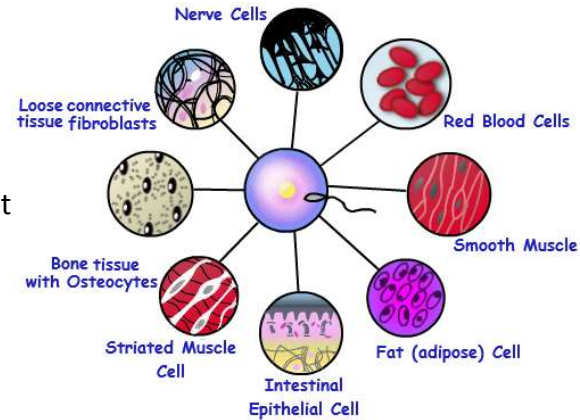


# Characteristics of Life Notes

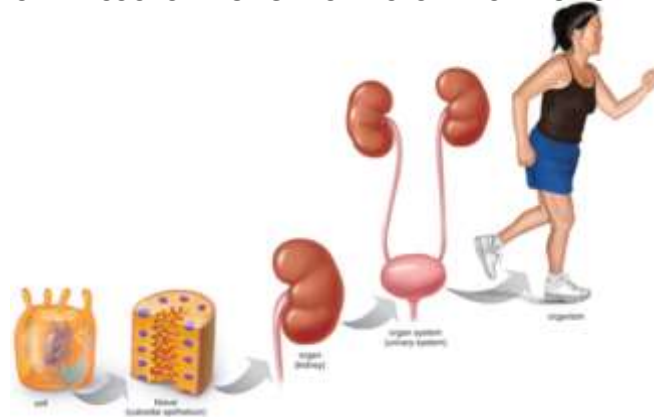
## 1. All living things have CELLS

- Living things are made up of one or more CELLS
- Single-cell organisms have everything they need to be self-sufficient
- UNICELLULAR – One Cell
- MULTICELLULAR – More than one cell



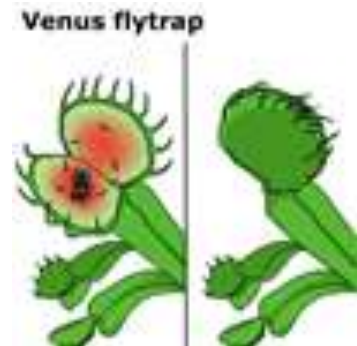
## Organization of Life

CELLS → TISSUES → ORGANS → SYSTEMS → ORGANISMS



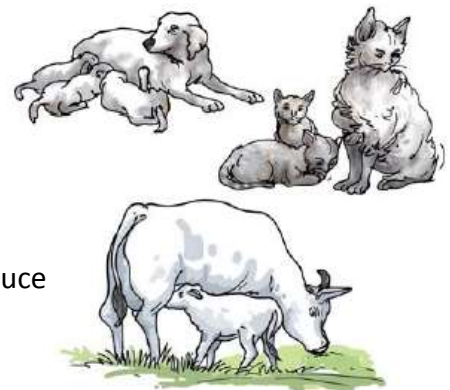
## 2. All living things RESPOND to STIMULI

- STIMULUS – something that causes a reaction
- RESPONSE – a reaction to a stimulus
- HOMEOSTASIS – maintaining a constant internal environment



## 1. All living things REPRODUCE

- To reproduce means to have OFFSPRING
- There are two types of reproduction:
  - SEXUAL REPRODUCTION – When two parents make offspring.
  - ASEXUAL REPRODUCTION – When one organism itself can produce offspring with the same DNA.



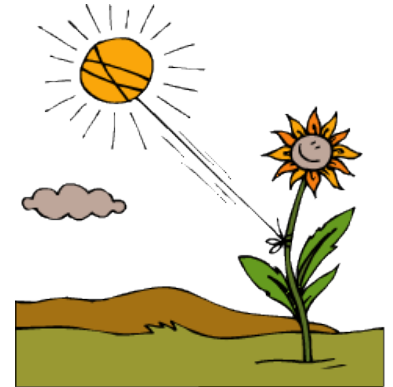
#### 4. ALL living things have DNA

- DNA is the genetic code that makes us, us
- It is the BLUEPRINT for how our body is made
- HEREDITY: the passing of traits from parents to offspring (kids)
  
- Our hereditary information is contained in our DNA



#### 5. All living things GET & USE ENERGY

- All living things must get ENERGY from their environment
- PLANTS (autotrophs) use the sun's energy and carryout PHOTOSYNTHESIS
- ANIMALS (heterotrophs) need to consume food and DIGEST it, in order to have energy
- All living things METABOLIZE, which means they use energy to do things



#### 6. All living things GROW & DEVELOP

- All organisms start of as ONE cell
- Throughout the life of an organism, cells DIVIDE & MULTIPLY
- The LARGER the organism, the MORE cells it has!!



### Conclusion

In order for something to be considered alive, it must have ALL the characteristics of life.

### Basic Needs of Living things

- 1) FOOD
- 2) WATER
- 3) AIR
- 4) LIVING SPACE