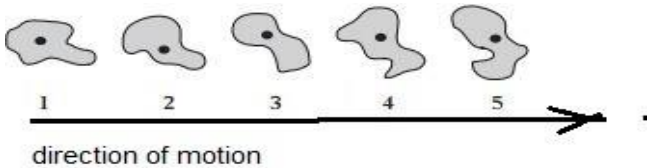
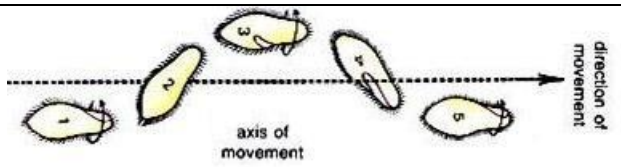
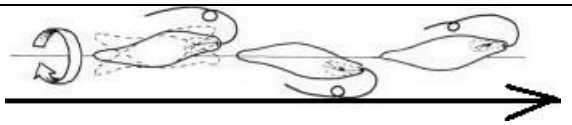
ICSE CLASS 7 BIOLOGY
MOVEMENT IN PLANTS AND ANIMALS

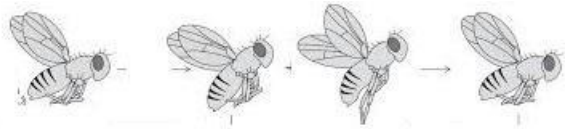
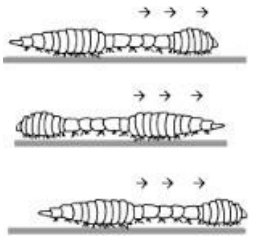
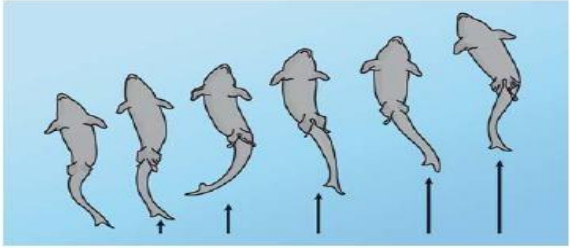
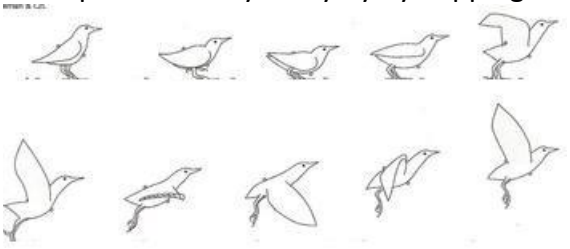
DIFFERENCE BETWEEN LOCOMOTION AND MOVEMENT

Movement	Locomotion
Occurs in fixed organisms like plants and in free living organisms	Seen only in free living organisms
Body parts alone move	Entire organism moves from one place to another
Can be voluntary or involuntary e.g. movement of joints, closing of leaves in touch me not plant	Voluntary in nature e.g. moving in search of prey or food, running away from predator

MOVEMENTS IN MICROSCOPIC ORGANISMS

Amoeba uses false feet or pseudopodia which are blunt finger like extensions of the cytoplasm to show creeping movement There are no specialized organs for locomotion	
Paramecium travels along a spiral path using its cilia with the cell rotating along its long axis. The direction of travel looks like a wave	
Euglena uses its whip like flagellum to move forwards. It shows a zig zag movement and at the same time rotates around its axis	 Direction of movement

ORGANS WHICH HELP IN MOVEMENT OF COMMON ANIMALS

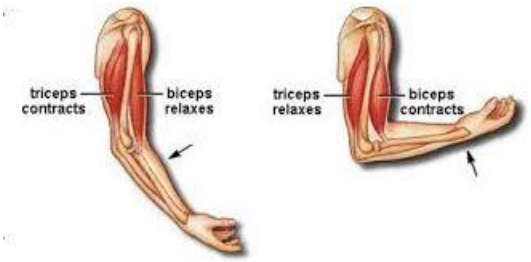
Insects: Many insects have three pairs of legs. These help in walking. The outer skeleton is made of different units joined together and that permits movement. Some insects can also fly There are two pairs of wings attached to the breast. The breast muscles move the wings when the insect flies 	Earthworm: Earthworms move by alternate extension and contraction of the body using muscles. Tiny bristles on the underside of the body help in gripping the ground. 
Fish: Fish swim by forming loops alternately on two sides of the body.Body is streamlined to aid motion 	Birds: Strong muscles and light bones work together to help the birds fly. They fly by flapping their wings. 

LOCOMOTION IN MAMMALS E.G. HUMAN

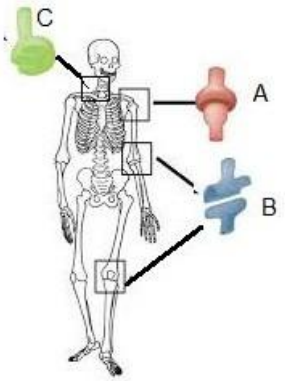
Bones and cartilage form the skeleton of the human body. It gives the frame and shape to the body and helps in movement.

Tendons: attach muscles to bones
Ligaments: attach bones to bones

The bones are moved by alternate contractions and relaxations of two sets of muscles. E.g. biceps and triceps in the arms



Joints in the human body:
Immovable joints: These are found in the skull between cranial bones
Slightly movable joints: These are found between the vertebrae in the backbone
Movable joints:

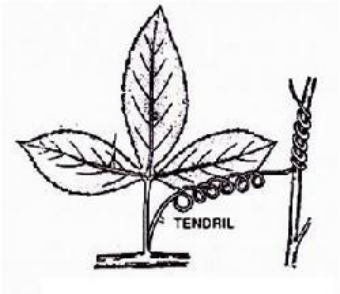


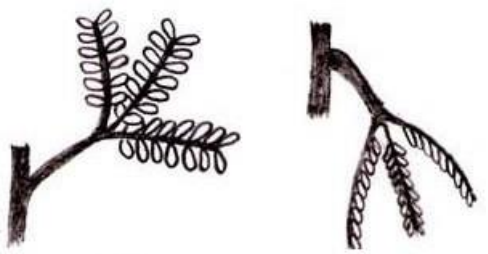
a: Ball and socket joint allows full rotation e.g. shoulder, hip
b: Pivot joint allows one bone to rotate over another e.g. skull is rotated on upper end of backbone
Hinge joint: Movement allowed in one plane e.g. elbow and knee joint

MOVEMENT IN PLANTS

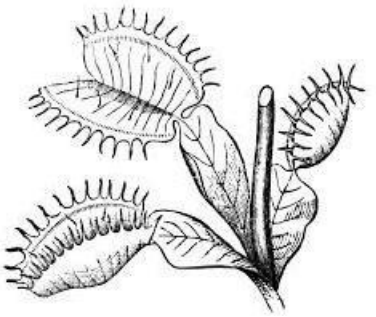
Tropic movements	**Nastic movements**
Growth towards or away from stimuli Movement shown by all parts of the body Slow movement	Response to stimuli without growth All parts of plant body do not show response Fast movement

Thigmotropism: Growth movements made by plants in response to contact with a solid object.





Touch me not plant: Leaves fold up when touched



Venus fly trap: Leaves close around an insect when it sits on surface