

## REVIEW : CHAPTER 13 – Support and Movement

1. For each organ below, indicate the type of Tissue that it is made up of. Some organs can be made up of more than one type of Tissue :

| Organ                                      | Muscle Tissue | Epithelial Tissue | Connective Tissue | Nerve Tissue |
|--------------------------------------------|---------------|-------------------|-------------------|--------------|
| Brain                                      |               |                   |                   |              |
| Ligaments (connect muscles and bones)      |               |                   |                   |              |
| Spinal Cord                                |               |                   |                   |              |
| The linings of internal organs             |               |                   |                   |              |
| Bicep Muscle                               |               |                   |                   |              |
| The Dermis (2 <sup>nd</sup> Layer of Skin) |               |                   |                   |              |
| The Epidermis (Outer Layer of Skin)        |               |                   |                   |              |
| Heart                                      |               |                   |                   |              |

2. Identify the following Body Systems (Organ Systems) by selecting the correct option in the drop-down boxes :

2.1 This Organ System gives structure and stability to the body and protects the internal organs.

2.2 This Body System exchanges Oxygen from the atmosphere with Carbon Dioxide in the blood stream (breathing).

2.3 This Organ System is responsible for the breaking down of food, nutrient absorption and waste elimination.

2.4 This Organ System processes sensory information, controls all movement, and coordinates communication between all the other Body Systems.

2.5 This Organ System helps protect the body against diseases, bacteria and viruses. It is part of the larger Immune System.

2.6 This Body System produces chemicals (hormones) that regulate various body functions.

2.7 This Organ System is responsible for reproduction.

2.8 This Organ System circulates blood throughout the whole body.

2.9 This Organ System System provides movement by pulling on the bones.

2.10 This Body System eliminates certain types of wastes and maintains the right amount of water in the body.

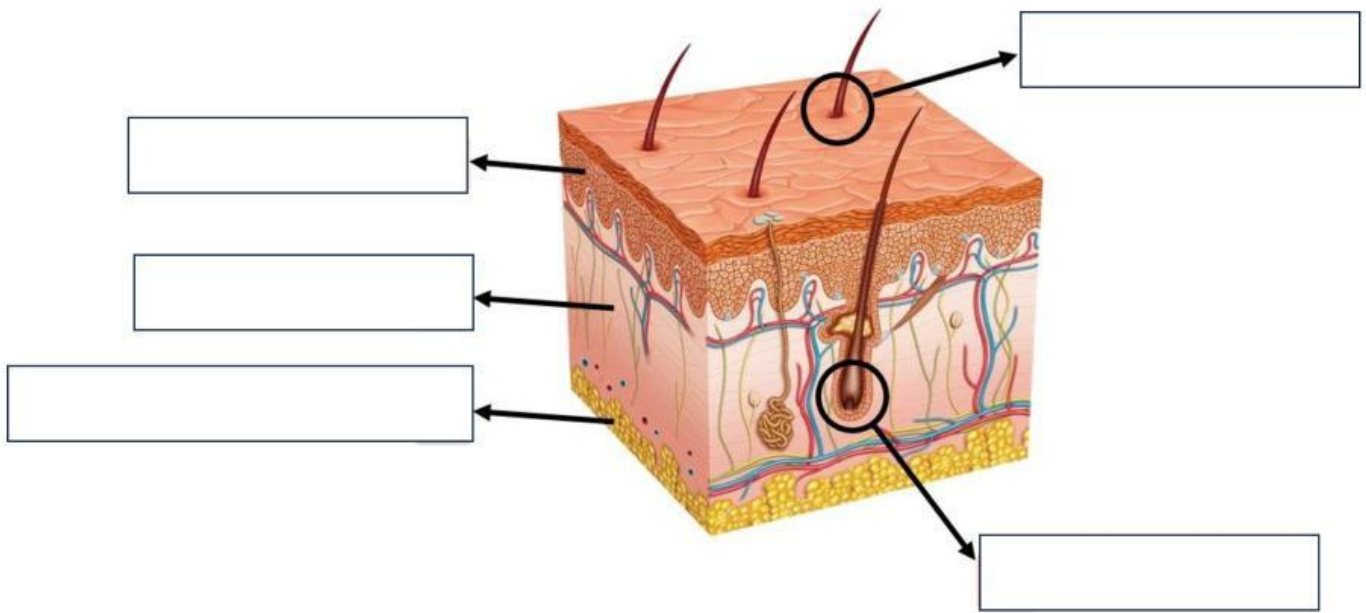
2.11 This Organ System provides protection for your whole body against the external world.

**3. Place the following Organs/Parts with the Organ System they fit with the best :**

|         |                |               |         |
|---------|----------------|---------------|---------|
| Heart   | Intestines     | Spinal Cord   | Testes  |
| Lungs   | Bones          | Vertebrae     | Stomach |
| Skin    | Kidneys        | Adrenal Gland | Brain   |
| Bladder | Hair and Nails | Thyroid       | Uterus  |

|                             |                           |                           |
|-----------------------------|---------------------------|---------------------------|
| <b>Reproductive System</b>  | <b>Nervous System</b>     | <b>Digestive</b>          |
|                             |                           |                           |
| <b>Skeletal System</b>      | <b>Endocrine System</b>   | <b>Urinary System</b>     |
|                             |                           |                           |
| <b>Integumentary System</b> | <b>Respiratory System</b> | <b>Circulatory System</b> |
|                             |                           |                           |

4. Label the skin cross section below, and fill in the blanks to complete the statements below the diagram :



The skin's outer surface consists of dead cells filled with \_\_\_\_\_ .

The second layer of skin is much thicker and consists of \_\_\_\_\_  
tissue. This layer contains follicles, sweat glands, blood vessels and \_\_\_\_\_ .

The very bottom layer in the diagram, that is technically not part of the skin, consists of  
loosely arranged fat cells and \_\_\_\_\_ . The fat cells help to cushion and  
\_\_\_\_\_ your body .

## 5. Select the correct answers for the following question :

### 5.1 A blister forms ...

- A) When skin is exposed to intense friction for a very long period of time, and the outer skin thickens to protect the deeper layers of skin.
- B) When skin is exposed to intense friction for a short period of time and the outer layer of the skin separates from the 2<sup>nd</sup> and fluid fills the space in between.
- C) When friction is not too intense but the skin thickens over time in the area where the friction is experienced.

### 5.2 A callus forms ...

- A) When skin is exposed to intense friction for a very long period of time, and the outer skin thickens to protect the deeper layers of skin.
- B) When skin is exposed to intense friction for a short period of time and the outer layer of the skin separates from the 2<sup>nd</sup> and fluid fills the space in between.
- C) When friction is not too intense but the skin thickens over time in the area where the friction is experienced.

### 5.3 In moderate amounts of sunlight, the skin produces its own ...

- A) Vitamin A
- B) Vitamin B
- C) Vitamin C
- D) Vitamin D

### 5.4 Whenever a hair is touched, you can sense it, because ...

- A) Follicles have blood cells.
- B) Follicles have nerve endings.
- C) Follicles have glands that produce sweat and oil.
- D) Vitamin D

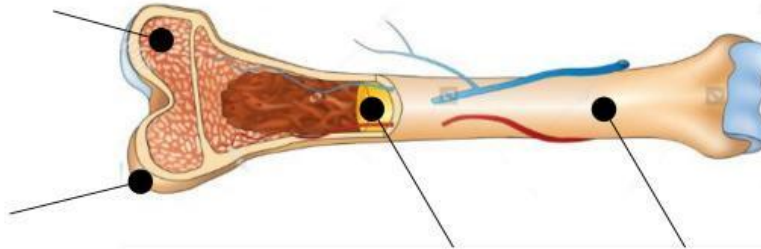
**6. Label the bone structure below :**

Spongy Bone

Compact Bone

Bone Marrow

Periosteum



**7. Use the words in the Word Bank to complete the statements below :**

Ligaments

Joint

Red

Periosteum

Cartilage

Blood Cells

Yellow

Fat

Bones are covered with a tough, white tissue called \_\_\_\_\_.

In children all Bone Marrow is \_\_\_\_\_, and it makes

\_\_\_\_\_. In adults Bone Marrow is \_\_\_\_\_,

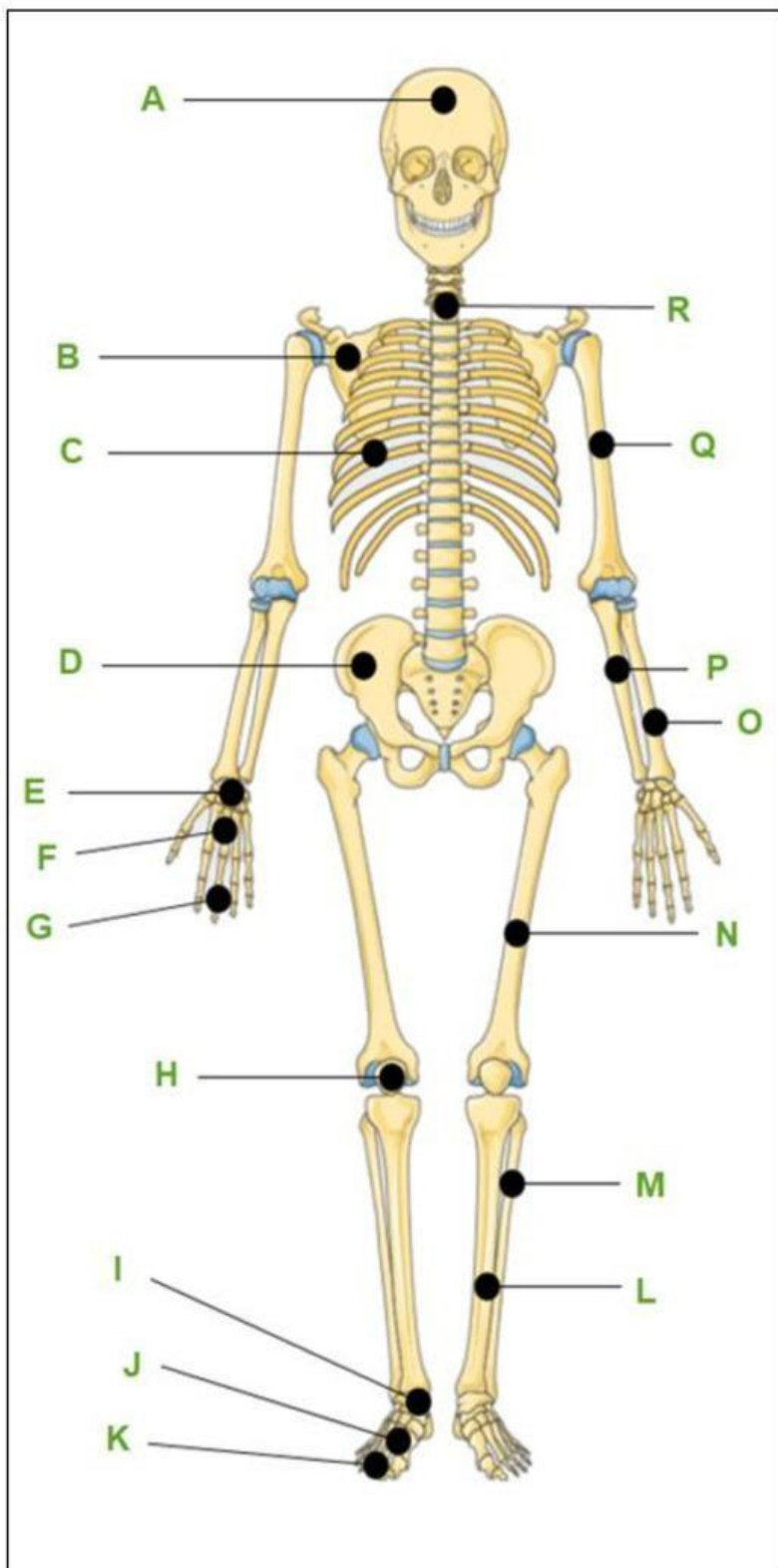
because it is primarily made of \_\_\_\_\_.

\_\_\_\_\_ is a type of Connective Tissue that is softer and more

flexible than bone. Two or more bones meet at a \_\_\_\_\_.

Joints are held together by \_\_\_\_\_.

7. Label all the bones in the skeletal system shown below by selecting the correct option from the drop-down boxes for each letter :



A :  
B :  
C :  
D :  
E :  
F :  
G :  
H :  
I :  
J :  
K :  
L :  
M :  
N :  
O :  
P :  
Q :  
R :

8. For each statement below, decide whether it is TUE or FALSE :

| Statement                                                                                     | FALSE | TRUE |
|-----------------------------------------------------------------------------------------------|-------|------|
| Cartilage is a type of epithelial tissue.                                                     |       |      |
| Cartilage is a type of connective tissue.                                                     |       |      |
| Cartilage is softer and more flexible than bone because it contains less Vitamin D than bone. |       |      |
| Cartilage is softer than bone because it contains less Calcium than bone.                     |       |      |
| A Joint is where 2 or more bones meet.                                                        |       |      |
| Your elbow is a Movable Joint.                                                                |       |      |
| Your knee is an Immovable Joint.                                                              |       |      |
| Your skull is an Immovable Joint.                                                             |       |      |
| Ligaments are connective tissue that hold bones at a joint together.                          |       |      |
| Tendons are bands of connective tissue that connect voluntary muscles to bones.               |       |      |
| Your Skull protects your Brain.                                                               |       |      |
| Your Pelvis Bone protects your Lungs.                                                         |       |      |
| Your Rib Cage protects your Heart and Lungs.                                                  |       |      |
| Calcium is needed to make bones strong and hard.                                              |       |      |
| If your body needs Calcium, it can remove some Calcium that has been stored in your bones.    |       |      |
| Yellow Bone Marrow produces Blood Cells.                                                      |       |      |

**9. Drag and Drop each statement onto the correct Muscle Type :**

Muscles you cannot control.

Muscles you can control.

Lungs breathing air.

Heart pumping blood.

Fingers gripping a pen.

Stomach digesting food.

Also called Smooth Muscle.

Have striations.

Have different layers of Proteins.

Cardiac Muscle.

Also called Striated Muscle.

Legs walking or jumping.

**Involuntary Muscles**

**Voluntary Muscles**

**10. Use the words in the Word Bank to complete the statements below :**

|        |         |         |        |
|--------|---------|---------|--------|
| ATP    | Blood   | ATP     | Oxygen |
| Oxygen | Glucose | Glucose |        |

Muscles need a constant supply of energy to function. This energy comes to muscles in the form of \_\_\_\_\_ carried by your \_\_\_\_\_ (these nutrients originate from the food you eat). But muscles cannot use \_\_\_\_\_ – it needs to be broken down to produce \_\_\_\_\_ (a form of energy that muscles can use).

Cellular Respiration uses \_\_\_\_\_ (that you breathe into your lungs) to make \_\_\_\_\_ from Glucose. That is why you start to breathe rapidly when your muscles are working hard : to increase the amount of \_\_\_\_\_ you need for Cellular Respiration.

**11. Use the words in the Word Bank to complete the statements below :**

|             |          |             |      |
|-------------|----------|-------------|------|
| homeostasis | contract | temperature | heat |
|-------------|----------|-------------|------|

Muscles produce a lot of \_\_\_\_\_ when they \_\_\_\_\_. This heat warms the body. When you are cold, you may begin to shiver or get goose bumps. This happens because your muscles are contracting in order to produce heat to maintain a stable body \_\_\_\_\_. This state of balance is called \_\_\_\_\_.