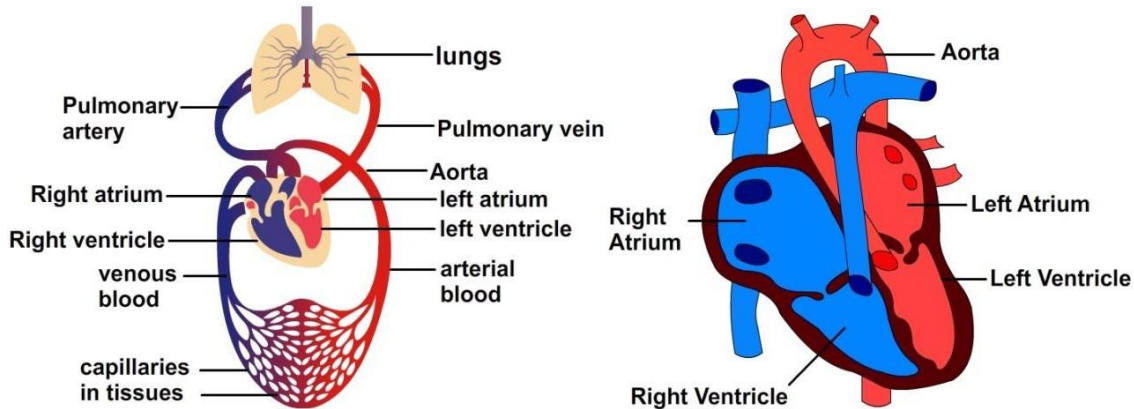


ICSE CLASS 8 BIOLOGY

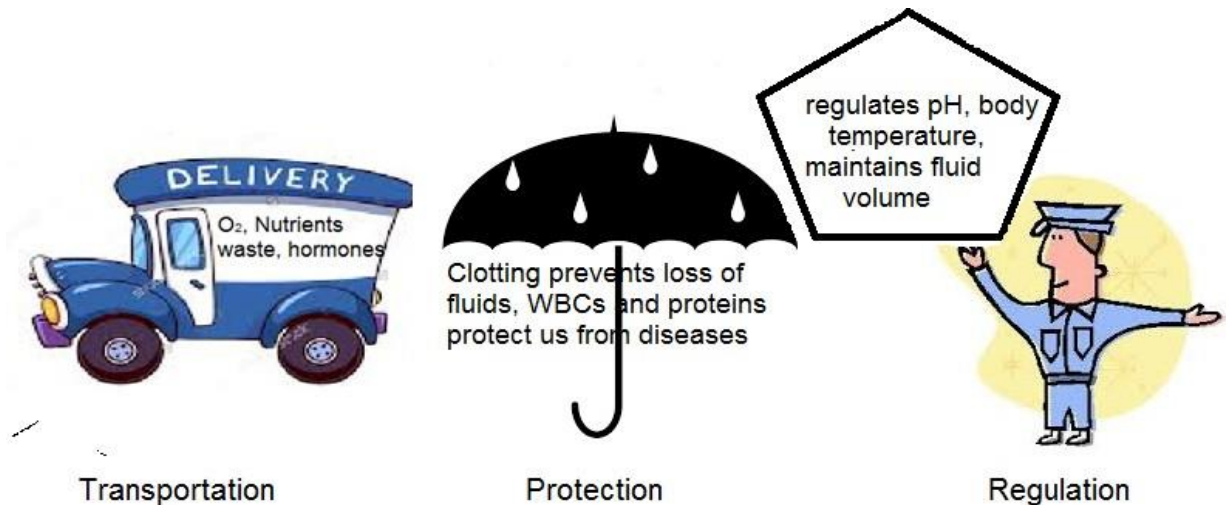
BLOOD-THE CIRCULATORY FLUID IN OUR BODY

Heart and major blood vessels

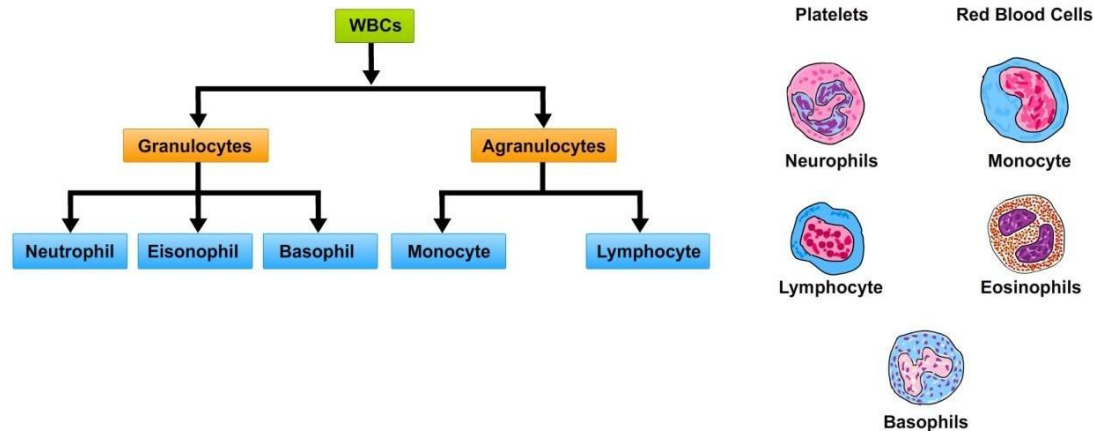


- Transport/Circulatory System in Humans is a closed system because circulatory fluid – blood – is always contained inside the blood vessels
- Blood from heart → arteries → divide to form capillaries → capillaries supply each cell of the body → exchange of gases, nutrients and other materials occur in capillaries → capillaries reunite to form venules → venules join to form veins → take blood back to heart

Functions of blood



Blood groups and blood cells



When a person loses blood due to injury or surgery, he may need blood transfusion. Person giving blood → donor. Person receiving blood → recipient
 O group people are called universal donors, AB group people are universal recipients

GROUP	A	B	AB	O
TYPE OF ANTIGEN	A	B	AB	NO ANTIGEN
TYPE OF ANTIBODY	ANTI B	ANTI A	NO ANTIBODY	ANTI A AND ANTI B
RECEIVE BLOOD FROM	A, O	B, O	A, B OR O	ONLY O
GIVE BLOOD TO	A, AB	B, AB	AB	A, B , AB AND O

Heart beat and heart rate

- One complete contraction and relaxation of the ventricles is called **heart beat**. During a heartbeat, blood flows from the auricles → ventricles → arteries
- The number of times a heart beats in a minute in a person is called **heart rate** (Normal heart rate - 70- 72/min for adults; about 92-100/min for children)
- Instrument to measure heart beat- **stethoscope**
- Blood exerts pressure on the walls of the arteries when it flows through them. This is felt as the **pulse** near the wrist, neck and other major arteries
- Blood pressure is measured using an instrument called **sphygmomanometer**. The normal BP is 120/80 mm Hg
- Heart rate increases during physical activity or when we are frightened, angry, stressed or excited

