

**Anatomy and Physiology  
Honors Anatomy**

**Anatomy and Physiology**

1. The study of structures of the human body is called \_\_\_\_\_.
  
2. The study of the processes and functions of the human body is called \_\_\_\_\_.
  - a. The goals of physiology are to understand and predict the body's responses to \_\_\_\_\_ and to understand how the body maintains conditions within a \_\_\_\_\_ of values in the presence of a continually \_\_\_\_\_.

**Structural and Functional Organization**

Using the list below, create a flow map illustrating the levels of organization in the human body.

- |                |       |
|----------------|-------|
| atoms          | _____ |
| cells          | _____ |
| macromolecules | _____ |
| molecules      | _____ |
| organ systems  | _____ |
| organelles     | _____ |
| organism       | _____ |
| organs         | _____ |
| tissues        | _____ |

Using the list of organ systems below, write the organ systems underneath their general functions. No organ system will be used more than once.

**Integration, Coordination and Regulation**

**Maintenance of the Body**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Reproduction and Development**

**Support, Movement, Protection**

\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Cardiovascular System  
Digestive System  
Endocrine System

Integumentary System  
Lymphatic System  
Muscular System

Nervous System  
Reproductive System  
Respiratory System

Skeletal System  
Urinary System

## Characteristics of Life

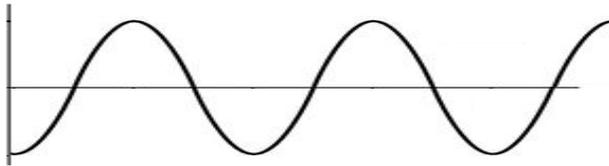
Match the characteristics of life with their descriptions.

- |                         |  |
|-------------------------|--|
| _____ 3. Development    | A. The formation of new cells or new organisms.  |
| _____ 4. Growth         | B. The ability to use energy to perform vital functions.   |
| _____ 5. Metabolism     | C. The changes an organism undergoes through life time.  |
| _____ 6. Organization   | D. The ability of an organism to sense changes in he environment and make adjustments that help maintain its life.                                 |
| _____ 7. Reproduction   | E. The condition in which the parts of an organism have specific relationships to each other and the parts interact to perform specific functions. |
| _____ 8. Responsiveness | F. An increase in size of all or part of the organism.   |

## Homeostasis

9. \_\_\_\_\_ is maintaining a constant, stable environment within the body.
- Conditions whose values can change are called \_\_\_\_\_.
  - Ideal normal values are called \_\_\_\_\_.
  - Increasing or decreasing values around the set point is called the \_\_\_\_\_.

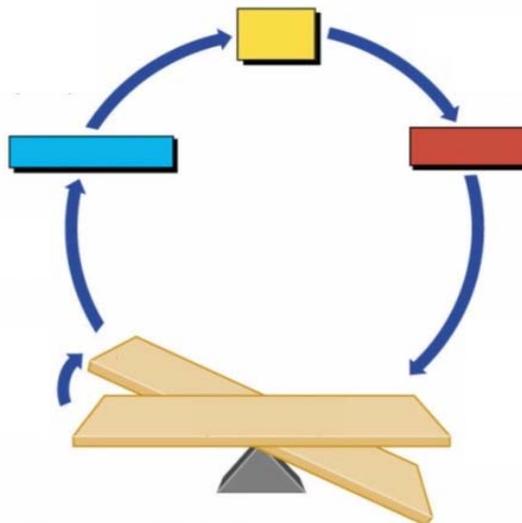
On the graph below, identify the normal range and set point.



10. A \_\_\_\_\_ mechanism is a homeostatic mechanism that responds to a deviation by making the deviation around the set point smaller or resisting the deviation.
- A \_\_\_\_\_ monitors the value of a variable.
  - A \_\_\_\_\_ establishes a set point around which the variable is maintained.
  - An \_\_\_\_\_ can change the value of the variable

Using the list below, label the parts of a negative-feedback mechanism.

- Control center
- Deviation
- Effector
- Receptor
- Set point



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13. A \_\_\_\_\_ mechanism is a homeostatic mechanism that responds to a deviation by making the deviation greater.