

The adult human skeletal system consists of 206 bones. Tendons, ligaments, and cartilage help connect the bones.



## Guided Question

Circle the number of bones an adult has.

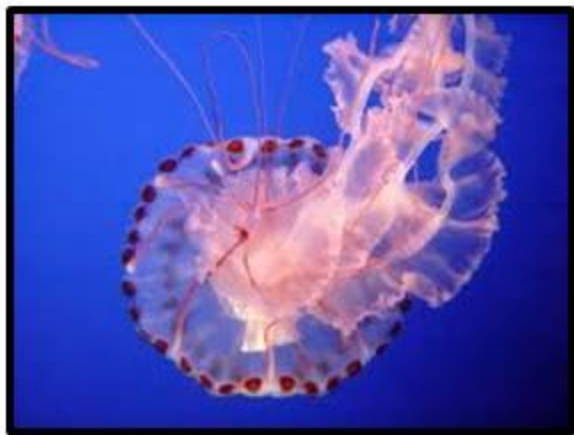
Babies are born with 300 to 350 bones. Their bones grow together and become harder as the as the baby grows. By the time most children reach the age of 9 they have 206 bones.



### **Guided Question**

Underline how many bones a baby has when it is born.

If you did not have a skeletal system you would be similar to a jellyfish.



## The skeletal system does many important things for your body.

1. It gives your body shape.
2. It holds you up.
3. It helps you move.
4. It protects your organs.
5. It helps make your blood.
6. It stores fat and minerals.

### Guided Question

What would your body be like if you did not have a skeleton?

# How does the Skeletal System help us?

## Support

The main job of the skeleton is to provide support for our body. Without your skeleton your body would collapse into a heap. Your skeleton is strong but light. Without bones you'd be just a puddle of skin and guts on the floor.



## Guided Question

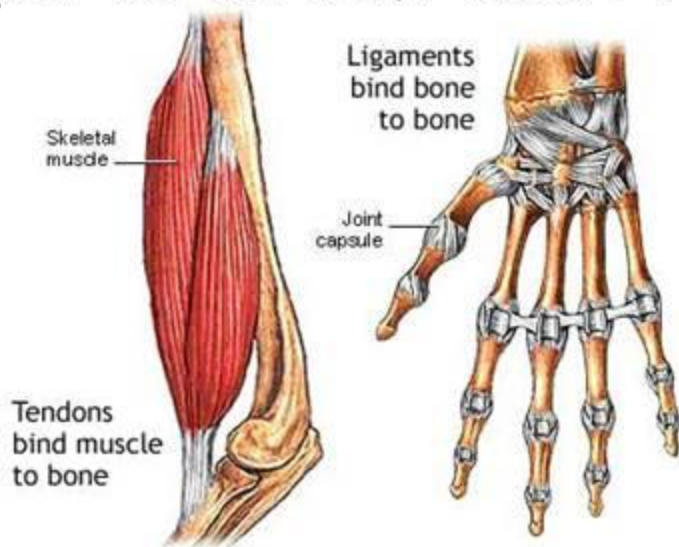
Underline the main job of the skeleton.

# How does the Skeletal System help us?

Bones provide the structure for muscles to attach to so that our bodies are able to move.

Ligaments bind bone to bone.

Tendons attach muscle to bone.



## Guided Question

How are ligaments different from tendons?

## Did you know?



Old bones are dead, dry and brittle. But in the body, bones are very much alive. They have nerves and blood vessels. They have tons of living cells which help them grow and repair themselves.

### Guided Question

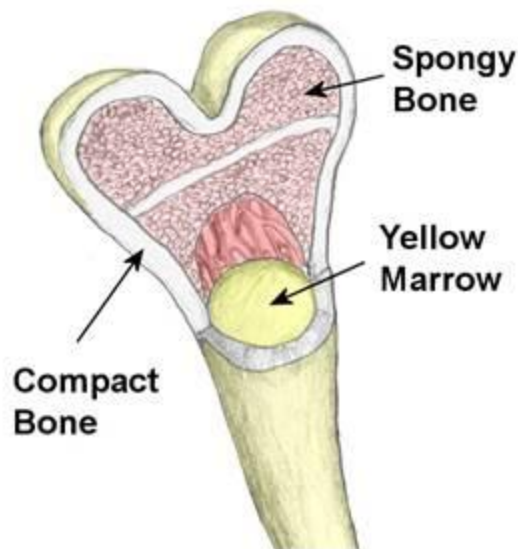
Are bones alive? Explain your answer.

# What is a bone made of?

A typical bone has an outer layer of hard or compact bone, which is very strong, dense, and tough.

Inside this is a layer of spongy bone, which is like honeycomb, lighter and slightly flexible.

In the middle of some bones is jelly-like **bone marrow**, where new cells are constantly being produced for the blood.



## Guided Question

Underline what happens in bone marrow.

# How can we keep our bones strong?

Calcium is an important mineral that bone cells need to stay strong.



You should eat foods with calcium like yogurt and green leafy vegetables or drink milk to keep your bones strong.

## Guided Question

Circle the mineral that your bones need to stay strong.



# What is a fracture?

Bones are tough and usually don't break even when we have some pretty bad falls. Bones will bend a little, but if you fall the wrong way you can break a bone.

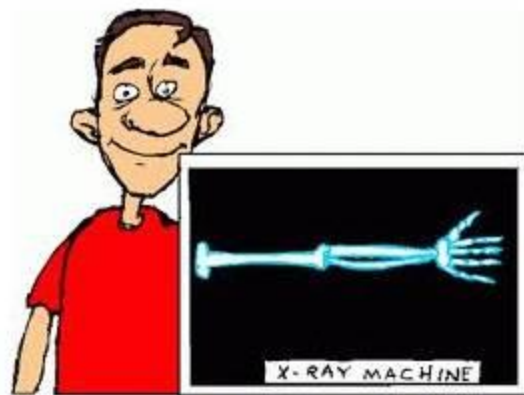


## Guided Question

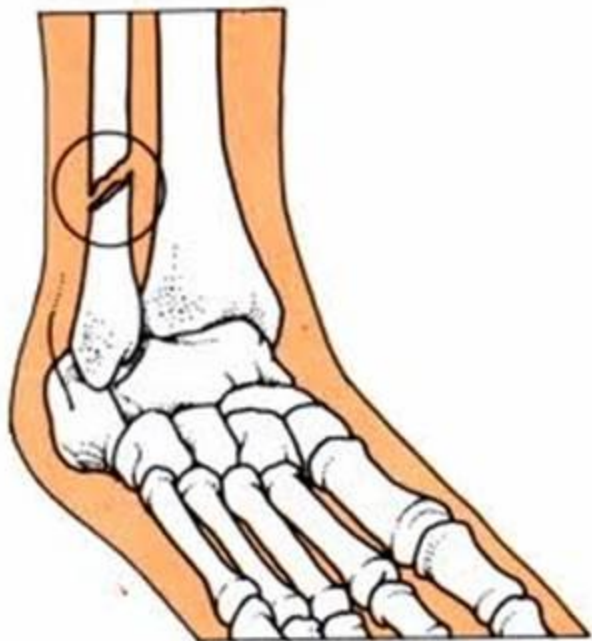
What do doctors call a broken bone?



Doctors have to take an x-ray to see if a bone is broken. They call a broken bone a fracture.



## How do bones heal?



Luckily, bones are made of living cells. When a bone is broken your bone will produce lots of new cells to rebuild the bone. These cells cover both ends of the broken part of the bone and close up the break.



### Guided Question

Describe how a broken bone heals.

# Types of Joints

## Gliding

A gliding joint (pivot joint) makes a rotating movement.

Examples:

- \* ankle
- \* wrist

## Ball and Socket

A ball and socket joint allows movement in every direction.

Examples:

- \* shoulder
- \* hip

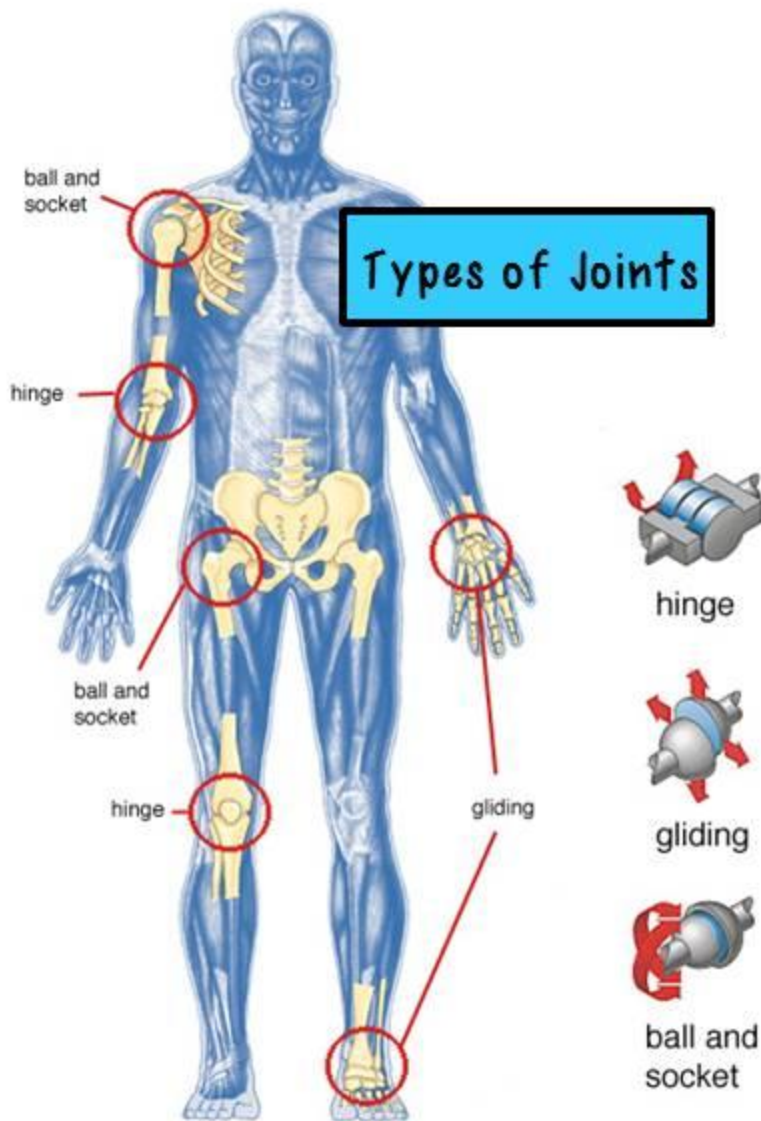
## Hinge

A hinge joint allows only backward and forward motion.

Examples:

- \* elbow
- \* knee
- \* jaw

# Location of Joints



## Ball and socket Joints:

- \* shoulder
- \* hip

## Hinge Joints:

- \* jaw (mandible)
- \* knee (patella)
- \* elbow

## Gliding Joints: (Pivot joint)

- \* wrist
- \* ankle

## Types of Joints



## Location of Joints

### Ball and socket Joints:

- \* shoulder
- \* hip

### Hinge Joints:

- \* jaw (mandible)
- \* knee (patella)
- \* elbow

### Pivot Joints:

- \* wrist
- \* ankle

# How can we keep our bones healthy?

## Exercise Every Day!

Run

Rollerblade

Ride your bike

Swim

Dance

Play a sport

Play tag

Play hide and seek



Make sure you wear or use the proper equipment like a helmet, kneepads, shin guards, mats, knee pads to keep your bones safe.

## **Guided Question**

Explain how you can keep your bones healthy.

# Why do we have bones?

1

To support our body

2

To protect our organs



3

To help us move

## Guided Question

Explain the purpose of our skeleton.

## Did you know??

1

The length of your arm span equals your height.

2

The length of your ulna/radius bone is the same length as your foot.

3

Your bones stop growing by the time you are 13 years old.

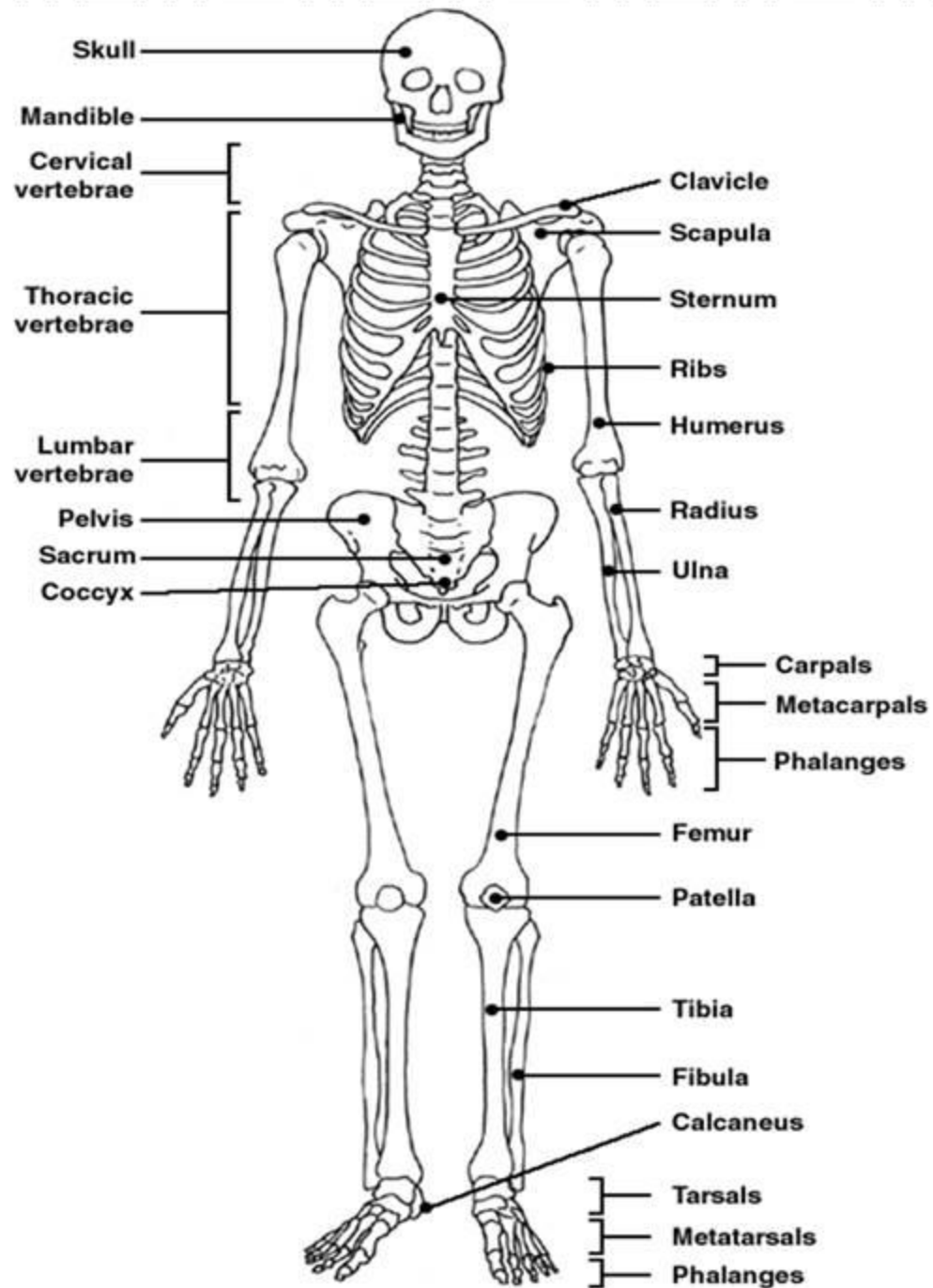
4

Your Humerus is connected to your funny bone.

### Now try #2

Put your FOOT up next to your forearm (ulna / radius bone).. You will see they are the same size!





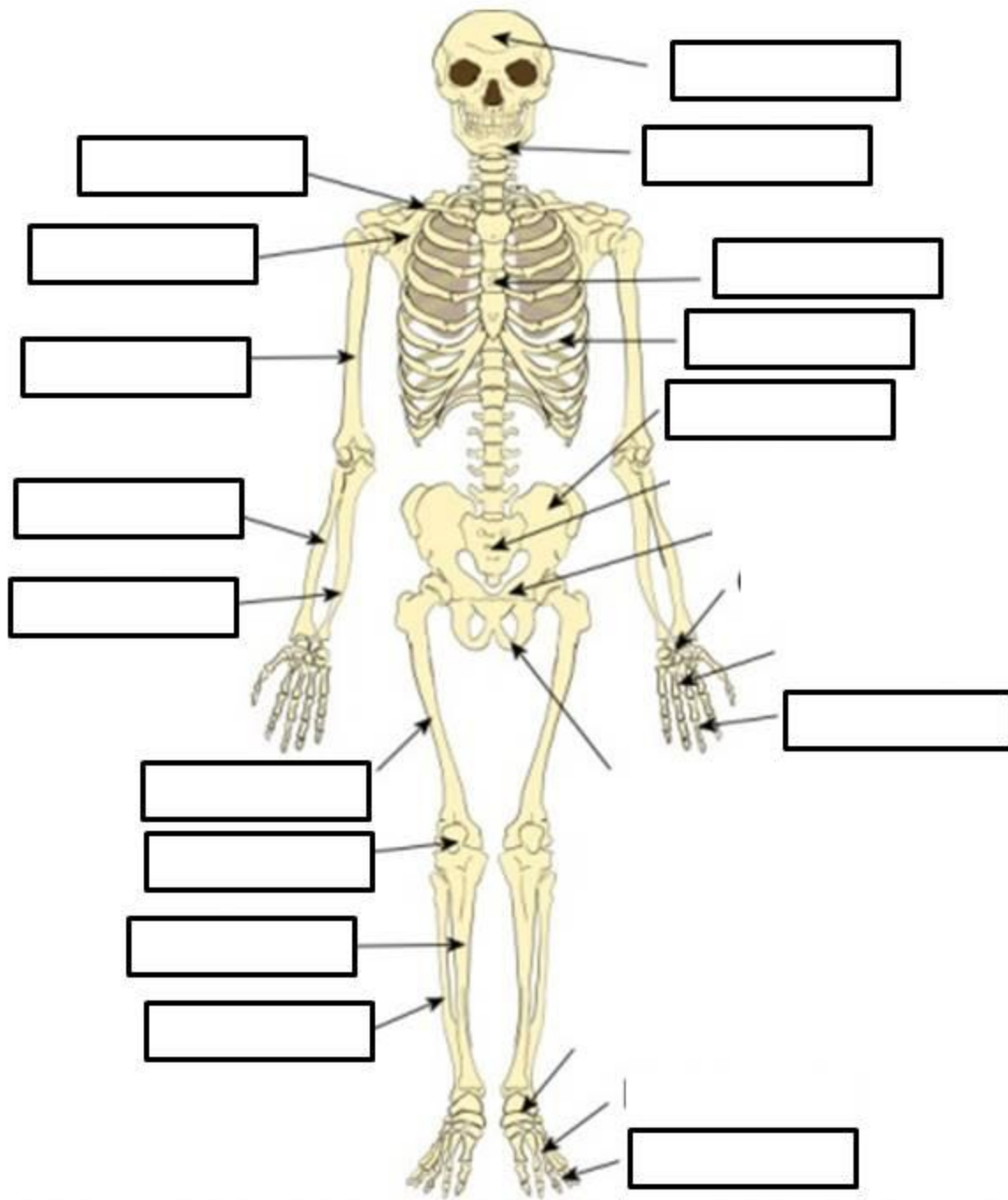
## Show What you Know

Turn and tell a friend what you know

- 1 What is the purpose of your skeleton?  
Give 3 jobs your skeleton does.
- 2 What are the 3 types of joints.  
Name where your joints are located.
- 3 Explain how bones heal?
- 4 How can we keep our bones strong?



Trivia: What is the is the largest bone in an adult body?



Be able to find and locate at least 10 bones on the skeleton.

Point to:

1. Cranium
2. Phalanges
3. Femur
4. Patella
5. Humerus
6. Mandible
7. Vertebrae
8. Tibia / fibula
9. Ribs
10. Ulna /