

Chapter 6

Circulatory System

LESSON PLAN

SPECIFIC OBJECTIVES

The students will learn about

- ❖ blood vascular system
- ❖ structure and working of heart
- ❖ blood vessels
- ❖ blood groups and blood transfusion
- ❖ lymphatic system

Teaching Aids

Pictures/charts/models/animation on structure of human heart, structure of bicuspid and semilunar valves; double circulation of blood; Events during cardiac cycle; conducting system of heart showing pacemaker; blood vessels (artery, vein and capillary), a part of vein cut open to show valves; union of artery and vein through capillary network; ABO system of blood groups

Teaching Strategy

- ❖ Teacher will start the chapter by revising the structure and functions of blood and external structure of heart which students have learnt in previous classes.
- ❖ Now, teacher will introduce circulatory system and its components.
- ❖ Teacher will discuss heart and will explain structure and functioning of heart.
- ❖ Teacher will explain double circulation of blood and its importance.
- ❖ Teacher will explain heartbeat, heart sounds and cardiac cycle.
- ❖ Teacher will explain pulse and pulse rate and will perform Activities 1 and 2.
- ❖ Teacher will explain pacemaker and discuss conduction of heartbeat.
- ❖ To evaluate students, teacher will ask them to solve 'Check Point 1'.
- ❖ Now, teacher will explain the kinds of blood vessels, their structure and functions.

- ❖ Now, teacher will discuss blood groups, blood transfusion and importance of blood groups in blood transfusion.
- ❖ To evaluate students, teacher will ask them to solve 'Check Point 2'.
- ❖ Teacher will discuss some conditions related to the functioning of heart, i.e., palpitations, cardiac arrest, hypertension and heart attack.
- ❖ Teacher will discuss lymphatic system, its components, functions and significance of lymphatic system.
- ❖ To evaluate students, teacher will ask them to solve 'Check Point 3'.
- ❖ At last, teacher will sum up the lesson by going through the points given under the head 'Wrapping It Up'.
- ❖ Teacher will finally help students to answer the questions given under the head 'Test Yourself'.

Boost Up

- ❖ Teacher can help students to perform the activities given in chapter and can assign Activities 3, 4 and 5 to the students as home assignment and discuss the results in the class.
- ❖ Teacher can make students revise new terms given under the head 'Know These Terms'.
- ❖ Teacher can encourage students to learn the facts given under the head 'Something More'.
- ❖ Teacher can show animations related to the topics taught, if possible.

Expected Learning Outcomes

The students understand and know:

- ❖ blood vascular system and its importance
- ❖ structure and function of heart and blood vessels
- ❖ double circulation and its significance
- ❖ heartbeat, heart sounds, cardiac cycle, pulse and pulse rate
- ❖ ABO blood groups, universal donor and universal acceptor
- ❖ blood transfusion
- ❖ palpitations, cardiac arrest, hypertension and heart attack
- ❖ lymph, lymph vessels, lymph nodes, their functions and significance of lymphatic system

Evaluative Questions

The teacher should ask the following questions to evaluate the students:

1. What are the two parts of circulatory system in humans?
2. What are cuspid valves? Where are they found?
3. What is double circulation?
4. What is heartbeat?
5. What is the duration of a cardiac cycle?

6. What is pacemaker?
7. What are universal donor and universal recipient?
8. What conditions lead to hypertension?
9. What are lymph nodes?
10. What is lymph?