

# UNIT 1 – BODY PLAN AND ORGANIZATION

## ACTIVITY - Body Plans and Organization Worksheet

Name \_\_\_\_\_ Period \_\_\_\_\_

1. Define and then contrast the following terms:

Anatomy

Physiology

2. Identify the levels of structural organization beginning with the highest level of organization to the lowest level of organization. (Give an example of each.)

3. Define metabolism and then differentiate between anabolic and catabolic processes.

4. Describe how a body would be divided by each of the following types of planes:

Frontal (Coronal)

Midsagittal

Sagittal

Transverse

5. Identify the correct directional term to complete the following statements.

A. The liver is \_\_\_\_\_ to the diaphragm.

B. Fingers are located \_\_\_\_\_ to the wrist bones.

C. The skin on the dorsal surface of your body is said to be located on your \_\_\_\_\_ surface.

D. The great (big) toe is \_\_\_\_\_ to the little toe.

E. The skin on your leg is \_\_\_\_\_ to the muscle tissue in your leg.

F. When you float face down in a pool, you are lying on your \_\_\_\_\_ surface.

G. The lungs and the heart are located \_\_\_\_\_ to the abdominal organs.

6. Identify which cavity each of the following organs are in:

Heart \_\_\_\_\_

Lungs \_\_\_\_\_

Liver \_\_\_\_\_

Spleen \_\_\_\_\_

Intestines \_\_\_\_\_

Kidneys \_\_\_\_\_

Spinal Cord \_\_\_\_\_

Stomach \_\_\_\_\_

Brain \_\_\_\_\_

Urinary Bladder \_\_\_\_\_

Sex Organs \_\_\_\_\_

Pancreas \_\_\_\_\_

7. Identify the abdominopelvic quadrants and two organs found in each of the quadrants.
  
8. Define homeostasis.
  
9. Define Stress.
  
10. Describe the relationship between stress and homeostasis.
  
11. Describe the feedback mechanisms of the body.
  
12. Give an example of a negative feedback mechanism and describe how it works.
  
13. Give an example of a positive feedback mechanism and describe how it works.

## WORKSHEET - Body Plans and Organization –KEY

1. Define and then contrast the following terms:  
**Anatomy: Study of structures and the relationship of structures to each other**  
**Physiology: Functioning of the specific body parts and systems.**
2. Identify the levels of structural organization beginning with the highest level of organization to the lowest level of organization  
**chemical, cellular, tissue, organs and organ systems**
3. Define Metabolism and then differentiate between anabolic and catabolic processes.  
**Metabolism: the sum of all chemical processes that occur in the body**  
**Anabolic: uses energy to synthesize or manufacture new tissue**  
**Catabolic: breakdown of tissue or chemical structure to produce or generate energy.**
4. Describe how a body would be divided by each of the following types of planes:  
Frontal (coronal) - **divides body into anterior and posterior sections.**  
Midsagittal - **divides body into equal right and left sides.**  
Sagittal - **divides body into right and left sides.**  
Transverse - **divides body into superior and inferior sections.**
5. Identify the correct directional term to complete the following statements.  
A. The liver is **inferior** to the diaphragm  
B. Fingers are located **distal** to the wrist bones.  
C. The skin on the dorsal surface of your body is said to be located on your **posterior** surface.  
D. The great(big) toe is **medial** to the little toe.  
E. The skin on your leg is **superficial** to the muscle tissue in your leg.  
F. When you float face down in a pool, you are lying on your **anterior** surface.  
G. The lungs and the heart are located **superior** to the abdominal organs.
6. Identify which cavity each of the following organs are in:  
Heart **ventral/mediastinal**                      Lungs **ventral/pleural**  
Liver **abdominal**                                      Spleen **abdominal**  
Intestines **abdominal**                              Kidneys **abdominal**  
Spinal Cord **vertebral**                              Stomach **abdominal**  
Brain **cranial**    Urinary Bladder **pelvic**  
Sex Organs **pelvic**

7. Identify the abdominopelvic quadrants and two organs found in each of the quadrants.

Examples might include:

**RUQ- liver, right kidney LUQ- spleen, stomach**

**RLQ- cecum, appendix LLQ-left ovary**

8. Define homeostasis.

**An attempt for the body to maintain a constant internal environment.**

9. Define Stress.

**Any stimulus which creates an imbalance in the body's internal environment.**

10. Describe the relationship between stress and homeostasis.

**Anything that disrupts homeostasis.**

11. Describe what a feedback mechanism is in the body.

**Any circular situation in which information about the status of something is continuously reported to a central control region.**

12. Give an example of a negative feedback mechanism and describe how it works.

**Blood glucose - see example in notes**

13. Give an example of a positive feedback mechanism and describe how it works.

**Milk letdown - see example in notes.**