



Master Lesson Plan

For

Body Movements

Board	Standard	Subject	Chapter	Language	Reference Link	Creation
CBSE	STD VI	Science	Body Movements	English	Body Movements	2020-10

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Body Movements

1. MS_Objectives_Body Movements

Notes to the teacher: This asset lays down the proposed plan for transacting this chapter. It states the asset objectives of the MLP. This asset is for teacher's reference and need not be taught to the students:

Students will be able to...

- build a ball and socket joint
- identify the various movements in animals
- identify the different types of joints
- appreciate artificial joints
- compare the types of joints in real life
- discover more on bones and joints discuss
- about the different types of bones
- recognize the need to work together as a team to achieve their goals
- explain about cartilage
- take delight in learning more about muscles
- examine the muscles and their working
- explain the different ways of movement in animals
- assess themselves on the topic 'Body movements'.

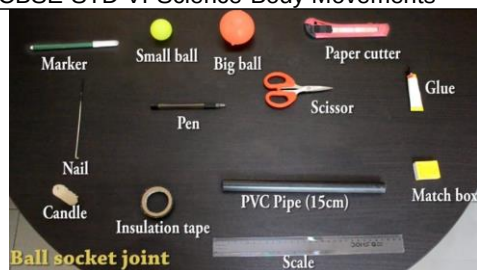
Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Main Script	The Human Body	Body and its movements, Body movements

2. SA_Ball and Socket Joint

Aim: To model a ball and socket joint.

Materials required:

- Small ball
- Big ball
- Marker
- Nail Candle
- Insulation tape
- PVC pipe 15 cm
- Scale
- Match box
- Glue
- A pair of scissors
- Paper cutter
- Pen



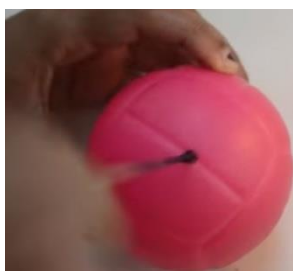
Class setting: Whole class

Procedure:

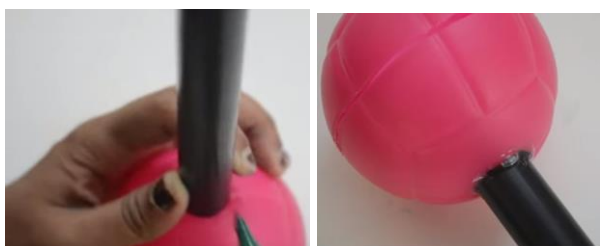
- Mark 3/4th portion of the circumference of the big ball and cut it.



- Make a hole perpendicular to the right side of the cut portion of the ball using a heated nail.



- Enlarge the hole such that the PVC pipe can easily fit. Fit the PVC pipe in the hole and glue it.



- Make a hole using a heated nail in the smaller ball.



- Enlarge the hole so that the empty pen can easily fit in the hole. Fix the pen in the hole using glue if necessary.



- Using a thread measure the circumference of the small ball.



- Make a hole perpendicular to the left side of the cut portion of the bigger ball. Make the hole wider, it should be 1 cm lesser than the diameter of the small ball.



- Tape the cut portion of the bigger ball.



Rotate the pen and see the ball moving inside the socket. This is the principle of ball and socket joint

Observation: Students will be able to make the model of ball and socket joint with the given instructions.

Discussion Questions:

Q.1 Why are two balls used in the experiment?

Answer: Ball and socket joints follow this principle. The rounded portion of a bone moves inside the cavity of another bone.

Q.2 Where are ball and socket joints found in the human body?

Answer: They are found in Shoulder and Hip joints.

Inference: This activity helps the students to understand the working of ball and socket joint.

Image source: <https://www.youtube.com/watch?v=h8FvMTdMzlo> (Attribution – ThinkTac)

Image source: <https://www.youtube.com/watch?v=h8FvMTdMzlo> (Attribution – ThinkTac)

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Suggested Activity	The Human Body	Bones and joints of the skeleton joints of the skeleton

3. MS_Animal movement

We all use mobile phones, computers, laptops etc. If we want to type something on the laptop we use our fingers.

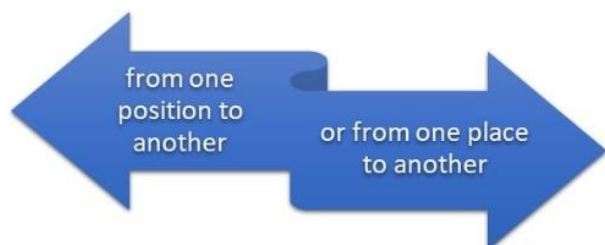


The fingers move from one position to another position, depending on the letter that we wish to type.

Let's imagine that Suman and Vilas are going to school. Their whole body moves from house to the school.



So we can say that when something moves, it either moves



All animals do not move the same way. They use different body parts to move.

- All the four legged animals such as tiger, lion, cows, cats, dogs, etc use their legs to walk.



- Most of the insects such as the ants, beetles, spiders, etc crawl.
- Frogs, fishes, whales, seals swim.
- Birds, few other insects like mosquitoes, housefly, etc fly
- The movement of an organism depends on the structure of its body and the kind of surroundings it lives in.
- For example, a fish, frog, etc lives in water. It has no legs, so it swims.

Animal	Body part used for moving	How does the animal move
Dog	legs	walk
Monkey	legs	walk/Swing
Snake/worm/snail	whole body	slither
Pigeon	wings	fly
Insect	legs, whole body	fly
Fish	whole body	swim
Humans	legs	walk
Kangaroo	legs, whole body	jump
Frog	whole body	leap
Penguin	whole body, legs	swim, waddle

Movement

- Movement means moving from one place or position to another.
- There are so many things that move around.
- We see animals, and humans moving from one place to another. Some non-living things such as fans and vehicles also show movement.

Movements in human body

There are some movements that occur in our bodies, which we don't even realise sometimes. For example, blinking our eyes or breathing.

In human beings only a few parts of the body can be moved easily and in different directions. We cannot move all the parts easily. There are few parts which cannot be moved at all.

Image source:

OC: puttyrevankar@gmail.com

Children going to school – SSSVV Gallery

Lion – SSSVV Gallery

Tiger – SSSVV Gallery

Cow – SSSVV Gallery

Cat – SSSVV Gallery

Dog – SSSVV Gallery

Time to teach	Asset Type	Theme	SubTheme
6 Minutes	Main Script	The Human Body	Body and its movements, B movements

4. IA_Artificial Joints

- There was a surgeon named Themistocles Gluck in Germany. In the year 1890, he implanted the first artificial knee joint to a patient in Berlin. The artificial knee joint was made up of ivory and nickel-plated steel.



- Artificial joints are made by mixing different kinds of materials including metal, ceramic and plastic.
- Human body is not able to withstand corrosion for a long period of time. So stainless steel is not used in the making of knee joints and knee replacement implants.

Image Source

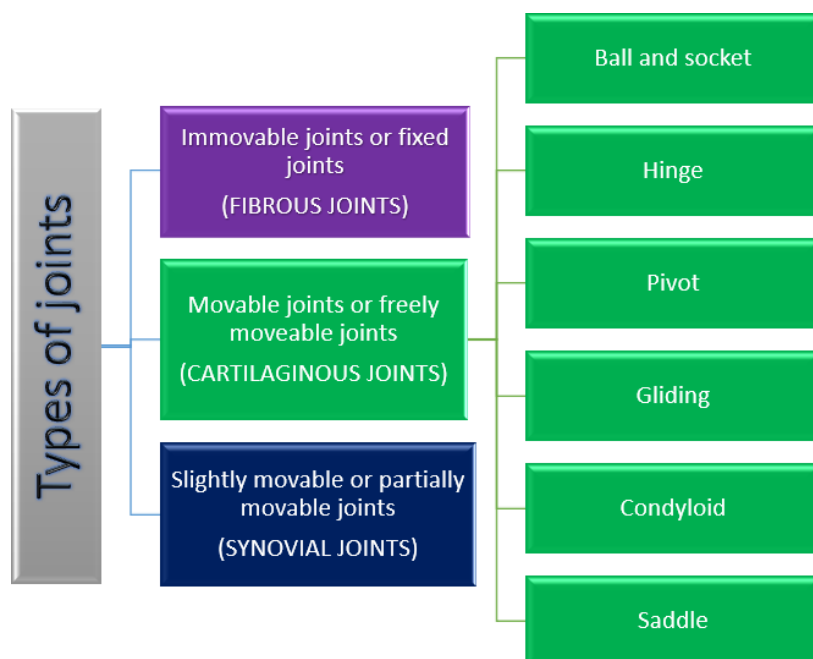
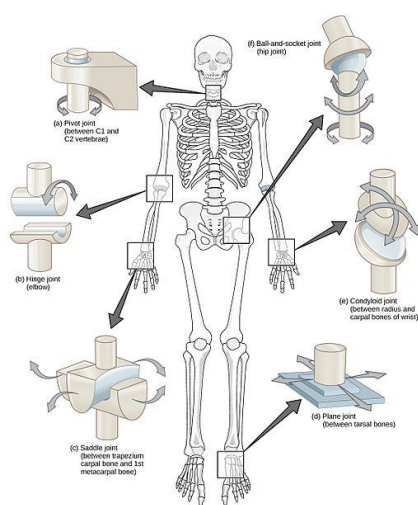
https://commons.wikimedia.org/wiki/File:Artificial_left_leg_Wellcome_L0037215.jpg

 (Attribution - https://wellcomeimages.org/indexplus/obf_images/fc/07/608f769624f8dec627dd93959957.jpg)

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Interesting Asides	The Human Body	Body and its movements, Body movements

5. MS_Types of Joints

Joint is an area where two bones are joint together so that they allow the movement of body parts.

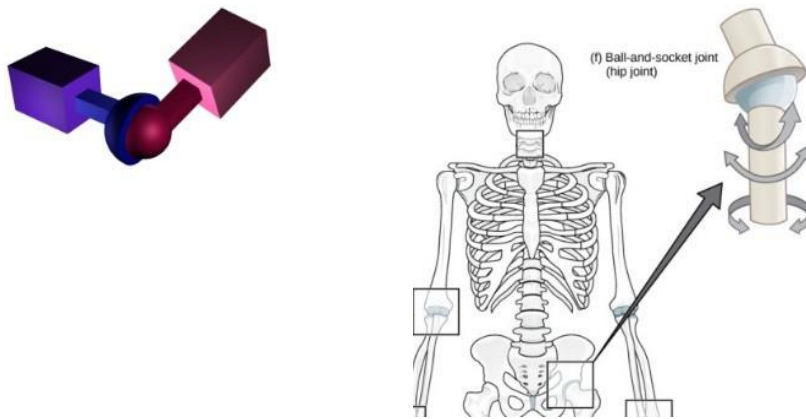


1. Ball & Socket Joint:

- Ball and socket joint: This type of joint allows us to perform wide range of rotation and movement.

- It helps us to bend, straighten, move side to side, circular movement, rotational movements.
- The end of one bone at this type of joint is round in shape and it fits into another end of the bone which is cup shaped.
- This joint has a rounded head that fits into the cavity of the other bone, such a joint allows movement in all directions, and it also helps in internal and external rotation.

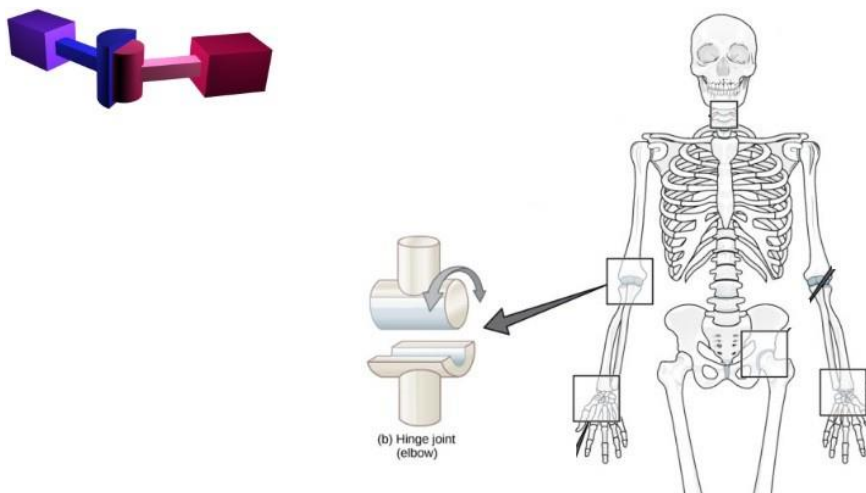
Example: The shoulder and hip have ball and socket joints.



2. Hinge Joint:

- A hinge joint is a point of connection between two objects that allow movement, backward and forward, on one plane.
- The joint does not allow side-to-side movement.
- Hinge joints are found in the human skeleton and other animal skeletons. The movement is brought about due to flexion & extension muscles of the joint bones.

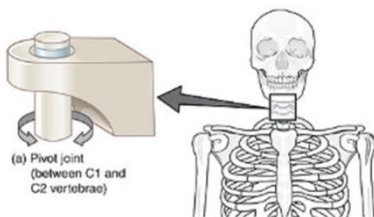
Example: knee and ulna part of the elbow, finger and toe have hinge joints.



and toes, excluding the big toe.

The first joint, the one that connects the hand and finger, or carpals and metacarpals, are not examples of hinge joints because, although they allow back-and-forth movement, they also allow movement from side to side. The joints and muscles work together to flex and extend the fingers and toes along their 180-degree plane of movement.

3. Pivot Joint:



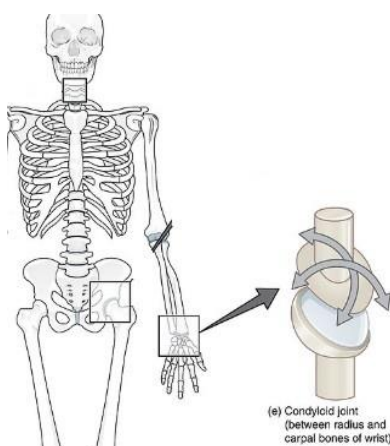
- The joint where our neck joins the head is a pivotal joint.
- With the help of pivotal joint we are able to bend our head forward, backward, to our right and to our left.
- This type of joint allows bones to spin and twist around other bones. In this joint, a cylindrical bone rotates in a ring.

Example : There are pivot joints in the neck and the radius part of the elbow. The joint that is present between the first and second cervical vertebrae near the base of the skull is also an example of a pivot joint.

4. Condylloid Joint:

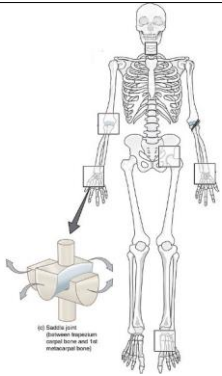
- This type of joint allows several different types of movements such as bending, straightening, side to side, circular movements but no rotation.
- One of the bones has an oval-shaped, or convex end, that fits into the depressed oval-shaped, or concave end of another bone.

Example : We can find condyloid joints in the jaws and fingers. When you open your mouth wide, you can move your lower jaw away from your head but not your upper jaw. They are also found between the radius bone of the fore arm and bones of the wrist.



5. Saddle Joint:

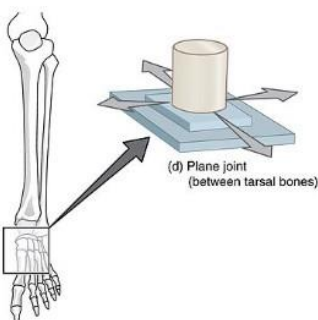
- A 'saddle' joint allows movement in two directions.
- The saddle joint gives the human thumb the ability to 'cross over' the palm of the hand.
- These distinct joints are very flexible, allowing for bending and straightening, side- to-side, and circular movements.
- The bones at these joints form, looks like a rider on a saddle.
- One bone is turned inward at one end, while the other is turned outward.



6. Gliding Joint:

- 'Gliding' joints or plane joints permit a wide range of mostly sideways movements.
- Bones at this type of joint slide past each other in a gliding motion.
- The bones at plane joints are of similar size and the surfaces where the bones meet at the joint are nearly flat.

Example : These joints can be found between bones of the wrist and foot, as well as between the collar bone and shoulder blade.



Synovial Joints

- Synovial joint is the most common type of joint in the human body.
- It has a joint cavity that is filled with fluid. This fluid-filled space is the site at which the articulating surfaces of the bones contact each other.

Example : It is found between bones that move against each other, such as the joints of the limbs (e.g. shoulder, hip, elbow and knee).

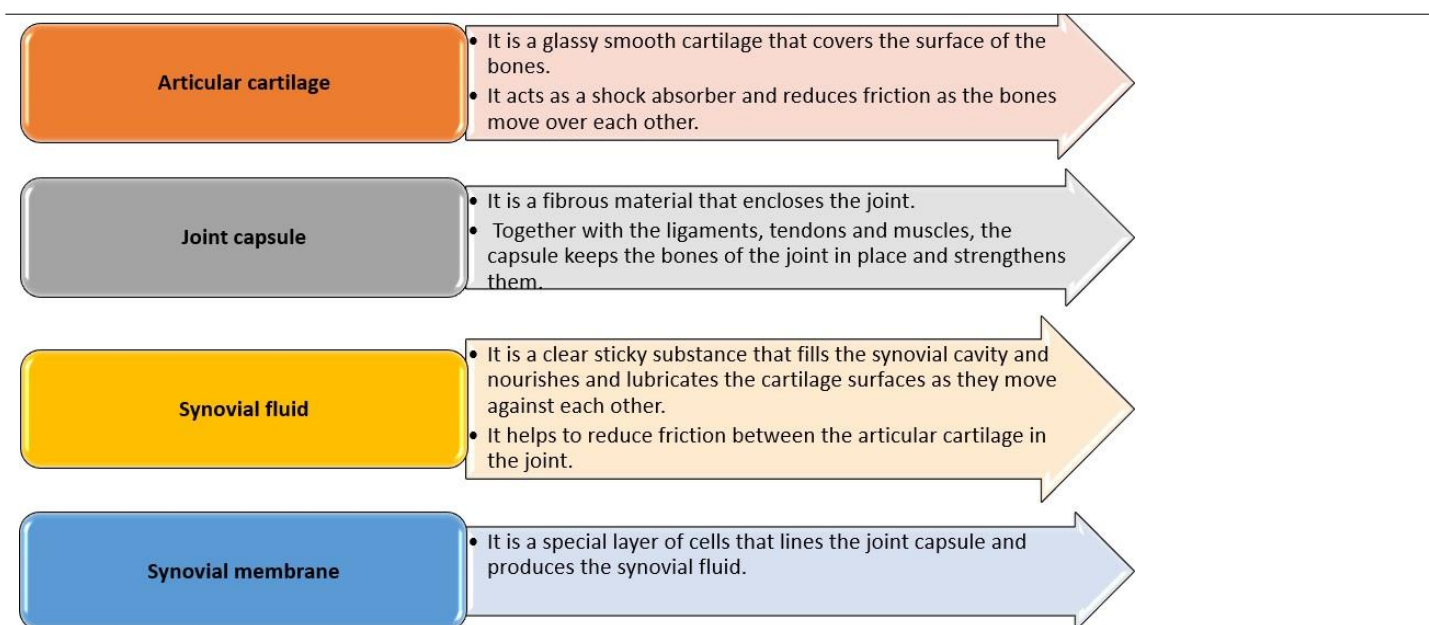


Image Source:

Types of Joints: https://commons.wikimedia.org/wiki/File:Figure_38_03_04.jpg (Attribution – CNX OpenStax https://cnx.org/contents/GFy_h8cu@10.53:rZudN6XP@2/Introduction)

Ball & Socket Joint: https://commons.wikimedia.org/wiki/File:Ball-socket_joint.png

Hinge Joint: https://commons.wikimedia.org/wiki/File:Hinge_joint.png

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Main Script	The Human Body	Bones and joints of the skeleton its movements, Bones and skeleton, Body and its move

6. DD_Joints in real world

1. Ball and Socket

If we make a wooden model of a mammal, then a ball and socket in the real world would be the joints in the model.



Hinge joints are found in the human skeleton and other animal skeletons. We can also find them in objects that allow single plane motion like doors, box lids and cupboards.

Practical examples of hinges in our homes:

Mechanical hinges make daily living easy because they help construct many of the structures and objects that we use in a day to-day basis.

Hinges are seen on doors that open and close on 180^0 planes. We also find them in jewellery box lids and toy box lids that open and close, and cupboard doors, etc.



3. Pivot joint: We can see a pivot joint in a microphone stand that is able to twist and turn the mic.



4. Saddle joint: A very good example for a saddle joint is the saddle on a horse.



3. Gliding joint: A gliding joint could be compared to tree branches swinging or moving in the wind.



Image Source:

Ball and Socket: <https://commons.wikimedia.org/wiki/File:Doll-1077114.png>

Hinge joints 1: <https://www.publicdomainpictures.net/en/view-image.php?image=176484&picture=rusted-hinge>

Hinge joints 2: <https://pixabay.com/photos/old-door-hinge-rusty-metal-iron-346587/>

Pivot joint 1: <https://pixabay.com/vectors/microphone-stand-mic-sound-concert-29191/>

Pivot joint 2: <https://pixabay.com/vectors/concert-mic-microphone-stage-stand-150476/>

Saddle joint 1: <https://www.publicdomainpictures.net/en/view-image.php?image=213367&picture=saddle>

Saddle joint 2: <https://www.pexels.com/photo/fence-jump-horse-drop-93489/>

Gliding joint: <https://pixabay.com/illustrations/sea-sky-leaf-wood-blue-sky-cloud-471965/>

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Day-to-day Relevance	The Human Body	Bones and joints of the skeleton its movements, Bones and skeleton, Body and its move

7.IQ_Bones and Joints- A thought

[Notes to the teacher - Teacher may enable the students to think and come out with as many answers as possible before giving out the right answer/ answers]

1. What will happen if there are no bones in our body?

Suggested Answer: Without bones we would be just like jelly fish(a ball of muscles). We would not have a definite shape and posture and we would not be able to walk.

2. Are bones living?

Suggested Answer: Yes, they are made up of living tissues.

3. Do bones decompose?

Suggested Answer: Yes, bones do decompose depending on the surrounding environment, such as biotic and abiotic factors.

4. What would happen if there were no joints in our body?

Suggested Answer: If there were no joints, motion would not be possible, all the bones would be joined together and we would not be able to stretch, bend, etc. we would not have been so flexible.

5. Which among these is not a weight bearing activity?

Suggested Answer: Swimming does not help our bones grow stronger. Weight-bearing exercise—like jogging, running, jumping, walking, or dancing— help our bones to grow.

6. How can I keep my bones healthy?

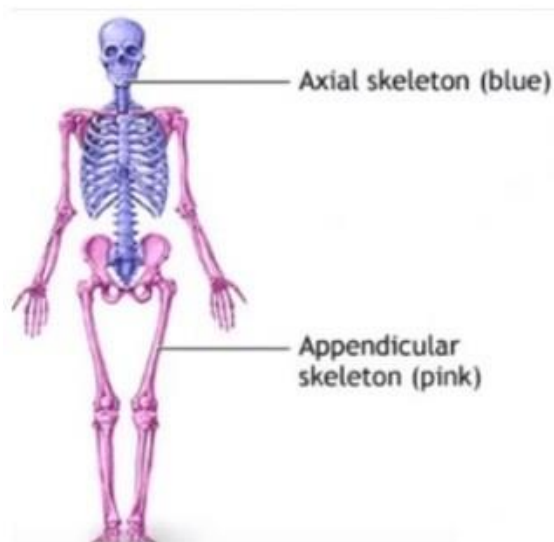
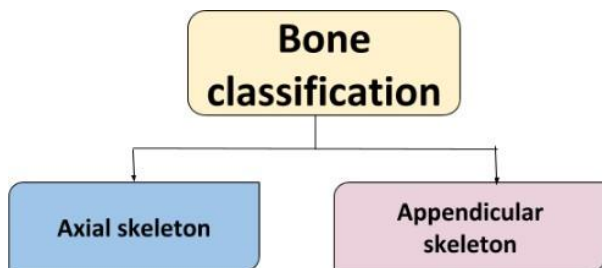
Suggested Answer: Intake of calcium, vitamin D and physical activity can help grow healthy bones.

Time to teach	Asset Type	Theme	SubTheme
4 Minutes	Inquisitive Question	The Human Body	Body and its Movements

8. MS_Types of Bones

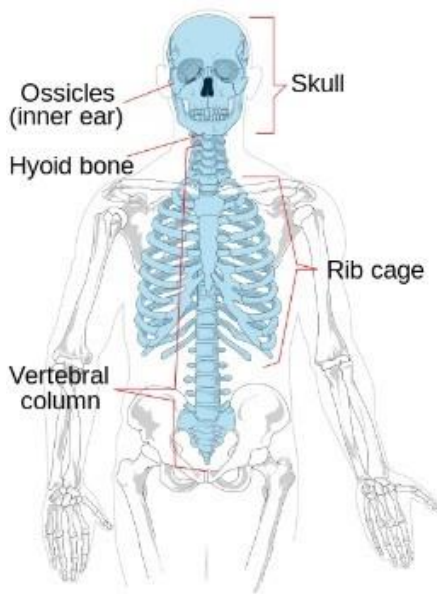
The different bones of different body parts combine together to form a single structure or system. This structure is called the skeleton.

There are 206 named bones in the human body. Each belongs to one of two large groups



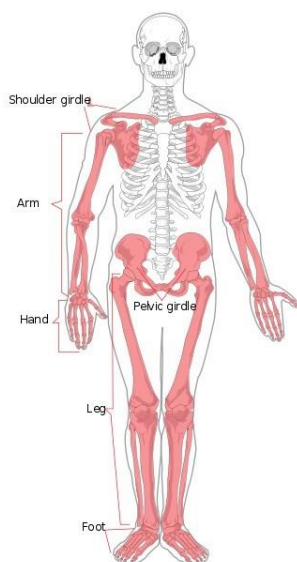
Axial skeleton:

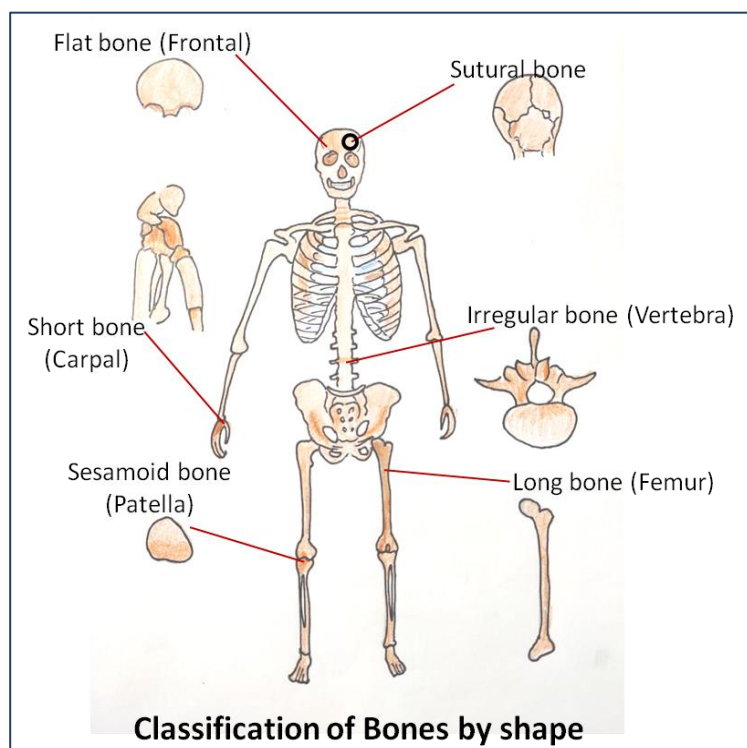
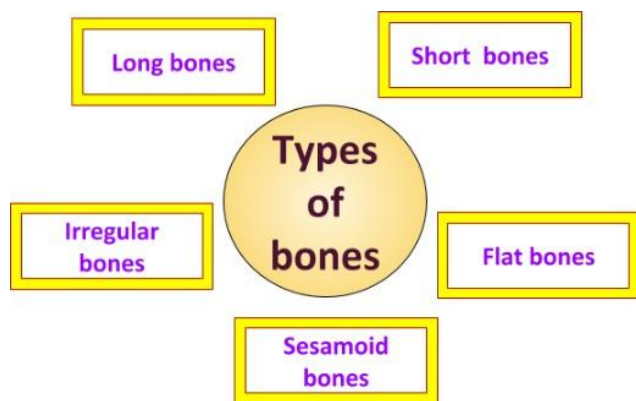
- This forms the long axis of the body.
- Skull, vertebral column and rib cage come under the axial skeleton.
- The function of these bones is mainly to support, protect and provide a cover for other body parts.



Appendicular skeleton:

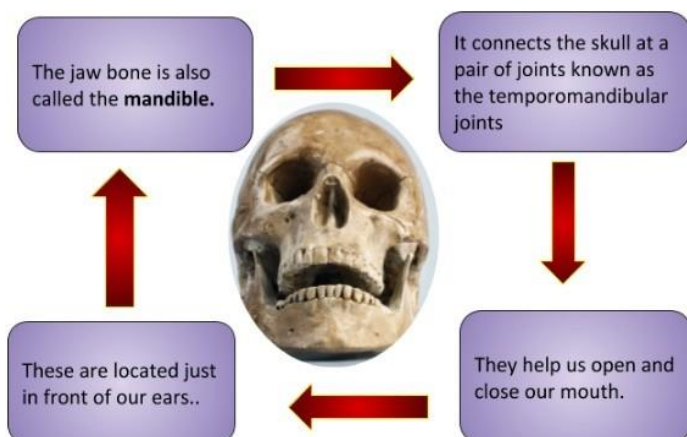
- Bones of upper and lower limbs, bones of the shoulder girdle, pelvic girdle, hip bones come under appendicular skeleton
- These help in locomotion.

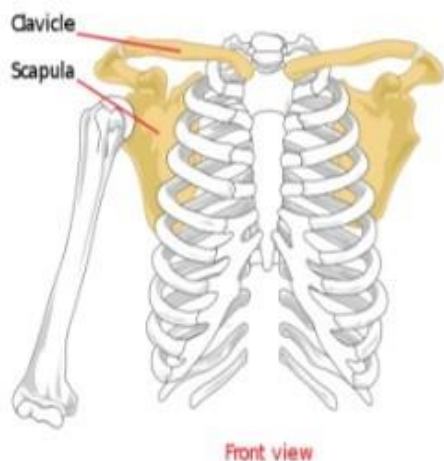




Muscles are joined to the bones to help them move. These are called tendons. In the same way, two bones are joined together in a special way by fibres. These fibres are called ligaments.

Jaw bone:





Clavicle is also known as the collarbone.

It is the only long bone in the body that lies horizontally.

It's one of the main bones of the shoulder.

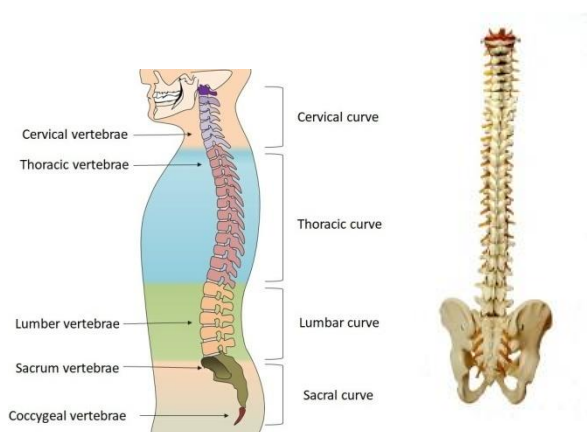
It is located between the ribcage(sternum) and the shoulder blade(scapula).

It is the bone that connects the arm to the body.

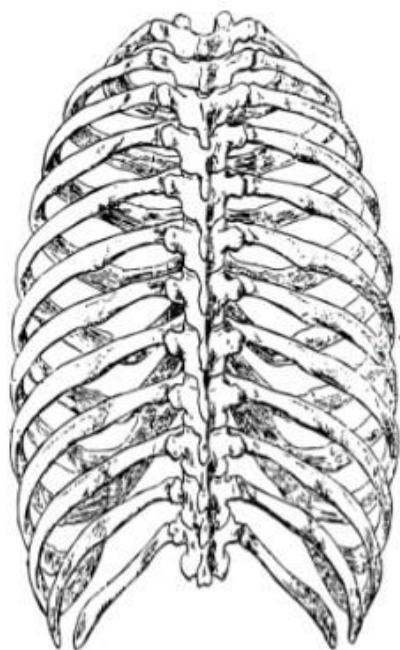
The clavicle:

Backbone:

- It is the line of long structures of bones running down the centre of the back that provides support for the body.
- It is the vertebral column of the vertebrae or spine.
- It is a part of the axial skeleton. In a human's vertebral column there are normally thirty-three vertebrae. The
- spinal cord passes through the vertebrae of the backbone. :

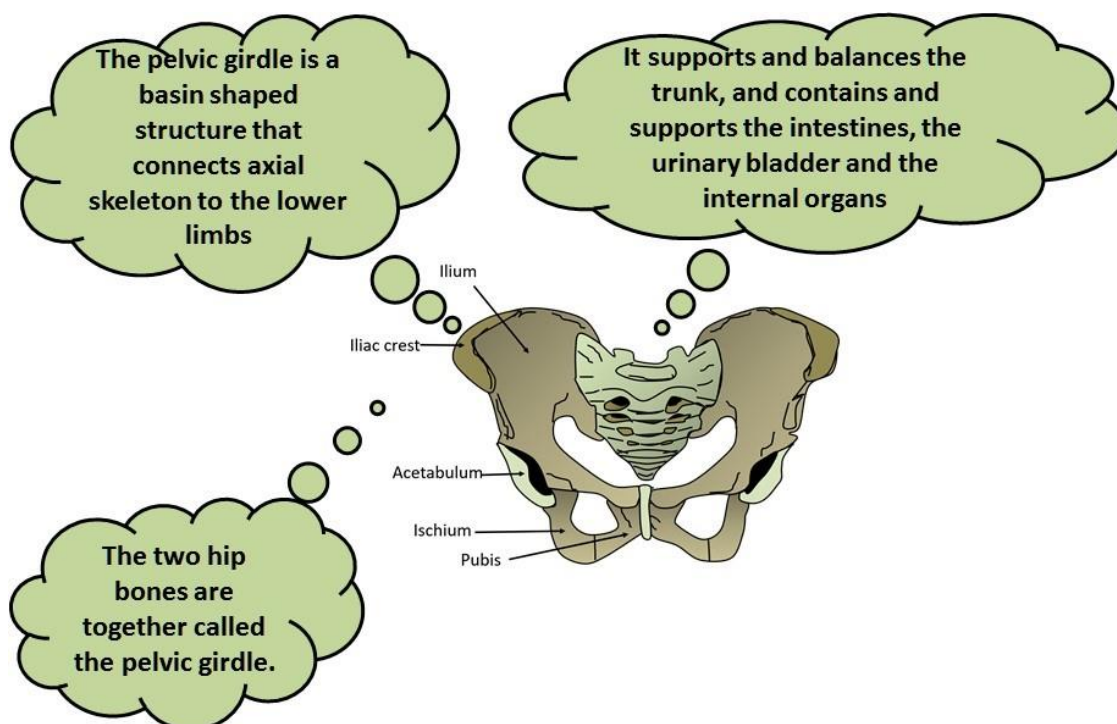


The ribs:

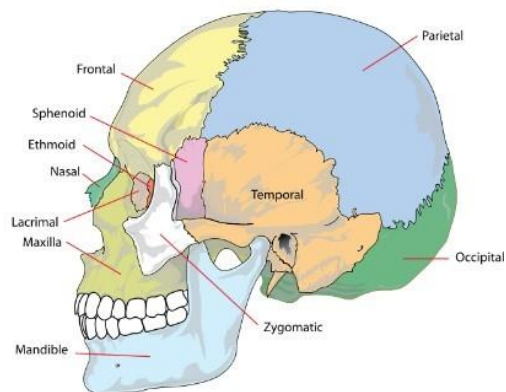


- These are long curved bones.
- They form the rib cage.
- Their main function is to protect the internal organs such as heart and lungs.
- They are a part of the axial skeleton.
- These individual bones have joint-connections to the spinal vertebrae.
- They expand the chest cavity and facilitate breathing.
- Humans have 24 ribs(12 pairs)

Pelvic girdle:



Skull:



- Skull is a bony structure that surrounds and protects the brain and sense organs.
- 22 bones come together to form the skull.
- These bones are joined together by fibrous joints also called sutures.

Cartilage:

- Cartilage is a very strong and flexible fibrous smooth elastic tissue.
- It covers and protects the ends of long bones at the joints.
- It is found in the nose, windpipe, ears and most of the body's joints.

Note to the teacher:

Please play the video: <https://www.youtube.com/watch?v=vZVITQuN8tY>

The video is 1 min 35 sec. It is attached

Category: [Education](#)

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Image source:

<https://www.youtube.com/watch?v=6MRemprl8fY> (Attribution – BOB MYERS)

https://commons.wikimedia.org/wiki/File:Axial_skeleton_diagram.svg (Attribution – Author – LadyofHats)

https://commons.wikimedia.org/wiki/File:Appendicular_skeleton_diagram.svg (Attribution – Author – LadyofHats)

Classification of Bones: SSSVV Gallery

https://commons.wikimedia.org/wiki/File:Pectoral_girdle_front_diagram.svg (Attribution – Author – LadyofHats)

<https://pxhere.com/en/photo/774965>

Original contribution - rushmish@gmail.com

<https://pixabay.com/illustrations/spine-backbone-vertebrae-eddy-957249/>

<https://pixabay.com/vectors/ribs-back-rib-cage-ribs-rib-2931059/>

Original contribution - rushmish@gmail.com

[https://en.wikipedia.org/wiki/File:Human_skull_side_simplified_\(bones\).svg](https://en.wikipedia.org/wiki/File:Human_skull_side_simplified_(bones).svg) (Attribution – Author – LadyofHats)

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	The Human Body	Bones and joints of the skeletal joints of the skeleton

9. VC_Teamwork Pays

Learning Domain- Classroom

Introduction:

In the human body, the different organs work in co-operation to help us carry out various activities. There are many movements that happen in our body. Different parts of our body keep moving though we may remain at the same place. When one muscle is contracted, the other muscle from the pair is stretched. For example, if the foot is pricked by a thorn while walking, the rest of the body does not think that is the foot and I am not affected. The moment the feet get pricked, the mouth warns with a cry, the hands go to help to remove the intruder, the eyes water. For any co-ordination to happen, multiple organs/muscles need to work together to achieve a goal. Similarly we can also achieve a goal by working in co-operation and as a team.

Sudha and Shwetha were two loving sisters. Sudha being the elder of the two, used to help her younger sister Shwetha in her studies.

Once while both were busy doing their school work, Shwetha asked her sister to help her write an essay on “Teamwork & Co-operation” which was given as a school assignment by her teacher.

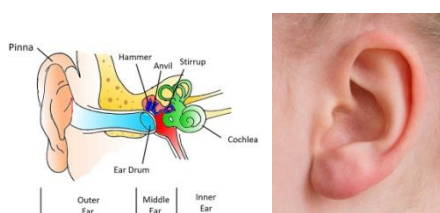
To explain the concept of teamwork, Sudha gave the following examples:

1. She said that whenever an ant finds sugar or any other food material, it immediately informs the other ants, which results in a large number of ants gathering around it in just a few seconds. The ants work together setting an example of co-operation and sharing.
2. Similarly, is the case with the honeybee. They spread themselves in different directions and collect the nectar in a hive. They collectively work in close co-operation. Therefore, these insects are the best examples of working in harmony and in the right spirit of co-operation.
3. Construction workers for instance, have perfect co-operation amongst themselves, and all their creativity can be observed and admired when a huge building is constructed. Group synergy built on the basis of co-operation, results in perfectly completed tasks.
4. Likewise, children and teachers work in close co-operation to put up a good programme when given a collective task like performing a dance, skit, etc. for an annual day programme or some similar function.

Children! Co-operation and teamwork brings out the inherent positive qualities such as co-ordination, creativity, self-confidence, sharing, patient hearing, harmony and the most important, perfect understanding amongst all the members. The universe can benefit if we can only play our role seamlessly in a spirit of co-operation.

Time to teach	Value Type	Value Sub Type	Value Attribute
10 Minutes	Non-Violence		Stories

10. MS_Cartilage



- There are some additional parts of the skeleton that are not as hard as the bones. That part is called the cartilage. Feel the ear, some parts are hard and some parts are soft. This soft part is the cartilage. It is an important structural component of the body.
- It is a firm tissue but is softer and much more flexible than the bone. It does not have blood vessels. Hence its growth is slower compared to other structures of the body.
- Cartilage reduces the friction between joints because of its soft, elastic and flexible nature.
- Cartilage is a tissue found in many parts of the body such as joints, the rib cage, the ear, the nose, the throat and between the bones of the back.
- The main function of the cartilage is to connect bones together. The most interesting thing about cartilage is It can bend a bit. It also acts as a shock absorber

Image source:

Ear structure – SSSVV Gallery

Ear: <https://pixabay.com/photos/ear-auricle-listen-hearing-2372090/>

Time to teach	Asset Type	Theme	SubTheme
4 Minutes	Main Script	The Human Body	Body and its movements,

11. 1A_Muscles



- ❖ Muscles make up 40% of your total body weight.
- ❖ The smallest muscles are found in the middle of the ear.
- ❖ We use 200 muscles to take one step.
- ❖ Your tongue is the strongest muscle in your body.
- ❖ It is said that we use 17 muscles to smile.
- ❖ Our heart muscle never tires.

<https://pixabay.com/illustrations/man-muscles-fitness-studio-sixpack-3133306/>

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Interesting Asides	The Human Body	Bones and joints of the skeleton its movements, Bones and skeleton, Body and its move

12. QA_Gait of Animals

1. Do all the animals move in the same way as we do?

Suggested Answer: No. Each animal has their own way of movement.

2. What are the different ways in which animals move?

Suggested Answer: Hop, skip, jump, run, slither, slide, glide, fly, swim, burrow, climb, soar, hover, creep, crawl, wiggle.

3. What are the different body parts used by animals to move?

Suggested Answer: Legs, fins, flippers, wings, tails and so on

4. How does an earthworm move?

Suggested Answer: Earthworm moves by expanding and contracting its muscles. The body is made of many rings. When the earthworm moves, it keeps the rear end fixed and extends the front end. Then it keeps the front end fixed and the rear end moves. In this way it moves forward.

5. Have you ever seen a snail? How does a snail move?

Suggested Answer: Yes, a thick structure called foot helps the snail to move at a slow pace. The foot has mucus which safeguards the snail from injury while moving on land. Waves of muscular contractions along this surface helps in the movement of the snail.

5. How does a cockroach move?

Suggested Answer: Cockroaches have three pairs of legs that help the cockroaches to move. They have a hard outer skeleton made of different units joined together that permits movement.

The breast muscles move the wings when the cockroach flies. A cockroach can move in different terrains like sand and wired meshes because of the spines on its legs.

6. How do birds move?

Suggested Answer: Birds fly, walk and few also swim. They have a light body which enables them to fly up in the air. The bones are hollow. They do not have a urinary bladder. All these features make the body light. The hind limbs are mostly used for walking and perching. They also have wings which help them in flying. The tail controls the direction of the flight. Strong muscles and light bones work together to help the birds fly. They fly by flapping their wings.

7. How do snakes move?

Suggested Answer: Snakes slither on the ground by looping sideways. A large number of bones and associated muscles push the body forward.

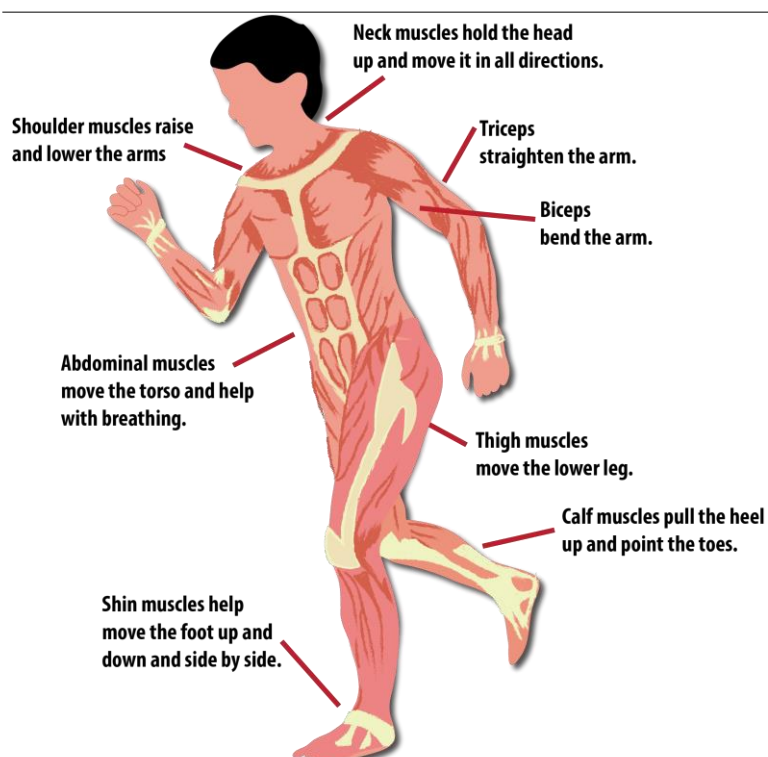
8. How does a fish move?

Suggested Answer: Fish swim by forming loops alternately on two sides of the body. It stretches its muscles on one side and relaxes it on the other side. The streamlined shape helps the fish to move in water. The caudal fin pushes the fish forward in water.

Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Assessments	The Human Body	Body and its movements,

13. MS_Know about your muscles

- Human beings have bones. Two bones are connected to each other with the help of tissues called muscles.



- Muscles allow us to perform different functions such as blinking our eyes, chewing our food, playing, swimming, dancing etc.
- Our muscles are made up of bundles of fibres. The fibres expand and contract. The expansion and the contraction of the muscles makes the movement possible.
- If we bend our arms, we see our muscles bulge (swell). This happens because of contraction of the muscle. The size of the muscle reduces. When the muscle contracts, the muscle becomes short, stiff and thick because it is pulling the bone. A muscle can pull but it can't push. Thus, two muscles have to work together to move a bone.



Two muscles work together to move a bone

- When one of the muscles in a pair contracts, to bend a joint, the other muscle relaxes and pulls in the opposite direction to straighten the joint out again.

Image source:

Muscle contract: OC: puttyrevankar@gmail.com

Muscles relax: OC: puttyrevankar@gmail.com

Muscles: SSSVV Gallery

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Main Script	The Human Body	Body and its movements,

14. QA_Body Movements - My knowledge**I. Write true / false against the following statements:**

1. Plants exhibit movement.
2. The way an animal moves is linked with its body structure.
3. As the child grows, the number of bones decreases.
4. Both the upper and lower jaws are movable.
5. Snails move through contraction and relaxation of the outer shell.

Suggested Answer:

1. True
2. True
3. True
4. False – The upper jaw is fixed and lower jaw is movable
5. False – Snails secrete a slimy liquid which enable them to crawl smoothly over the liquid by the expansion and contraction of muscles.

II. Alphabet grid

A	K	R	V	O	U	C	L	K	N	R
M	O	T	N	N	H	I	N	G	E	M
R	C	A	R	T	I	L	A	G	E	C
T	A	T	E	N	D	O	N	I	U	A
V	V	E	M	U	S	C	L	E	R	V
S	I	E	S	E	B	A	C	R	L	S
M	T	B	A	C	K	B	O	N	E	T
R	Y	E	A	E	A	A	J	R	T	L
L	E	A	J	O	I	N	T	S	R	N
E	T	L	I	G	A	M	E	N	T	T

Find the words hidden in the grid

Suggested Answer:

Hinge, Cartilage, Tendon, Muscle, Backbone, Joints, Ligament

III. Match the following:

Long Bones	Wrist and ankle
Short Bones	Vertebrae coccyx and skull
Flat Bone	Bones of legs, thighs
Irregular Bones	Cranial bones, scapula

Suggested Answer:

Long Bones	Bones of legs, thighs
Short Bones	Wrist and ankle
Flat Bone	Vertebrae coccyx and skull
Irregular Bones	Cranial bones, scapula

IV. Fill in the blanks:

1. Movement in animals help them escape from_____.
2. _____helps a snail to move.
3. _____in fish helps in changing the direction in water.
4. _____images help to identify any injury of the bones.
5. The upper jaw is an example of a_____joint.

Suggested Answer:

1. Predators 2. Muscular foot 3. Tail 4. X-ray 5. Fixed

V. Find the odd one:

1. Lion, Tiger, Snake, Crocodile
2. Skull, Backbone, Shoulder, Neck
3. Earthworm, Fish, Snake, Humans
4. Fins, Legs, Wings, Rib Cage

Suggested Answer:

- 1.Snake 2. Backbone 3. Humans 4. Rib-cage

VI. Correct the statements:

1. **The muscles connect the bones with each other.**

Suggested Answer: Ligaments connect bones to each other.

2. **Body forms the basic framework of our body.**

Suggested Answer: Skeleton forms the basic structure of our body.

3. **Human skeleton system in adult consists of 300 bones.**

Suggested Answer: Human Skeleton System in adult consists of 206 bones.

4. **Skeleton system helps in respiration.**

Suggested Answer: Skeleton system helps in support and movement in the body.

5. **The longest bone of the body is carpals.**

Suggested Answer: The longest bone of the body is Femur.

6. **Femur , Libia, fibula, are bones of arm.**

Suggested Answer: Femur , Libia, fibula, are bones of leg.

7. **Muscles are attached to bones by girdles.**

Suggested Answer: Muscles are attached to bones by tendon.

8. **Clear image of the bone is formed on a photographic film by ECG.**

Suggested Answer: Clear image of the bone is formed on a photographic film by X-ray.

9. **Snake's body has a very short backbone.**

Suggested Answer: Snake's backbone is made up of many vertebrae attached to the ribs.

VII. Look at the picture and answer the questions.

(i) What is shown in the picture?



(ii) Which part do they use for their movement?

Suggested Answer: Starfishes use tube feet for locomotion which is present in their arms.

2. (i) How many bones are there in the human skull?



Suggested Answer: There are 22 bones in the human skull.

(ii) How many bones are there in the face?

Suggested Answer: There are 14 bones in the face.

2. (i) Name the joint shown in picture.



Suggested Answer: Hinge joint is present in the knee.

(ii) Write any others joints present in our body.

Suggested Answer: Pivot joint, ball and socket, gliding joint.

2. (i) What part of the body does man use to walk?



Suggested Answer: Man uses legs to walk.

(ii) List the parts that animals use to walk.



Suggested Answer: Animals use legs to walk.

VIII. Short Answer:-

1. Write the importance of skeleton?

Suggested Answer:

- i) Holds the body upright
- ii) Protects the internal organs
- iii) Support

2. How many pairs of ribs form the rib cage?

Suggested Answer: 12 pairs

3. What is hinge joint?

Suggested Answer: Hinge joints are formed between two or more bones where the bones can only move along one axis to flex or extend

4. What is the function of muscles?

Suggested Answer:

The main function of the muscles are:-

- maintaining and changing posture
- locomotion
- movement of internal organs, such as the contraction of the heart and the movement of food through the digestive system via peristalsis.

Image source:

<https://pixabay.com/photos/starfish-ocean-sea-water-tropical-2124393/>

<https://pixabay.com/illustrations/arthrocalman-osteoarthritis-knee-2384254/>

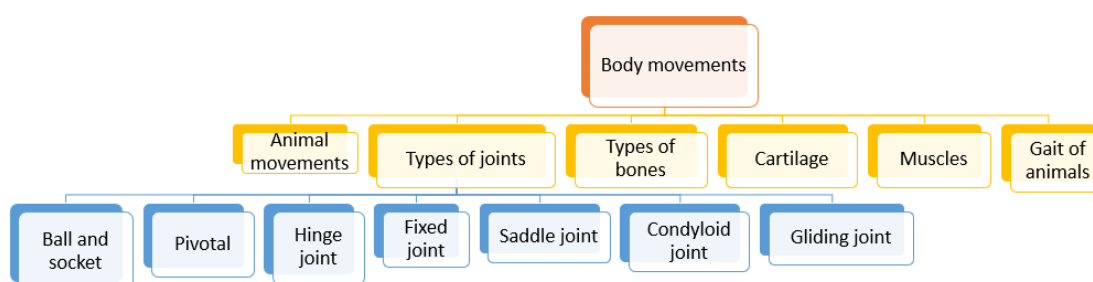
<https://pixabay.com/vectors/boy-walk-cartoon-animation-figure-312238/>

Elephant: SSSVV Gallery

Skull: SSSVV Gallery

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Assessments	The Human Body	Body and its movements,

15. MS_Summary_Body movements



Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Main Script	The Human Body	Body and its movements,