

**Biology:** made up of 2 roots

"**bios**" - life                      "**-logy**" - study of

biology is the study of life

so what does it mean to be alive?

**Characteristics of living organisms** (text p. 6)

1-living things are made up of one or more cells  
unicellular or multicellular

2-living things reproduce using DNA  
all life uses the same genetic code, DNA  
all life has the ability to reproduce itself  
asexually: only one parent, offspring is  
clone  
sexually: 2 parents, offspring shows  
variations

3-living things need and use Energy  
they use that E to grow and develop  
growth: addition of cells & tissues  
development: involves specialization of cells

4-living things can sense and respond to their  
environment

5-living things maintain homeostasis  
they are able to keep a stable internal  
environment regardless of external conditions

6-living things, as populations, can evolve  
change over time

## **Biological Hierarchy or Levels of Organization**

life can be studied and organized at different levels

1-atomic level: all life is composed of atoms

2-molecular level:

3-cellular level:

4-tissue level:

5-organ level:

6-organ system level:

7-organism level:

8-population level:

9-community level:

10-ecosystem level:

11-biome level:

12-biosphere: