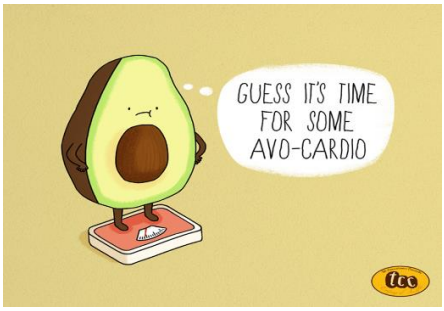

UNIT 1 STRUCTUE AND FUNCTION

Learning Objectives

- Life is built on a hierarchical organization of interacting systems.
  Feedback mechanisms maintain a living system's internal conditions.
  Body systems interact within organisms to maintain homeostasis.

- Sugar molecules contain carbon, hydrogen, and oxygen; their hydrocarbon backbones are used to make amino acids and other carbon based molecules that can be assembled into larger molecules. Chemical elements combine in different ways as matter and energy flows through different levels of living organisms.

Can you answer these questions???

- ☐ How does the structure of cells relate to the functions they perform?
- ☐ How is life built on hierarchical organization?
- ☐ How do atoms relate to organisms?
- ☐ How are living systems organized?
- ☐ How do feedback mechanisms maintain homeostasis?
- ☐ How do organisms regulate water uptake to maintain homeostasis
- ☐ What could happen if an organism could not maintain homeostasis?
- ☐ How do body systems interact together to maintain homeostasis?
- ☐ How do C, H, O combine to form macromolecules of life?
- ☐ How are the four macromolecules essential to proper functioning of organisms?
- ☐ How does food supply our bodies with the macromolecules necessary to maintain life?

Can you……?

- ☐ Simulate water uptake and relate it to a living system
- ☐ Develop and use a model based on evidence to illustrate the relationships between body systems and how they contribute to the overall function of the organism
- ☐ Design, conduct, and explain an investigation/experiment that shows positive and/or negative feedback mechanisms can stabilize or destabilize a system
- ☐ Explain how C, H, and O atoms are part of the food we eat and how organisms rearrange these atoms to create the macromolecules essential for life.

Can you define…….?

- Independent Variable
- Dependent Variable
- Direct Relationship,
- Inverse Relationship
- Organization: Atom, Molecule, Cell, Tissue, Organ, Organ System, Organism
- Positive vs. Negative Feedback
- Stimulus, response
- Homeostasis
- Macromolecule
- Carbohydrate
- Protein
- Amino acid
- Lipid
- Nucleic acid
- Nucleotide
- DNA
- RNA