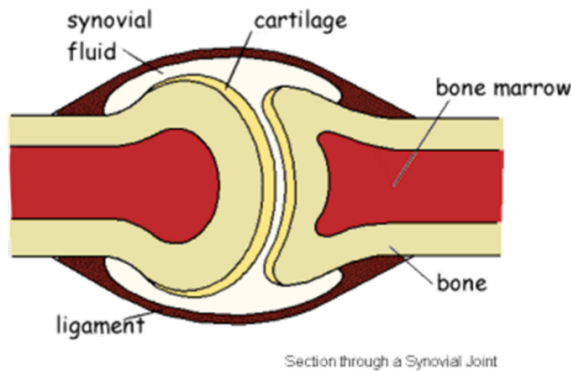
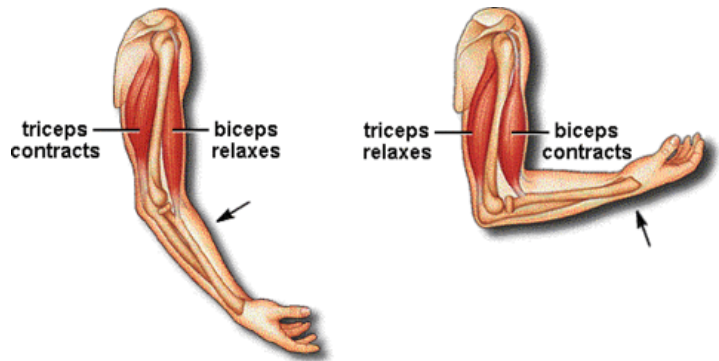


A skeleton is needed for:

- **Movement.** Muscles pull on bones. Bones held together at joints.
- **Supports the body.**
- **Protects our organs.**
- **Makes new blood cells in the bone marrow.**



Joints: Places where bones meet.
Bone marrow: Tissue found inside some bones where new blood cells are made.
Ligaments: Connect bones in joints.
Tendons: Connect muscles to bones.
Cartilage: Smooth tissue found at the end of bones, which reduces friction between them.
Antagonistic muscle pair: Muscles working in unison to create movement.

Ball and socket joint. Wide range of movement in all directions. e.g. shoulder and hip.

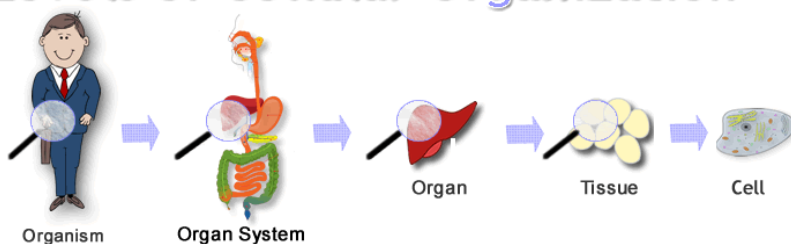
Hinge joint. Movement in one direction e.g. elbow and knee

Muscles:

- Keep our heart beating
- Push food along our gut
- Pump blood through arteries
- Move our skeleton
- Help us breathe

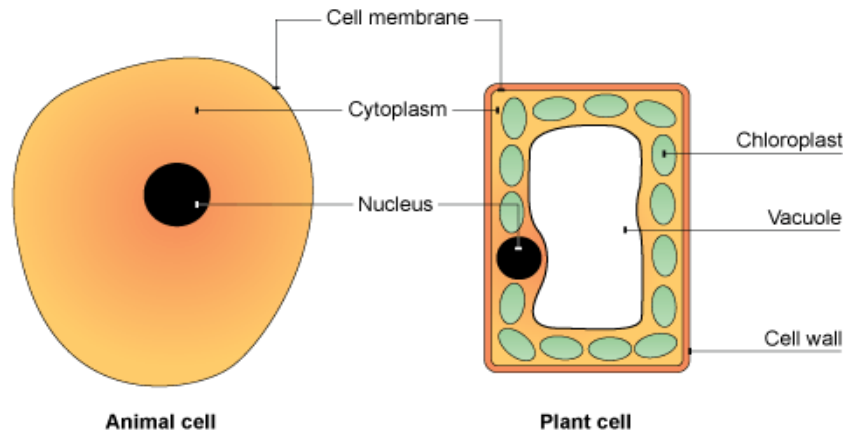
- Muscles work in antagonistic pairs.
- When one **contracts** (gets shorter) the other **relaxes** (gets longer).
- Muscles are joined to the bone by **tendons** that do not stretch.

Levels of Cellular Organization



Multicellular organisms are composed of cells which are organised into tissues, organs and systems to carry out life processes.

Tissue	Group of cells of one type.
Organ	Group of different tissues working together to carry out a job.
Muscular Skeletal System	Muscles and bones working to cause movement and support the body.
Reproductive System	Produces sperm and eggs. Where the foetus develops.
Digestive System	Breaks down and then absorbs food molecules.
Circulatory System	Transports substances around the body.
Respiratory System	Replaces oxygen and removes carbon dioxide from blood.
Immune System	Protects the body against infections.



Keywords	
Nucleus	Controls the cells activities.
Cell membrane	Controls what enters and leaves the cell.
Cytoplasm	Where chemical reactions occur in the cell.
Chloroplast	Absorbs sunlight energy for photosynthesis.
Cell wall	Gives the cell strength.
Vacuole	Area in a cell that contains liquid, and can be used by plants to keep the cell rigid and store substances.
Mitochondria	Part of the cell where energy is released from food molecules.

Subject	Year 7 Organisms
A skeleton has four jobs. Name all four.	Movement, support, protection and blood cells.
Key word - the place where bones meet.	Joint.
Name a ball and socket joint.	Shoulder or hip.
Name a hinge joint.	Elbow or knee.
Muscles contract and relax to move a skeleton. Name one more job carried out by muscles.	Heart beating, food movement, blood flow, or breathing
Muscles work in a pair. When one muscle contracts the other must do what?	Relax.
What is missing? Organism - - Organ - Tissue - Cell	Organ system.
Animal and plant cells have which parts in common?	Cell membrane.
	Nucleus.
	Cytoplasm.
Plant cells also have which parts?	Chloroplasts.
	Vacuole.
	Cell wall.
Key word - Controls the cells activities.	Nucleus
Key word - Controls what enters and leaves the cell.	Cell membrane
Key word - Where chemical reactions occur in the cell.	Cytoplasm
Key word - Absorbs sunlight energy for photosynthesis.	Chloroplast
Key word - Gives the plant cell strength.	Cell wall
What do we call the bag in the middle of a plant cell?	Vacuole
What does a mitochondria release?	Energy

Subject	Year 7 Organisms
A skeleton has four jobs. Name all four.	
Key word - the place where bones meet.	
Name a ball and socket joint.	
Name a hinge joint.	
Muscles contract and relax to move a skeleton. Name one more job carried out by muscles.	
Muscles work in a pair. When one muscle contracts the other must do what?	
What is missing? Organism - - Organ - Tissue - Cell	
Animal and plant cells have which parts in common?	
Plant cells also have which parts?	
Key word - Controls the cells activities.	
Key word - Controls what enters and leaves the cell.	
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