

# Kentucky Class Notes

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BIO 152 Debski  
Fall 2010  
Test 1

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- The sea slug is half animal and half plant. The sea slug produces chlorophyll and can carry out photosynthesis
- The solar salamander has symbiotic algae living inside its cells. In embryos the algae provides more oxygen to the organism.

**ANATOMY** is the study of the structure of a living organism

**PHYSIOLOGY** is the study of mechanisms by which an organism functions in the environment

Examples of Physiology:

- Single celled organisms live in aqueous environments through diffusion
- In large aquatic animals not every cell is in contact with the environment
- In terrestrial animals cells cannot have direct contact with the environment

**Levels of Organization:**

Cell → Tissue → Organ → Organism

**ORGAN** structural unit in which specialized tissues combine in proportions and patterns that allow them to perform a common task

- Plant Organs can be vegetative or reproductive.

1. Vegetative organs are essential for maintaining the life of a plant. Examples of vegetative organs are the root, stem, and the leaf.

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2. Reproductive organs vary depending on type of plant.

- In angiosperms the reproductive organs are the seed, flower, and the fruit.

- In conifers the reproductive organs are the cones

An **ORGAN SYSTEM** is two or more organs working together. Examples of animal organ systems are circulatory, respiratory, reproductive, muscular (There are 11 in total which will be discussed later).

A **TISSUE** is a group of cells and intercellular substances that function together in specialized activity.

Types of Plant and Animal Tissues	
<b>Animal Tissue</b>	<b>Plant Tissue</b>
Epithelial	Dermal
Connective	Ground
Nerve	Muscular
Muscle	

## Tissues

- Many cells interacting are necessary for tissue formation
- Properties of individual cells promote recognition between similar cells and their adhesion to one another in tissues

There are four types of animal tissues: Epithelial, Connective, Nervous, and Muscle.

### Epithelial Tissue

1. Epithelial tissue is classified by the number of cell layers it possesses.

1. An epithelial cell with only one layer is classified as simple epithelium.