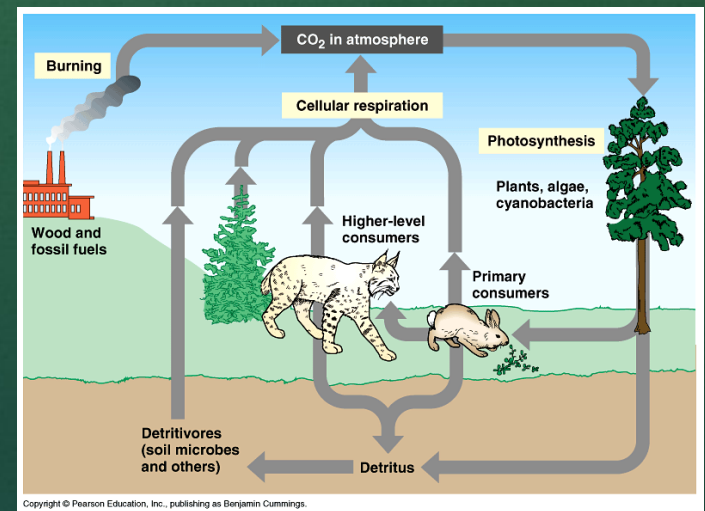
- Community: a group of interacting populations that live in the same location at the same time
- Organisms of all different species in a certain area make up a community.





# Ecosystem

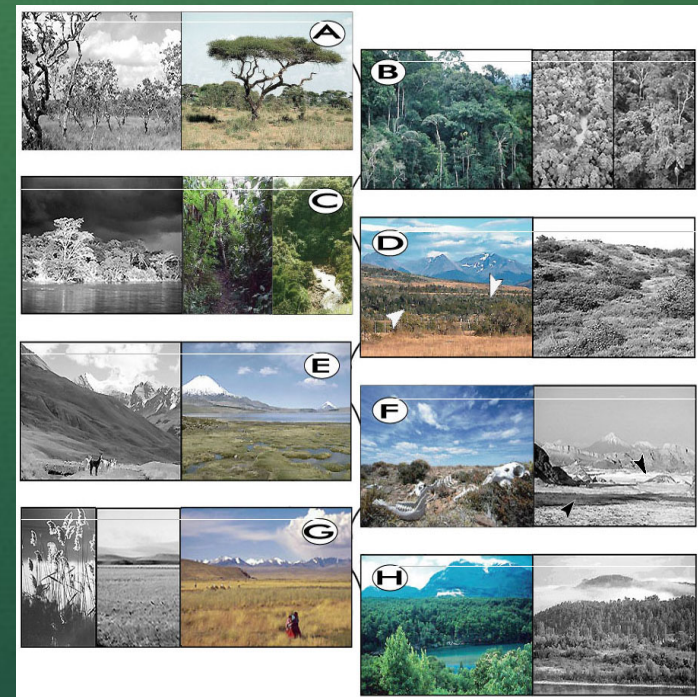
- Ecosystem: a biological community + *abiotic factors* that affect it.
- The boundaries of an ecosystem are flexible and can change, and ecosystems even might overlap.





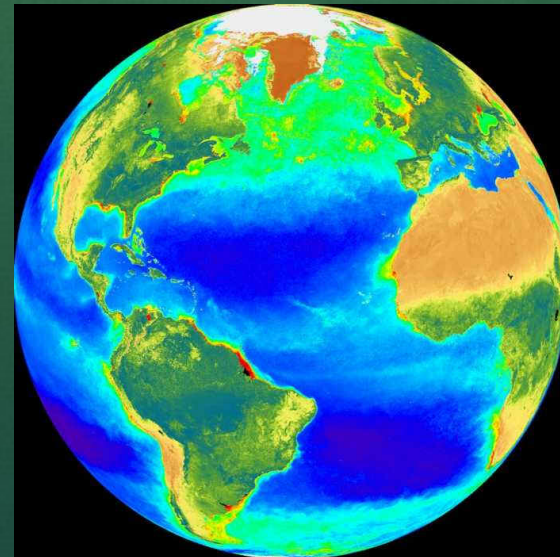
# Biome

- Biome: a large group of ecosystems that share the same climate and have similar types of communities
- Examples: temperate forest, desert, tropical rain forest, tundra.



# The Biosphere

- The biosphere is the portion of Earth that supports life.
- All of the biomes on Earth combine to form the biosphere.





# Levels of Organization

