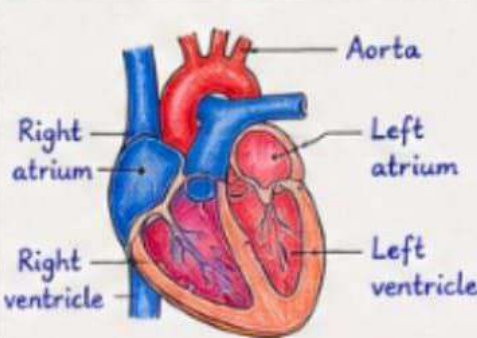
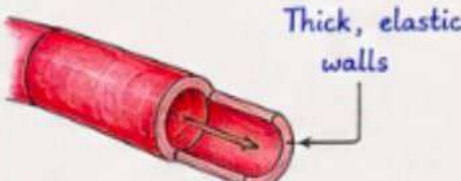
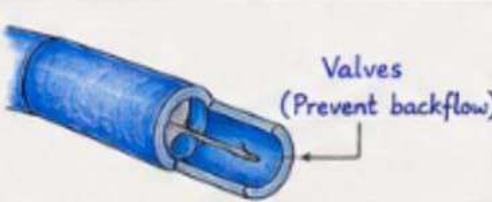
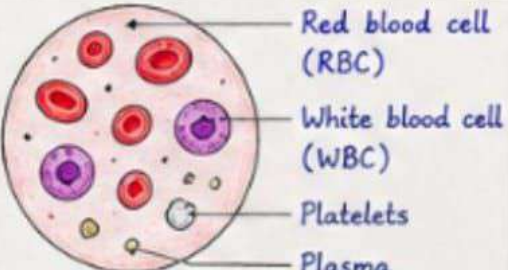




HUMAN CIRCULATORY SYSTEM



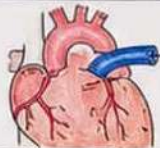
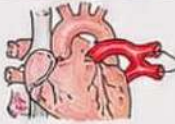
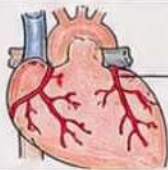
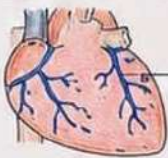
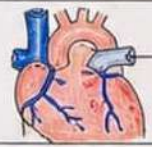
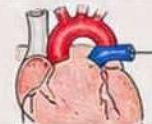
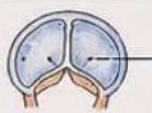
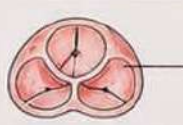
Structure, Location and Functions

NO.	PART	STRUCTURE (Appearance)	LOCATION	FUNCTIONS
1.	HEART		• In the chest cavity, slightly to the left side between the lungs.	• Pumps blood throughout the body. • Right side pumps impure blood to lungs. • Left side pumps pure blood to all parts of the body.
2.	ARTERIES		• Arise from the heart and carry blood away from the heart.	• Carry oxygenated blood (except pulmonary artery). • Have thick, elastic walls to withstand high pressure.
3.	VEINS		• Bring blood from body parts back to the heart.	• Carry deoxygenated blood (except pulmonary vein). • Have valves to prevent the backflow of blood.
4.	CAPILLARIES		• Found all over the body between arteries and veins.	• Very thin walls allow exchange of gases, food, water and wastes between blood and body cells.
5.	BLOOD		• Circulates throughout the body in blood vessels.	• RBC - Carry oxygen. • WBC - Fight against infections. • Platelets - Help in clotting of blood. • Plasma - Carries food, hormones and wastes.
6.	PULMONARY ARTERY		• Arises from right ventricle and goes to the lungs.	• Carries deoxygenated blood from heart to lungs.
7.	PULMONARY VEIN		• Brings blood from lungs to left atrium of heart.	• Carries oxygenated blood from lungs to heart.
8.	AORTA		• Arises from left ventricle and supplies blood to all parts of body.	• Carries oxygenated blood to all organs and tissues of the body.

★ The circulatory system transports oxygen, nutrients, hormones and removes wastes from the body. ❤️

♥ IMPORTANT PARTS OF HUMAN CIRCULATORY SYSTEM ♥

LOCATION AND FUNCTIONS

NO.	PART		LOCATION (Where it is found)	FUNCTIONS (What it does)
1.	PULMONARY ARTERY (Blue)		• Arises from the right ventricle of the heart. • It goes to the lungs.	• Carries deoxygenated blood from the right ventricle to the lungs for oxygenation.
2.	PULMONARY VEIN (Red)		• Enters the left atrium of the heart from the lungs.	• Carries oxygenated blood from the lungs to the left atrium.
3.	CORONARY ARTERY		• Found on the surface of the heart. • Branches from the aorta just above the aortic valve.	• Supplies oxygenated blood to the heart muscle (myocardium) itself. • Helps the heart to work properly.
4.	CORONARY VEIN		• Found on the surface of the heart. • Drains into the coronary sinus which opens into the right atrium.	• Drains deoxygenated blood from the heart muscle and returns it to the right atrium.
5.	SUPERIOR VENA CAVA		• Enters the right atrium of the heart from the upper part of the body.	• Brings deoxygenated blood from the head, neck, arms and upper chest to the right atrium.
6.	INFERIOR VENA CAVA		• Enters the right atrium of the heart from the lower part of the body.	• Brings deoxygenated blood from the abdomen, pelvic organs and legs to the right atrium.
7.	AORTA		• Arises from the left ventricle. • The largest artery in the body.	• Carries oxygenated blood from the left ventricle to all parts of the body.
8.	BICUSPID (MITRAL) VALVE		• Located between left atrium and left ventricle.	• Allows blood to flow from left atrium to left ventricle. • Prevents the backflow of blood into the left atrium when ventricle contracts.
9.	TRICUSPID VALVE		• Located between right atrium and right ventricle.	• Allows blood to flow from right atrium to right ventricle. • Prevents the backflow of blood into the right atrium when ventricle contracts.
10.	PULMONARY SEMILUNAR VALVE		• Located at the opening of pulmonary artery, at the base of the right ventricle.	• Allows blood to flow from right ventricle into pulmonary artery. • Prevents backflow of blood into the right ventricle.
11.	AORTIC SEMILUNAR VALVE		• Located at the opening of the aorta, at the base of the left ventricle.	• Allows blood to flow from left ventricle into the aorta. • Prevents backflow of blood into the left ventricle.

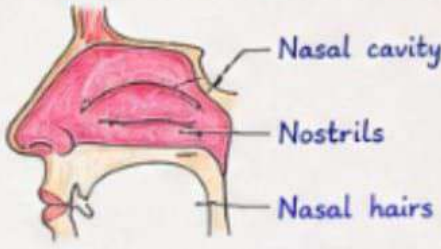
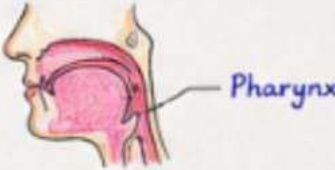
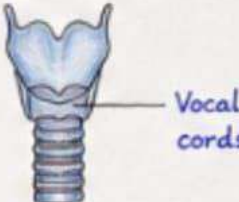
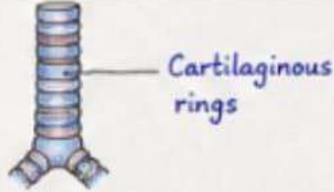
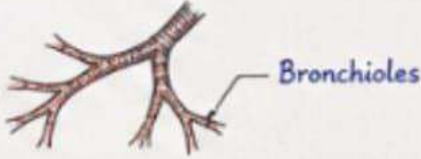
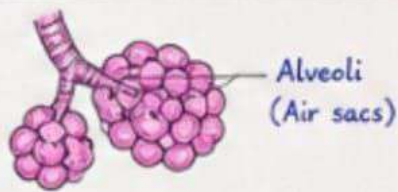
★ These parts work together to keep the blood flowing in the right direction and the body healthy. ♥♥



HUMAN RESPIRATORY SYSTEM



Structure, Location and Functions

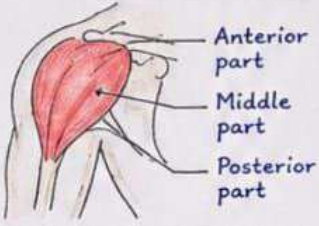
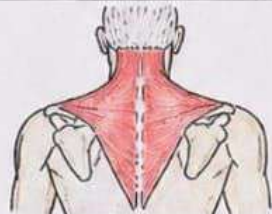
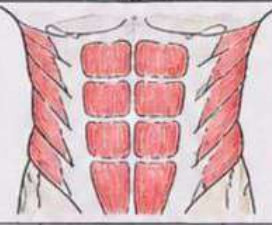
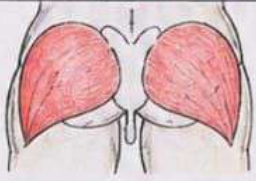
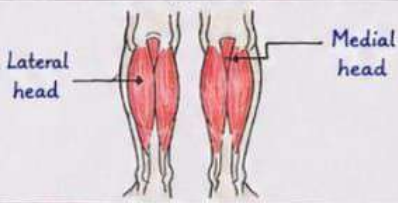
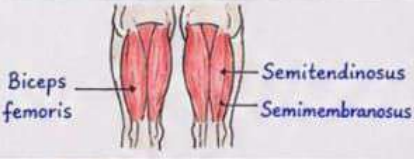
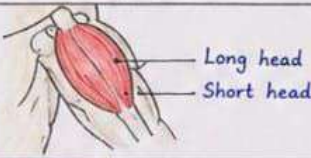
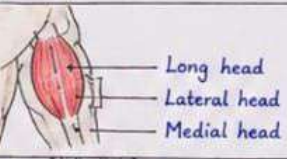
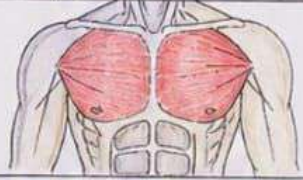
NO.	PART	STRUCTURE (Appearance)	LOCATION	FUNCTIONS
1.	NOSE / NASAL CAVITY	 Nasal cavity Nostrils Nasal hairs	• In the face above the mouth.	• Air enters through the nostrils. • Filters, warms and moistens the air. • Nasal hairs trap dust particles.
2.	PHARYNX (THROAT)	 Pharynx	• A passage behind the nose and mouth.	• Common passage for air and food. • Conducts air from nasal cavity to larynx.
3.	LARYNX (VOICE BOX)	 Vocal cords	• At the upper end of the windpipe (trachea).	• Allows air to pass into the trachea. • Contains vocal cords which help in sound production.
4.	TRACHEA (WINDPIPE)	 Cartilaginous rings	• Extends from larynx down to bronchi.	• Passage for air. • Cartilaginous rings keep the trachea open. • Cilia and mucus trap dust and germs.
5.	BRONCHI	 Bronchi	• Two branches of trachea entering the lungs.	• Carry air into the lungs. • Further divide into bronchioles.
6.	BRONCHIOLES	 Bronchioles	• Smaller branches of bronchi inside lungs.	• Carry air to the alveoli. • Distribute air throughout the lungs.
7.	ALVEOLI (AIR SACS)	 Alveoli (Air sacs)	• Tiny air sacs at the ends of bronchioles.	• Site of exchange of gases. • Oxygen passes into blood and carbon dioxide comes out.
8.	LUNGS		• In the chest cavity, on either side of the heart.	• Main organs of respiration. • Take in oxygen and remove carbon dioxide. • Make the blood pure.

★ Breathing is the process of taking in oxygen and giving out carbon dioxide. ❤️



SKELETAL MUSCLES – Structure, Location and Functions



NO.	MUSCLE	STRUCTURE (Appearance)	LOCATION	FUNCTIONS
1.	DELTOID Triangular muscle on the shoulder. Shows 3 parts.		Covers the shoulder joint at the top of the arm.	- Lifts the arm sideways (abduction). - Helps in lifting the arm forward and backward. - Rotates the arm. - Stabilizes the shoulder joint.
2.	TRAPEZIUS Large, flat, triangular muscle.		Extends from the back of the neck, down the back and across the upper back to the shoulders.	- Raises, lowers and draws inwards the shoulder blade. - Supports arm movements. - Helps in rotating the neck and extending the neck.
3.	SOLEUS Long, flat muscle.		Located in the lower part of the leg, beneath the gastrocnemius (calf muscle), along the back of the tibia and fibula.	- Helps in standing on tiptoe (plantarflexion at the ankle). - Maintains posture while standing or walking. - Important in walking, running and jumping.
4.	ABDOMINALS Broad, flat muscles arranged in pairs.		Present in the front of the abdomen, between the chest and the pelvis.	- Bends the trunk forward. - Supports the abdominal organs. - Helps in breathing, coughing and maintaining posture. - Protects internal organs.
5.	GLUTEUS Large, thick and powerful muscle.		Forms the buttocks region, at the back of the pelvis.	- Extends the hip (moves thigh backward). - Rotates the thigh outward. - Helps in standing up, climbing stairs, walking and running.
6.	GASTROCNEMIUS Thick, two headed calf muscle.		Located at the back of the lower leg, above the Achilles tendon; has two heads (medial & lateral).	- Helps in plantarflexion (standing on tiptoe). - Helps in walking, running and jumping. - Bends the knee slightly.
7.	HAMSTRINGS Group of three muscles at the back of the thigh.		Located at the back of the thigh, between the hip and the knee.	- Bends the knee. - Extends the hip (moves leg backward). - Helps in walking, running, jumping and maintaining balance.
8.	BICEPS Muscle with two heads.		Located in the front of the upper arm, between the shoulder and the elbow.	- Bends the elbow (flexes forearm). - Rotates the forearm outward (supination). - Helps in lifting and pulling objects.
9.	TRICEPS Muscle with three heads.		Located at the back of the upper arm, opposite to the biceps.	- Straightens the elbow (extends forearm). - Helps in pushing movements. - Supports the arm while lifting heavy objects.
10.	Pectoral muscles (Pectoralis major) Broad, fan shaped muscle on the chest.		Found in the front of the chest, between the shoulder and the sternum.	- Helps in pushing and lifting. - Brings the arm across the body. - In deep breathing, it helps in expanding the chest.

★ Muscles work together with bones and joints in every movement, maintain posture and protect internal organs. ❤