

# SKELETAL SYSTEM

School House Rock: Bones Music Video



## Cool Facts

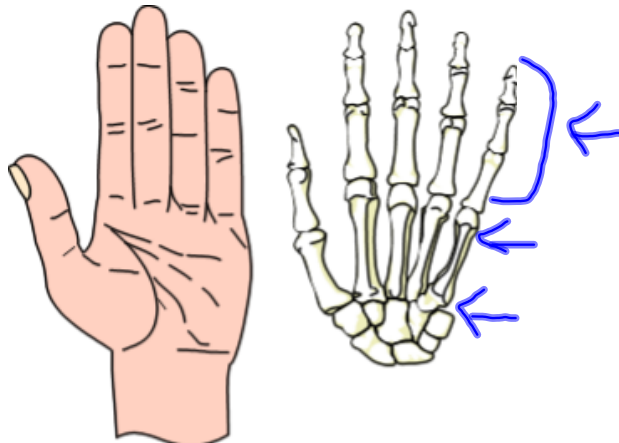
Did you know?

How many bones do you think there are in the human body?

Pull



Count the bones in each finger (3 in each finger, 2 in each thumb). These bones add up to what?



There are also 5 more bones (metacarpals) in each hand, and 9 more (carpals) in the wrist.

Brainpop Video: Skeletal System

# THE INSIDE STORY

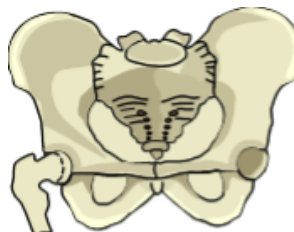
Just like the boards of a house, your bones are the framework of the human body. Your skeletal system gives your body shape.



The hard bones of your skull protect your brain and your eyes. Ribs form a cage that protect your heart and lungs.



Bones also make red blood cells. Red blood cells carry oxygen to all your body cells and carry away cell wastes.

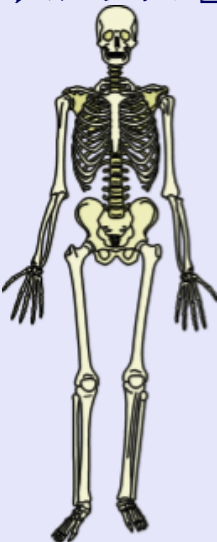


Skeletal System Interactive



## Purpose of the Skeletal System:

1. The skeleton provides the framework for the body. It gives the body structure and support.
2. The skeleton protects organs in the body.
3. Blood Cell production.
4. Movement.
5. Mineral storage.



## **Index Card Activity - Types of Bones**

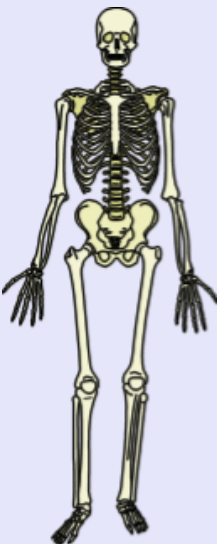
**The Mystery of The Skeletal System**



**Skeletal System Video**



**Skeletal System Game**





# The Skeletal System

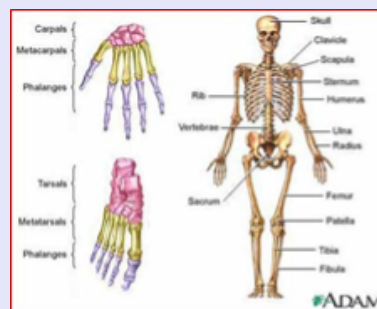
Four different types of bones:

1) Long bones: provide support, and help your body move.

Ex: arms and legs

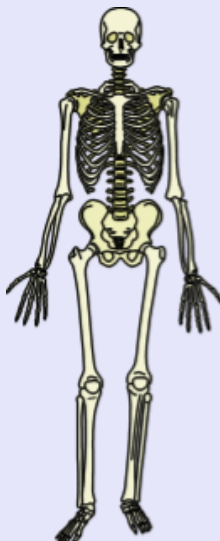
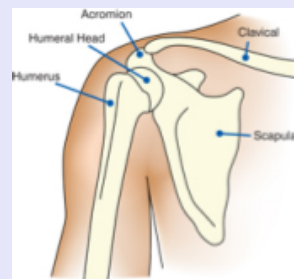


2) Short bones: shape body. Help with movement. Ex: Fingers and toes



3) Flat bones: protection for organs, provide place for muscles to attach.

Ex: Ribs, hip, shoulder

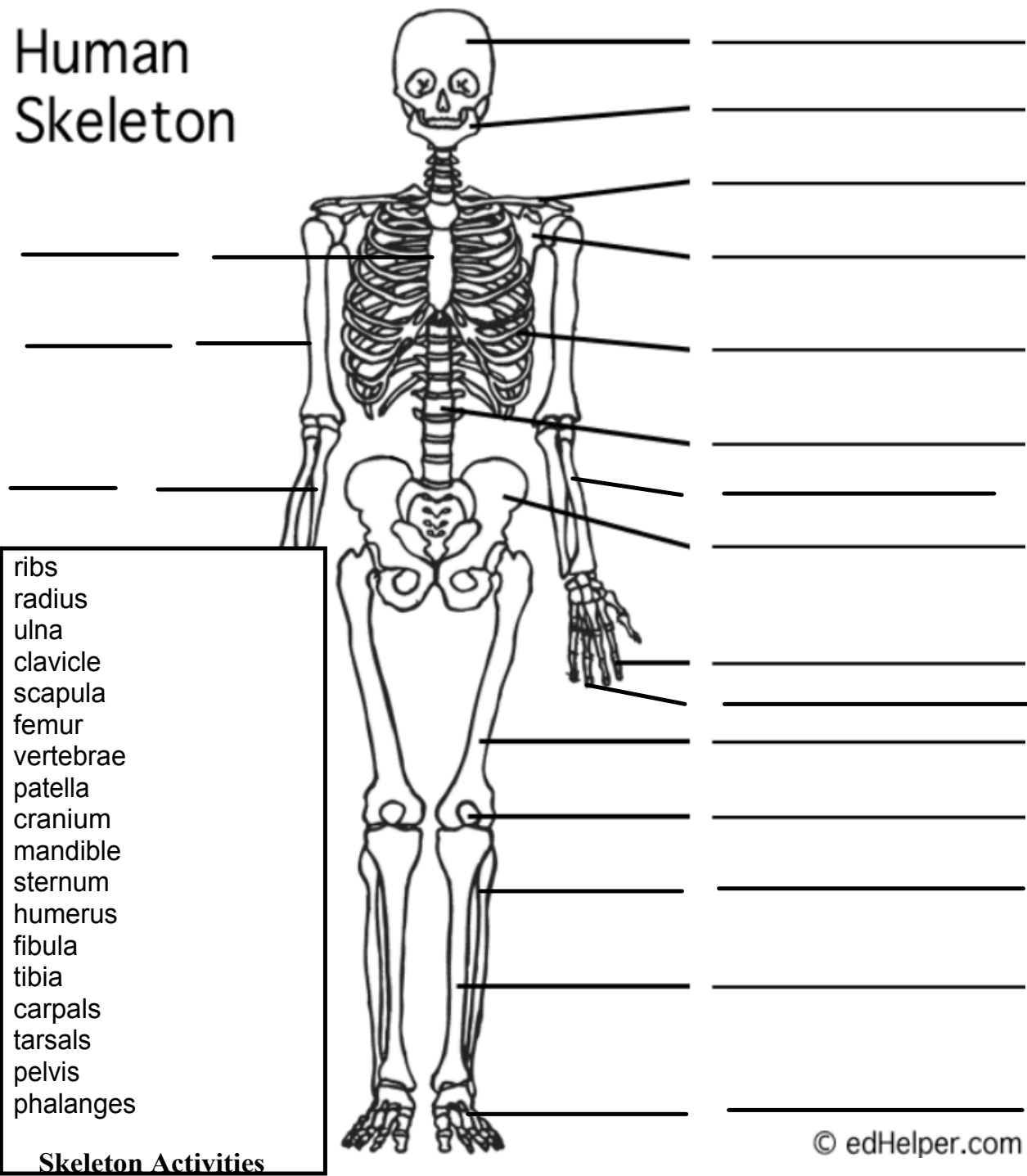


4) Irregular bones: smaller bones, different shapes.

Ex: vertebrae, patella.



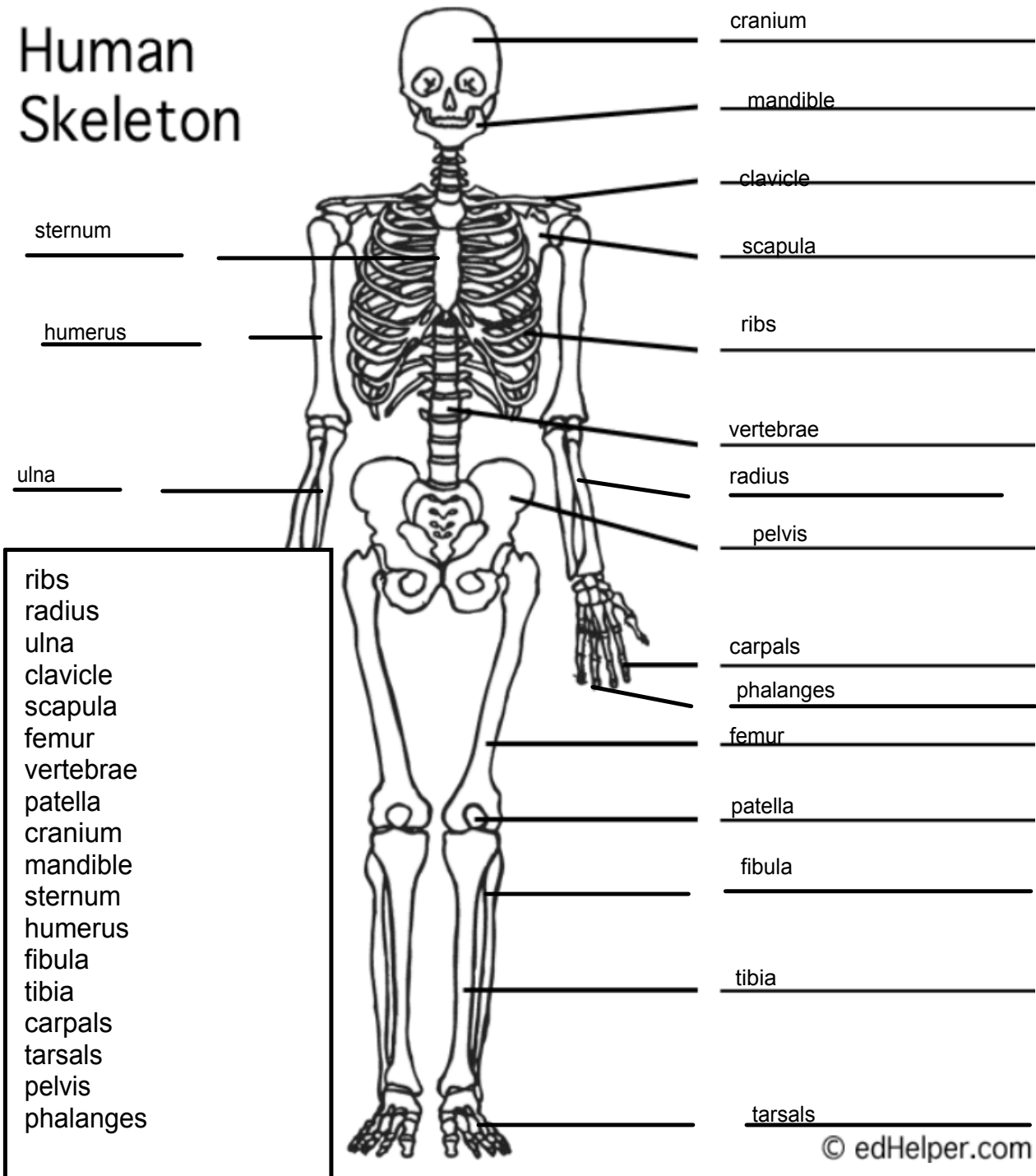
# Human Skeleton



- ribs
  - radius
  - ulna
  - clavicle
  - scapula
  - femur
  - vertebrae
  - patella
  - cranium
  - mandible
  - sternum
  - humerus
  - fibula
  - tibia
  - carpals
  - tarsals
  - pelvis
  - phalanges
- Skeleton Activities**

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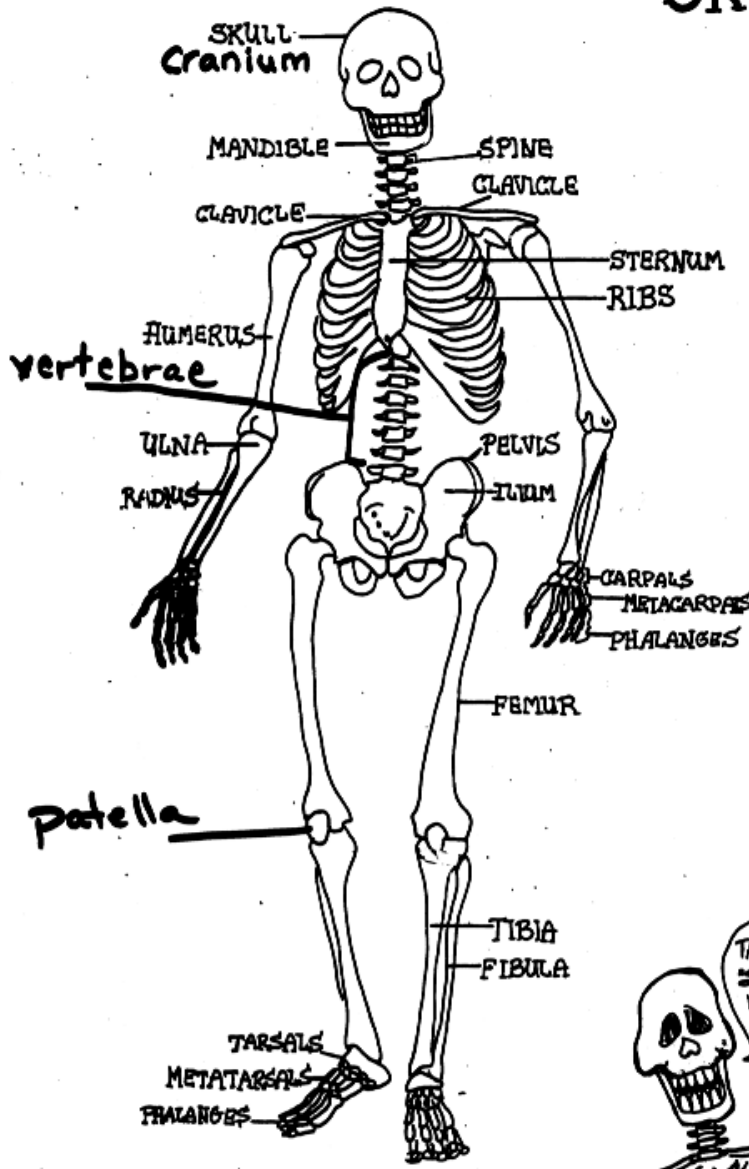
# Human Skeleton



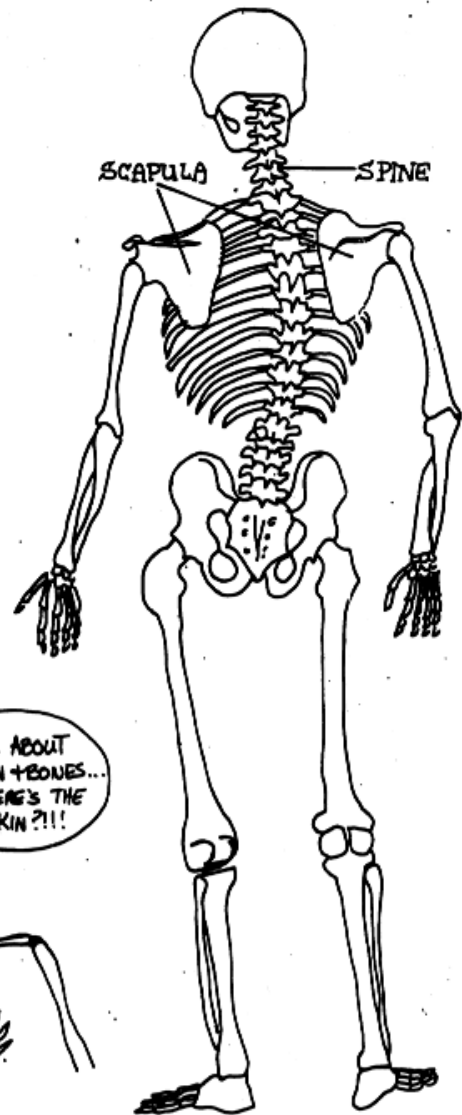


# 'DEM BONES'

## SKELETON



THE FRAMEWORK OF THE BODY



13.

Look at the words in the word bank and label the bones of the skeletal system. Remove the covers to reveal the correct name.

**Word Bank**

Common Name	Scientific Name
skull (cranium)	collarbone (clavicle)
tailbone (coccyx)	shoulder blade (scapula)
kneecap (patella)	thighbone (femur)
hipbone (pelvis)	lower arm bone (radius)
jawbone (mandible)	
backbone (vertebrae)	
rib	
shinbone (tibia)	



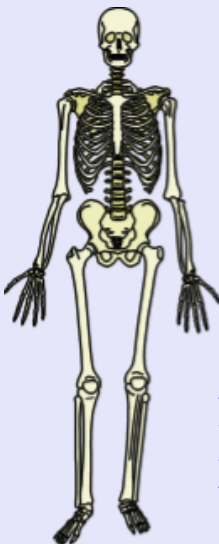
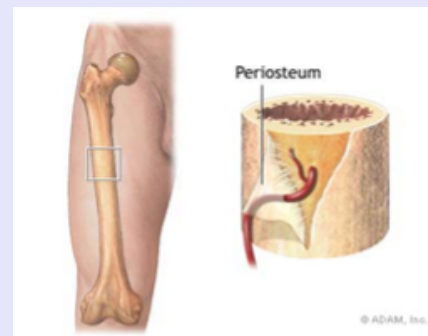
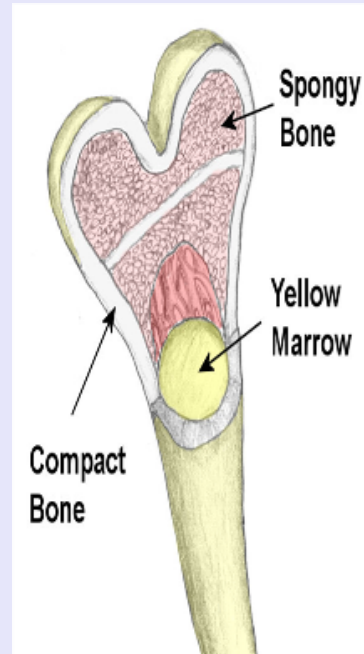
## Make-up of the Long Bone

Marrow: center of the bone, produces red blood cells and stores fat.

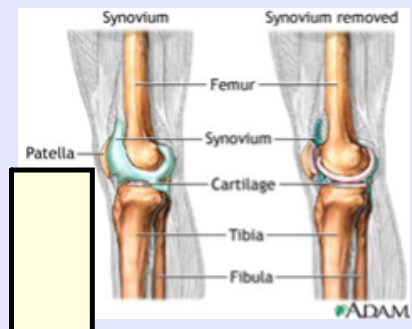
Spongy bone: porous part of bone, lightweight and allows for easier movement.

Calcified bone (compact bone): hard portion, used for protection.

Periosteum: a thick two-layered membrane covering the surface of bones. Contains blood vessels and nerves.



Cartilage: rubbery substance, protects bones from wearing down. Also, provides structure for ears, nose, etc...



## Four Different types of joints:

1) **Ball and socket:** one bone sits inside the other, allows for lots of movement.

Ex: Hip and shoulder

2) **Hinge joint:** provides back and forth movement.

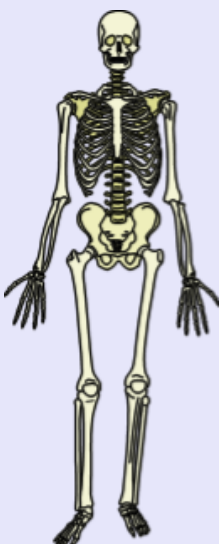
Ex: Knee and elbow

3) **Gliding joint:** back and forth, plus side to side.

Ex: Wrist and ankle

4) **Pivot joint:** one bone pivots around another.

Ex: Neck



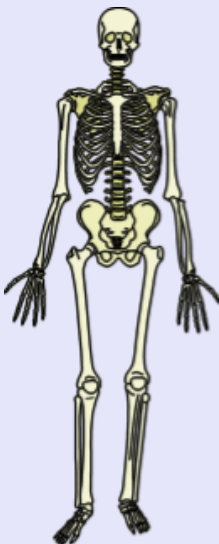
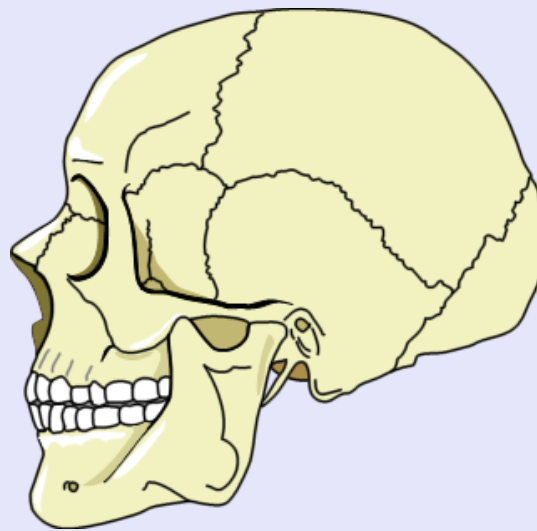
Brainpop Video: Joints



Casing the Joint










**Immovable Joint: Where two bones join but they do not move. Ex. cranium**



## YOUR JOINTS (answer key)

Label the five joints pictured below. Also, list examples of where each kind of joint is found.

Kind of Joint	Joint	Man-made Equal	Example
<input type="text"/>			<input type="text"/> <input type="text"/>
<input type="text"/>			<input type="text"/> <input type="text"/>
<input type="text"/>		No Man-made Equal	<input type="text"/> <input type="text"/>
<input type="text"/>		No Man-made Equal	<input type="text"/>
<input type="text"/>		No Man-made Equal	<input type="text"/>

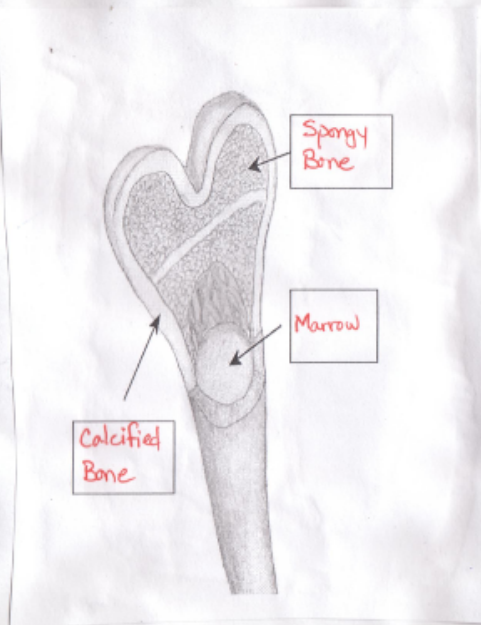
<b>Word Bank</b>		<b>Examples</b>	
<b>Kind of Joint</b>			
Ball and socket joint		knee	spine
Hinge joint		hip	wrist
Gliding joint		elbow	shoulder
Pivot joint		head & neck	
Immovable joint		skull	

Bone and Joint Quiz





## Inside the bone



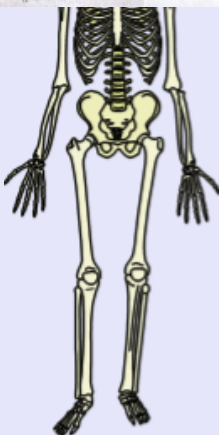
Marrow - center of bone where red blood cells are produced

Spongy Bone - porous and light weight portion of the bone.

Calcified Bone - hard portion of the bone, used for protection.

System

Skeletal

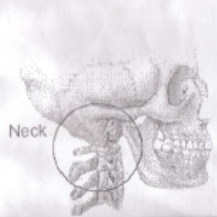


### Gliding Joint



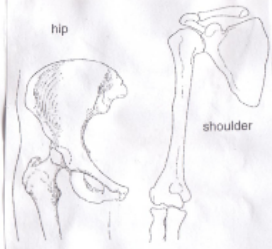
- Back and forth
- side to side

### Pivot Joint



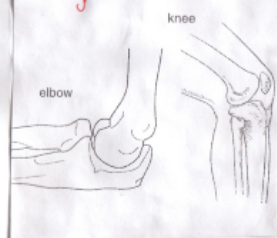
- one bone fits around another

### Ball and Socket Joint

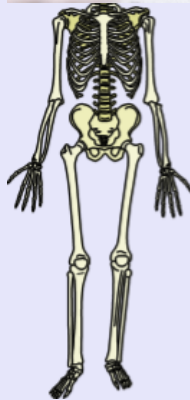
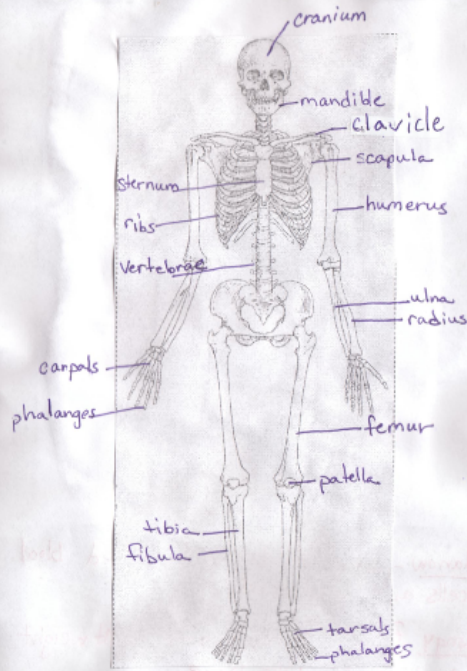


- one bone sits inside another.
- lots of motion

### Hinge Joint



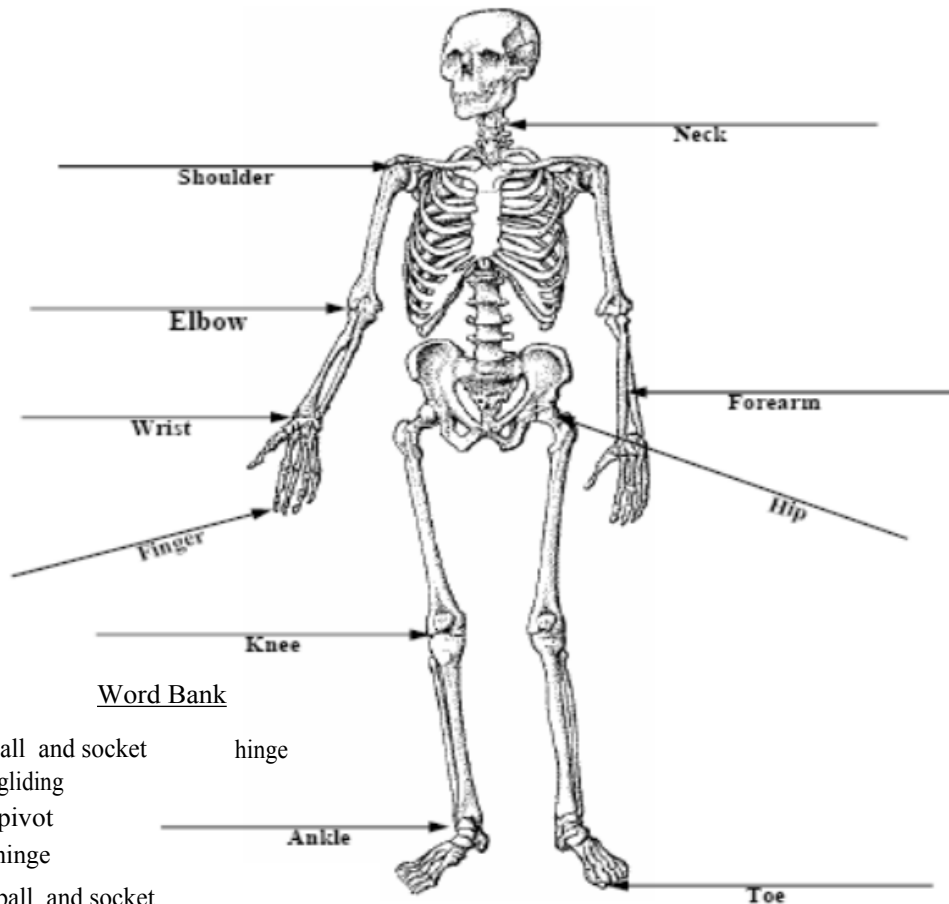
- Back and forth motion



## LEG BONE'S CONNECTED TO THE HIP BONE

The place where two or more bones meet is called a joint. Joints are either movable or immovable. There are four kinds of movable joints: *hinge*, *pivot*, *gliding* and *ball-and-socket*. Label each joint on the skeleton below.

Drag the word from the word bank to label each joint.



### Word Bank

ball and socket      hinge  
gliding  
pivot  
hinge  
ball and socket  
pivot  
gliding



Created By



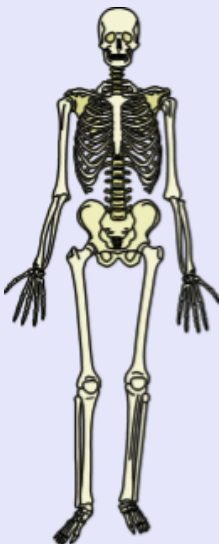
In addition to bones...

Synovial fluid: lubricant that prevents bones from wearing down.

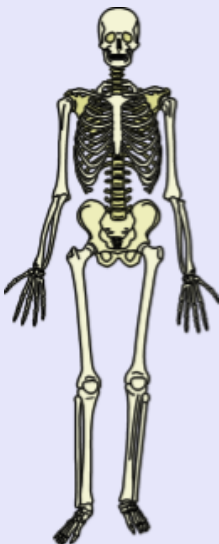
Ligaments: connective tissue that connects two bones.

Tendons: connect bone to muscle.

Cartilage: firm, rubbery substance that helps protect bones. It also provides structure for ears, nose, ...



## Jeopardy game on the skeletal system

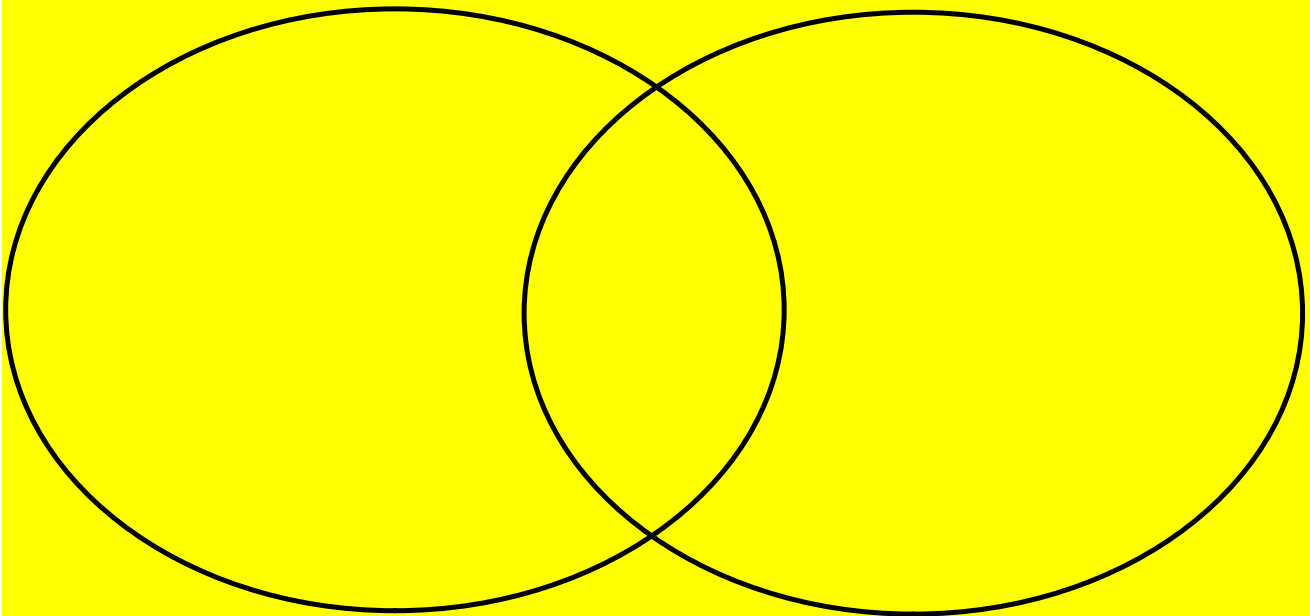


**1. Name five functions of the skeleton:**

**2. Explain why an infant has more cartilage than an adult.**



**4. Compare and contrast two types of joints.**



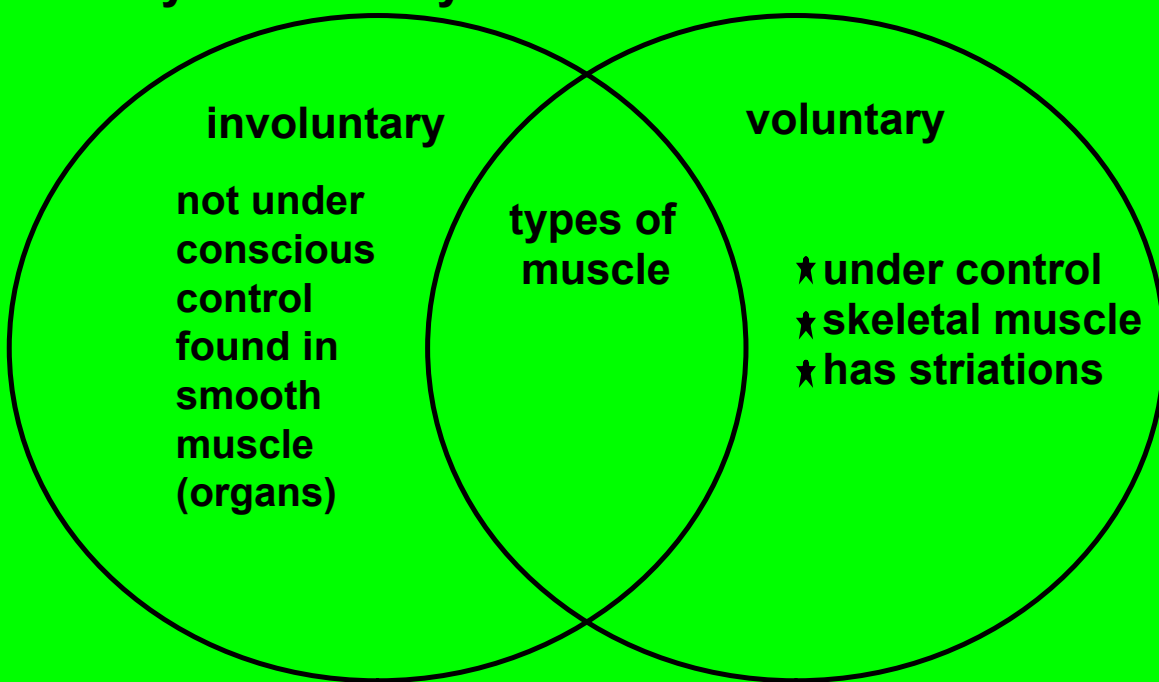
**1. Name five functions of the skeleton. The function of the skeleton is to:**

- ★ Give the body shape and support
- ★ Protect internal organs
- ★ Enable you to move
- ★ Produce blood cells
- ★ Store certain materials until your body needs them

**2. Explain why an infant has more cartilage than an adult.**

An infant has more cartilage than an adult because as the infant grows the cartilage turns to bone.

3. In the Venn diagram, compare and contrast two types of muscles:  
voluntary/involuntary/cardiac



Created by



## **Funny Bones Review Game**

### **You need to know the following terms:**

Long Bones

Spongy Bone

Ligament

Immovable Joint

Short Bones

Marrow

Tendon

Pivot Joint

Irregular Bones

Joint

Ball and Socket Joint

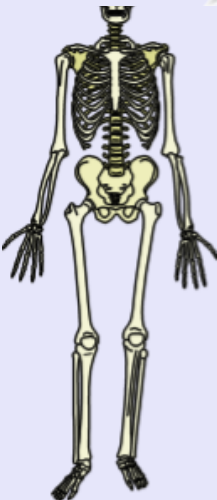
Gliding Joint

Flat Bones

Cartilage

Hinge Joint

**Make no bones  
about it, you  
better study !!!!**



### **You should also know:**

The functions of the skeletal system

The bones of the skeletal system