**Worksheet**

**Group 1**

1. Fill in the gaps using the mold and information in the atlas and the internet

**The skeleton of the head** consists of – cranial bones - .............................................

- .............................................

- ..............................................

- ..............................................

-the facial bones are - ...........................................(fixed bone)

- .......................................(movable bone)

The cranial bones protect............................

**2. Match the human skeleton function (column A) with its definition (column B) by writing the function’s number in front of the definition’s letter.**

**A B**

1. support ......a)the skeletal muscles are attached to the bones, creating

levers, which provide the principal mechanics for

movement

2. storage ......b) the development of blood red cells that takes place in the bone marrow

3. blood cell production ......c­) the bone matrix can store calcium and phosphorus

4. protection ......d) the skeleton provides the framework which supports

the body and maintains its shape

5. movement ......e) the skeleton helps to protect our many vital internal

organs from being damaged (the skull protects the brain, the vertebrae protect the spinal cord, the rib cage protects the

lungs, heart and major blood vessels

**3. The skeleton represents almost 11% of the body’s weight.**

The bone consists of 9% water and 92% bone matrix: ground substance (calcium and magnesium) and

organic substance (ossein and collagen fibers ).

Using the bone structure percentages, calculate how much bone matrix the skeleton of a person weighing 73 kg has.

**4. The bones, muscles and joints create the lever systems learnt in Physics.**

**Mention the role of the components of a lever in the human body!**

**a) A lever consists of :**

1. F – fulcrum ......a) the bones
2. R –resistance ......b) the muscles
3. E- effort ......c) contracted muscles

**b) The joint between the head and the first vertebra is a type .......... lever.**

**c) Draw this type of lever!**

**5. If you match the word in column A with the right definition in column B, you’ll discover the main diseases of the human skeleton :**

**A B**

1. STRAIN ......a) Damage to one or more ligaments in a joint, often.

caused by trauma or the joint being taken beyond its

functional range of motion

1. FRACTURE ......b) A partial or complete break in the continuity of the

bone; they are either closed (the overlying skin is intact)

or compound/open (involve wounds)

1. KYPHOSIS ......c­) Acute injury that occurs to a muscle, tendon or both
2. SPRAIN ......d) Excessive curvature of the spine (roundback)

1. SCOLIOSIS ......e) The spine has sideways curve (usually appears when

only a part of the body is carrying weights)

**Worksheet**

**Group 2**

**1. The skeleton of the chest** consists of - .......................(breastbone)

- 33-34.....................................which from the

.....................................................

- 12 pairs of ..........................

* The first 7 rib pairs are directly connected to the .................
* The next 3 rib pairs are indirectly connected to the sternum via the 7th pair (................. ribs)
* ....................................(floating ribs)

A vertebra consists of - ..................................

- ..................................

- ..................................

The curves of the spine are: - ..................... curve(7 vertebrae)-the topmost bones:- atlas and - axis

* ..................... curve(12 vertebrae)
* ......................curve( 5 vertebrae)
* ...................... curve( 5 vertebrae fused together)
* ...................... curve( 4-5 vertebrae fused together)

**2. Match the human skeleton function (column A) with its definition (column B) by writing the function’s number in front of the definition’s letter.**

**A B**

1. support ......a)the skeletal muscles are attached to the bones, creating

levers, which provide the principal mechanics for

movement

1. storage .....b)the development of blood redcells that takes place in the

bone marrow

1. blood cell production ......c­) the bone matrix can store calcium and phosphorus

1. protection ......d) the skeleton provides the framework which supports

the body and maintains its shape

1. movement ......e) the skeleton helps to protect our many vital internal

organs from being damaged (the skull protects the brain, the vertebrae protect the spinal cord, the rib cage, protects the

lungs, heart and major blood vessels

**3. The skeleton represents almost 11% of the body’s weight.**

The bone consists of 9% water and 92% bone matrix: ground substance (calcium and magnesium) and

organic substance (ossein and collagen fibers ).

Using the bone structure percantage, calculate how much bone matrix the skeleton of a person weighing 96 kg has.

**4. The bones, muscles and joints create the lever systems learnt in Physics.**

**Mention the role of the components of a lever in the human body!**

**a) A lever consists of :**

1. F – fulcrum ......a) the bones
2. R –resistance ......b) the muscles
3. E- effort ......c) contracted muscles

**b) A type ..........** **lever is found in the lower leg when someone stands on tiptoes.**

**c) Draw this type of lever!**

**5. If you match the word in column A with the right definition in column B, you’ll discover the main diseases of the human skeleton :**

**A B**

1. STRAIN ......a) Damage to one or more ligaments in a joint, often.

caused by trauma or the joint being taken beyond its

functional range of motion

1. FRACTURE ......b) A partial or complete break in the continuity of the

bone; they are either closed (the overlying skin is intact)

or compound/open (involve wounds)

1. KYPHOSIS ......c­) Acute injury that occurs to a muscle, tendon or both
2. SPRAIN ......d) Excessive curvature of the spine (roundback)

1. SCOLIOSIS ......e) The spine has sideways curve (usually appears when

only a part of the body is carrying weights)

**Worksheet**

**Group 3**

**1. The skeleton of the arms** is connected to the chest via *the pectoral girdle*

Consisting of- ...................

- ....................

The bones of the arm are - the bone of the lower arm - .........................

- the bone of the upper arm - .........................

- ..........................

- the bones of the hand - the bones of the wrist (.........................)

- the bones of the palm (................................)

- the bones of the fingers (............................)

**2. Match the human skeleton function (column A) with its definition (column B) by writing the function’s number in front of the definition’s letter.**

**A B**

1. support ......a)the skeletal muscles are attached to the bones, creating

levers, which provide the principal mechanics for

movement

1. storage ....b) the development of blood red cells that takes place in the

bone marrow

1. blood cell production ......c­) the bone matrix can store calcium and phosphorus

1. protection ......d) the skeleton provides the framework which supports

the body and maintains its shape

1. movement ......e) the skeleton helps to protect our many vital internal

organs from being damaged (the skull protects the brain, the vertebrae protect the spinal cord, the rib cage, protects the

lungs, heart and major blood vessels

**3. The skeleton represents almost 11% of the body’s weight.**

The bone consists of 9% water and 92% bone matrix: ground substance (calcium and magnesium) and

organic substance (ossein and collagen fibers ).

Using the bone structure percentage, calculate how much bone matrix the skeleton of a person weighing 53 kg has.

**4. The bones, muscles and joints create the lever systems learnt in Physics.**

**Mention the role of the components of a lever in the human body!**

**a) A lever consists of :**

1. F – fulcrum ......a) the bones
2. R –resistance ......b) the muscles
3. E- effort ......c) contracted muscles

**b) A type ..........** **lever is found in the lower leg when someone stands on tiptoes.**

**c) Draw this type of lever!**

**5. If you match the word in column A with the right definition in column B, you’ll discover the main diseases of the human skeleton :**

**A B**

1. STRAIN ......a) Damage to one or more ligaments in a joint, often.

caused by trauma or the joint being taken beyond its

functional range of motion

1. FRACTURE ......b) A partial or complete break in the continuity of the

bone; they are either closed (the overlying skin is intact)

or compound/open (involve wounds)

1. KYPHOSIS ......c­) Acute injury that occurs to a muscle, tendon or both
2. SPRAIN ......d) Excessive curvature of the spine (roundback)

1. SCOLIOSIS ......e) The spine has sideways curve (usually appears when

only a part of the body is carrying weights)

**Worksheet**

**Group 4**

**1. The skeleton of the legs** is connected to the chest via *the pelvic girdle*

consisting of - ...................

- ....................

The bones of the leg are - the bone of the thigh - .........................

- the patella(kneecap) is near the knee’s joint

- the bones below the knee - .........................

- .........................

- the bones of the ankle (.........................)

- the bones of the foot (................................)

- the bones of the toes (............................)

**2. Match the human skeleton function (column A) with its definition (column B) by writing the function’s number in front of the definition’s letter.**

**A B**

1. support ......a)the skeletal muscles are attached to the bones, creating

levers, which provide the principal mechanics for

movement

1. storage ...b) the development of blood red cells that takes place in the

bone marrow

1. blood cell production ......c­) the bone matrix can store calcium and phosphorus

1. protection ......d) the skeleton provides the framework which supports

the body and maintains its shape

1. movement ......e) the skeleton helps to protect our many vital internal

organs from being damaged (the skull protects the brain, the vertebrae protect the spinal cord, the rib cage, protects the

lungs, heart and major blood vessels

**3. The skeleton represents almost 11% of the body’s weight.**

The bone consists of 9% water and 92% bone matrix: ground substance (calcium and magnesium) and

organic substance (ossein and collagen fibers ).

Using the bone structure percentage, calculate how much bone matrix the skeleton of a person weighing 67 kg has.

**4. The bones, muscles and joints create the lever systems learnt in Physics.**

**Mention the role of the components of a lever in the human body!**

**a) A lever consists of :**

1. F – fulcrum ......a) the bones
2. R –resistance ......b) the muscles
3. E- effort ......c) contracted muscles

**b) A type ..........** **lever is found in the lower leg when someone stands on tiptoes.**

**c) Draw this type of lever!**

**5. If you match the word in column A with the right definition in column B, you’ll discover the main diseases of the human skeleton :**

**A B**

1. STRAIN ......a) Damage to one or more ligaments in a joint, often.

caused by trauma or the joint being taken beyond its

functional range of motion

1. FRACTURE ......b) A partial or complete break in the continuity of the

bone; they are either closed (the overlying skin is intact)

or compound/open (involve wounds)

1. KYPHOSIS ......c­) Acute injury that occurs to a muscle, tendon or both
2. SPRAIN ......d) Excessive curvature of the spine (roundback)

1. SCOLIOSIS ......e) The spine has sideways curve (usually appears when

only a part of the body is carrying weights)

**Worksheet**

**Group 5**

**1. The skeleton of the arms** is connected to the chest via *the pectoral girdle*

Consisting of- ...................

- ....................

The bones of the arm are - the bone of the lower arm - .........................

- the bone of the upper arm - .........................

- ..........................

- the bones of the hand - the bones of the wrist (.........................)

- the bones of the palm (................................)

- the bones of the fingers (............................)

**2. Match the human skeleton function (column A) with its definition (column B) by writing the function’s number in front of the definition’s letter.**

**A B**

1. support ......a)the skeletal muscles are attached to the bones, creating

levers, which provide the principal mechanics for

movement

1. storage ...b) the development of blood red cells that takes place in the

bone marrow

1. blood cell production ......c­) the bone matrix can store calcium and phosphorus

1. protection ......d) the skeleton provides the framework which supports

the body and maintains its shape

1. movement ......e) the skeleton helps to protect our many vital internal

organs from being damaged (the skull protects the brain, the vertebrae protect the spinal cord, the rib cage, protects the

lungs, heart and major blood vessels

**3. The skeleton represents almost 11% of the body’s weight.**

The bone consists of 9% water and 92% bone matrix: ground substance (calcium and magnesium) and

organic substance (ossein and collagen fibers ).

Using the bone structure percentage, calculate how much bone matrix the skeleton of a person weighing 92 kg has.

**4. The bones, muscles and joints create the lever systems learnt in Physics.**

**Mention the role of the components of a lever in the human body!**

**a) A lever consists of :**

1. F – fulcrum ......a) the bones
2. R –resistance ......b) the muscles
3. E- effort ......c) contracted muscles

**b) A type ..........** **lever is found when the joints are flexed.**

**c) Draw this type of lever!**

**5. If you match the word in column A with the right definition in column B, you’ll discover the main diseases of the human skeleton :**

**A B**

1. STRAIN ......a) Damage to one or more ligaments in a joint, often.

caused by trauma or the joint being taken beyond its

functional range of motion

1. FRACTURE ......b) A partial or complete break in the continuity of the

bone; they are either closed (the overlying skin is intact)

or compound/open (involve wounds)

1. KYPHOSIS ......c­) Acute injury that occurs to a muscle, tendon or both
2. SPRAIN ......d) Excessive curvature of the spine (roundback)

1. SCOLIOSIS ......e) The spine has sideways curve (usually appears when

only a part of the body is carrying weights)

**Worksheet**

**Group 6**

**1. The skeleton of the legs** is connected to the chest via *the pelvic girdle*

consisting of - ...................

- ....................

The bones of the leg are - the bone of the thigh - .........................

- the patella(kneecap) is near the knee’s joint

- the bones below the knee - .........................

- .........................

- the bones of the ankle (.........................)

- the bones of the foot (................................)

- the bones of the toes (............................)

**2. Match the human skeleton function (column A) with its definition (column B) by writing the function’s number in front of the definition’s letter.**

**A B**

1. support ......a)the skeletal muscles are attached to the bones, creating

levers, which provide the principal mechanics for

movement

1. storage ...b) the development of blood red cells that takes place in the

bone marrow

1. blood cell production ......c­) the bone matrix can store calcium and phosphorus

1. protection ......d) the skeleton provides the framework which supports

the body and maintains its shape

1. movement ......e) the skeleton helps to protect our many vital internal

organs from being damaged (the skull protects the brain, the vertebrae protect the spinal cord, the rib cage, protects the

lungs, heart and major blood vessels

**3. The skeleton represents almost 11% of the body’s weight.**

The bone consists of 9% water and 92% bone matrix: ground substance (calcium and magnesium) and

organic substance (ossein and collagen fibers ).

Using the bone structure percentage, calculate how much bone matrix the skeleton of a person weighing 66 kg has.

**4. The bones, muscles and joints create the lever systems learnt in Physics.**

**Mention the role of the components of a lever in the human body!**

**a) A lever consists of :**

1. F – fulcrum ......a) the bones
2. R –resistance ......b) the muscles
3. E- effort ......c) contracted muscles

**b) A type ..........** **lever is found in the lower leg when someone stands on tiptoes.**

**c) Draw this type of lever!**

**5. If you match the word in column A with the right definition in column B, you’ll discover the main diseases of the human skeleton :**

**A B**

1. STRAIN ......a) Damage to one or more ligaments in a joint, often.

caused by trauma or the joint being taken beyond its

functional range of motion

1. FRACTURE ......b) A partial or complete break in the continuity of the

bone; they are either closed (the overlying skin is intact)

or compound/open (involve wounds)

1. KYPHOSIS ......c­) Acute injury that occurs to a muscle, tendon or both
2. SPRAIN ......d) Excessive curvature of the spine (roundback)

1. SCOLIOSIS ......e) The spine has sideways curve (usually appears when

only a part of the body is carrying weights)