**Notes Chapter 7 Part 2: Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Animal Body Plans**

* **Animal’s bodies are described based on the following characteristics:**
  + **Type of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Location of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(for bilateral only)**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Types of \_\_\_\_\_\_\_ layers**
  + **Presence of a body \_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Type of \_\_\_\_\_\_\_\_ plan**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_----- refers to the way that the \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ are arranged in \_\_\_\_\_\_\_\_\_\_\_\_ to each other.**
* **Types of Symmetry:**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ---- no particular symmetry.**

**Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -- organized similar to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_. Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ---- has definite \_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_ halves, adaptation for movement.**

**Ex: \_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* **For animals with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ symmetry, we refer to areas of the body:**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_----- back side/top side**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_----- belly side/bottom side**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_----- front/head region**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_------ back end/ tail region**
* **Organisms can be classified as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ---- made of \_\_ \_\_\_\_\_\_\_ Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_----- made of \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ \_\_ \_\_\_\_\_\_ Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_**
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organisms will have cells organized into \_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_.**
* **There are \_\_\_\_\_ layers that form during development ----number of layers present determines how they are organized**
* **\_\_\_ \_\_\_\_\_\_\_\_\_:**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Endoderm----**
  + **\_\_\_\_\_\_\_\_\_\_\_ layer**
  + **Becomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ system**
* **Ectoderm----**
  + **\_\_\_\_\_\_\_\_\_\_ layer**
  + **Becomes \_\_\_\_\_\_\_/\_\_\_\_\_\_\_\_\_\_ coverings and \_\_\_\_\_\_\_\_\_\_\_\_ system**
* **Mesoderm-----**
  + **\_\_\_\_\_\_\_\_\_\_ layer**
  + **Becomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Type of Coelom**

* **\_\_\_\_\_\_\_\_\_\_\_ is an \_\_\_\_\_\_\_\_\_\_\_\_ body cavity where \_\_\_\_\_\_\_\_\_ organs are found.**
  + **Importance:**
    - **Allows \_\_\_\_\_\_\_\_\_\_ to freely \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_ without being squeezed by animal’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
    - **Filled with \_\_\_\_\_\_\_\_\_\_\_\_\_, which \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_ organs from \_\_\_\_\_\_\_\_\_\_\_\_\_.**
    - **Fluid within can sometimes act as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
    - **Fluid in some can carry \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_----does what your \_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_ vessels do.**

**Type of Body Plan**

* **Two body plans are present in the animal kingdom:**
  + **Sac plan:**
    - **Incomplete \_\_\_\_\_\_\_\_\_\_\_ system**
    - **Only \_\_\_\_\_\_\_ body opening.**
    - **Ex: \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_**
* **Tube-within-a-tube plan:**
  + **Complete \_\_\_\_\_\_\_\_\_\_\_\_\_ system**
  + **\_\_\_\_\_\_\_\_ body openings----- allows for specialization along the length of the \_\_\_\_\_\_\_\_.**
  + **Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_**

**Segementation**

* **Segmentation is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of body parts along the \_\_\_\_\_\_\_\_\_\_ of the body.**
  + **Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Support--- what holds the \_\_\_\_\_\_\_\_ of the organism’s body**
* **\_\_\_\_ types:**
  + **Hydrostatic skeleton ---**
    - **\_\_\_\_\_\_\_\_ fills \_\_\_\_\_\_\_ within the body**
    - **Seen in \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_, \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_**
* **Exoskeleton---**
  + **Hard segments that \_\_\_\_\_\_\_ the \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_.**
  + **Restricts the \_\_\_\_\_\_\_\_\_\_ of the animal---animal must shed it (or molt) to form a \_\_\_\_\_\_ \_\_\_\_\_\_\_ that has room for \_\_\_\_\_\_\_\_\_\_\_.**
* **Endoskeleton----**
  + **Composed of \_\_\_\_\_\_\_\_\_\_\_ and/or \_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
  + **Seen in all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
* **Digestion: taking \_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food.**
  + **Intracellular---**
    - **Food taken in and \_\_\_\_\_\_\_\_\_\_ \_\_\_\_ is done by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells/layers**
    - **Seen in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
* **Extracellular----**
  + - **Digestion performed by \_\_\_\_\_\_\_\_\_\_ such as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
    - **Seen in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_.**
* **Internal transport: process of getting \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ around the body; done in various ways**
  + **Through \_\_\_\_\_\_\_\_\_\_ Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Using \_\_\_\_\_\_\_\_\_\_\_\_\_ Ex: \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Using \_\_\_\_\_\_\_\_\_\_\_\_\_ such as \_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Open circulatory system:**
  + **\_\_\_\_\_\_\_\_\_\_\_\_\_ but no \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Seen in \_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_**
* **Closed circulatory systems:**
  + **Seen in \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Blood travels within \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Blood is pumped by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Respiration: exchange of \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Simple organisms---- exchange \_\_\_\_\_\_\_\_ directly through their \_\_\_\_\_\_\_\_\_\_\_\_ or their \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
    - **Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Larger animals----- organs such as \_\_\_\_\_\_\_\_ (tiny tubes), \_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_**
* **Excretion: Removal of \_\_\_\_\_\_\_\_\_ products**
  + **Simple animals---- use \_\_\_\_\_\_\_ or sets of \_\_\_\_\_\_\_\_ to get rid of \_\_\_\_\_\_\_\_**
    - **Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_**
  + **Complex animals---- develop \_\_\_\_\_\_\_ such as the \_\_\_\_\_\_\_\_\_\_.**
    - **Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **Nerve Net**
  + **Web of \_\_\_\_\_\_\_\_\_ cells held together**
  + **Seen in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (jellyfish, coral, sea anemones), and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (starfish, sea urchins)**
* **Animals with \_\_\_\_\_\_\_\_\_\_\_\_\_ symmetry have a head with all \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ at the front end of the organism. This is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
  + **Simple worms----- cluster of nerve cells called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
  + **More complex animals have \_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
  + **Vertebrates have a \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ in addition to a more developed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
  + **Many animals have well-developed \_\_\_\_\_\_\_\_\_\_\_ such as \_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**